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**The Experience of Zen Meditation on Patients with Generalized
Anxiety Disorder in Taiwan**

Chueh-Fen Lu

Supervisor: Lorraine N Smith

**Submitted in fulfilment of the requirements for the
degree of Doctor of Philosophy**

**Nursing & Health Care
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Step by step

Mountains and rivers passed by

When look back I realize they are thousands

Now the mountains are blurred and rivers are hardly seen

But the landscapes I have seen is carved in my mind

Pursuing this PhD has been the richest experience in my life both academically and personally. Many profound experiences were gained by carrying out this study. Listening to the personal viewpoints of participants was touching and inspiring; some scenes and dialogues are still fresh in my mind. Particularly, exploring research questions in group situations were impressive. To learn how to be a group moderator was challenging, as it was so different from a leader in a therapeutic group which I was used to. Due to the nature of the groups, a gathering of generalized anxiety disorder patients, the interactions between participants were fascinating. Overall, qualitative study has brought me to the window through which I can approach the worlds in which participants live.

Not only to me, but also there are valuable experiences for my family. It was good that each of my children had one year's experience of living in a foreign country. For the first year, my thirteen-year-old second daughter accompanied me. Trying to figure out how to survive in a foreign country and cope with home-sickness trained me to be strong. This built up my confidence that I can travel around the world alone and can attend international conferences with assurance. The second year I returned to Taiwan to conduct my study, which was nice as I was with my family. Yet this was probably the toughest year of my PhD in some way as some problems could not be solved by hard working, i.e. to recruit participants. Facing and solving these tasks aggressively was the only pathway. These contributed to my personal growth and as a part of becoming an experienced researcher. The third year, with my eldest daughter, I returned to Glasgow with mixed feelings, as Glasgow became familiar but we were separated from my family again. In this year, learning how to manage different types and huge amounts of data in a systematic way was the main challenge. The fourth year, my son was finally old enough to accompany me. Helping him settle down in a "weird place" (his words) was different from helping my teenage girls. However, I appreciate the varieties of experiences very much as they enrich my experience greatly. I was not only living there as a 'pure student', but multilateral life i.e. differences circumstances of compulsory education.

In this journey, learning to write academically is my most precious fruit which credit to my meticulous Professor Lorraine N Smith. Especially, she is always there for me. Senior lecturer, Tom Aitchison helped greatly on statistical work. Moreover, all participants, Taiwanese Associate Professor Gau, and the psychiatric doctors were essential helpers; this work could not be completed without them. Finally, I would like to thank my husband who loves me enough to allow me free for this journey.

ABSTRACT

This study explored the experience of patients with generalized anxiety disorder (GAD) undertaking a six week intervention of a Zen meditation programme in Taiwan. Mix-methods were used including the Revised State and Trait Anxiety Inventory (RSTAI), repeated focus groups, individual interviews, diaries and field notes. Heidegger's interpretative phenomenology was adopted as a theoretical framework. Two groups of 9 and 12 patients (n=21) participated in the study.

Three themes emerged from repeated focus groups: First 'Expectation of Zen meditation regarding GAD symptoms included sub themes of 'ambivalence towards meditation', 'crave a good sleep', 'stop thinking' and 'regain memory and concentration'. The second theme, 'The process of Zen meditation' included the sub themes of 'struggling to reach a state of calm', 'signs of improvement' and 'an individual process'. The last theme, 'The cultural beliefs regarding Zen meditation in Taiwan' involved the 'spiritual influence' of Zen meditation practice.

Four themes emerged from individual interviews. Firstly, 'Separation' referred to the issues that participants faced in dealing with the termination of the programme, including 'concern about other participants' and 'examining the relationship between Zen meditation and self'. The second theme 'Body experience of Zen meditation practice' incorporated 'body awareness' and 'preparing to practise Zen meditation'. The third theme, 'States of mind while meditating' consisted of 'the state of engagement with real life', 'the state of detachment from real life' and 'the state of calm'. Lastly, 'Benefits of Zen meditation practice' incorporated the categories 'less pressure with daily life' and 'more acceptance of being a GAD patient'.

The RSTAI was administrated at baseline and post intervention and also at the two week follow-up of the Zen meditation programme. Neither the Trait Anxiety Score nor the State Anxiety Score showed significant differences between Groups 1 and 2 at baseline. This allowed the RSTAI data from the 2 groups to be merged. The results of 95% confidence interval for differences of both groups showed a significant improvement in the Trait Anxiety Score over time but not the State Anxiety Score.

This study contributes to the existing body of knowledge and associated literature regarding Zen meditation and GAD in three ways. Firstly, the findings confirmed that the essential or authentic traditional qualities of meditation should be addressed in meditation study. Secondly, the meaning of Zen meditation for the groups of GAD patients was revealed in the context of Taiwan society. How their lived experience of GAD shaped their understanding of Zen meditation was interpreted. Thirdly, a comprehensive understanding of Zen meditation is reported. The findings (including themes, i.e. diverse Zen meditation processes, body experiences, concepts of obstacles and spiritual influence) add to the current knowledge by providing insight derived from participants' lived experiences.

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List of Abbreviations

CBT	Cognitive-behavioural treatment
DSM	Diagnostic and Statistical Manual of Mental Disorders
GAD	Generalized Anxiety Disorder
ICD	International Classification of Diseases
MBSR	Mindfulness based stress reduction
MDD	Major Depression Disorder
RCT	Randomized Controlled Trials
RSTAI	Revised State and Trait Anxiety Scale
SSRI	Selective-serotonin reuptake inhibition
SNRI	Serotonin nor-epinephrine reuptake inhibition
TCAs	Tricyclic antidepressants
USA	United States of America

CHAPTER I INTRODUCTION

This chapter consists of three sections: firstly, personal motivation for this study, then the health system of the study site providing a basic understanding and lastly, the aims of this study.

1.1 Personal motivation for this study

The reasons for choosing this study topic resulted from my past experiences: the experience of being a student nurse, clinical nurse, nursing instructor, and also from study experiences and self understanding.

Psychiatric nursing was my favourite subject since as student nurse. I was encouraged by a clinical instructor who said “you are suitable to be a psychiatric nurse because of outstanding performance on clinical practice as well as analyzing communication process”. However, I did not work in the psychiatric field directly after graduation but on surgical-medical wards. Then, I was assigned to a psychiatric ward after gaining top scores in an advanced psychiatric training course provided by the hospital. I felt contented during the two years in the ward. Afterwards psychiatric nursing became the major of my master’s degree in Taiwan.

Then, I was a lecturer and clinical instructor of psychiatric nursing mainly teaching psychiatric nursing. According to observation I found that anxiety patients were neglected. They are less conspicuous as they do not threaten communities like paranoid schizophrenia patients nor do they harm themselves like depressed patients do. Influenced by Taiwanese culture, I carried out a quasi-experimental study to provide an intervention of Zen meditation for anxiety disorders patients (Appendix I). However, what kind of experiences that participants had gone through was a question in my mind. The inner process of Zen meditation is not clearly understood in the literature despite that it has been adopted as a way of spiritual- cultivating and health-improving in Taiwan.

As noted above, I decided to explore the experience of patients with generalized anxiety disorder undertaking Zen meditation programme as my PhD topic to see if they could benefit from Zen meditation practice because Zen meditation is familiar to Taiwanese and is a cheaper, non-invasive intervention and able to provide a sense of control.

1.2 Taiwanese healthcare system

In order to provide information regarding the background of where the study was carried out, a brief description of the healthcare system in Taiwan is introduced so that the context of the research setting can be understood. General information about Taiwan, the history of the development of the healthcare system, the current healthcare system, medical expenditure and an overview of the state of mental health provision in Taiwan are included here.

Located in East Asia, Taiwan is a long, narrow island. The land area is 36,190km² but with a central 270km mountain range. According to the life statistics of the government, the population is 22.7 million of whom 9.7 % are aged over 65. Life expectancy was 73.7 years old for males and 79.8 years old for females in 2005. The healthcare providers shown in Table 1-1 include both public and private providers in 2006 (<http://www.doh.gov.tw>).

Table 1-1 Public/Private mix of healthcare providers in Taiwan in 2006

	Public	Private	Total
Number of hospitals	79 (15%)	463 (85%)	542 (100%)
Number of clinics	427 (2%)	17,311 (98%)	17,738 (100%)
Number of beds	33,875 (30%)	78,098 (70%)	111,973 (100%)

Public: run by the governments

Private: run by private owners

Adopted from: <http://www.doh.gov.tw>

The history of development of the healthcare system in Taiwan may be divided into four periods: the primitive period, the missionary period, the Japanese colonisation period and the Chinese government's relocation period (Chang 2007). The most important events in each period are reported next.

The first period is the primitive period (before 1865). In 1544, Portuguese sailors discovered Taiwan and called it 'Ilha Formosa' which means 'beautiful island'. At that time the people who dominated the island were aboriginal tribes. Shamans were the key persons who dealt with medical problems for their tribesmen (Chang 2007). In 1625 when Holland occupied Taiwan, western medicine was introduced but it was then withdrawn when Holland retreated. In 1661, General Zheng C. of the Ching dynasty landed in Taiwan when Chinese medicine was also brought into a mainstream medicine.

In the second period, the missionary period (1865-1895), many missionaries dedicated their lives to Taiwan and brought western medicine back to Taiwan again. At that time the Ching Empire was defeated by an alliance of the English and French and then the Beijing-Treaty was signed. Thus, Kaohsiung Harbour was open to western countries in 1860. In 1865 James Laidlaw Maxwell from the UK located to south Taiwan and started his preaching work and medical services. He was welcomed by the local people and tribesmen. In 1866, Dr Patrick Manson initiated his studies of tropical medicine and is regarded as the 'Father of tropical medicine'. In 1871 Rev. George L. Mackay started his work in north Taiwan. In 1886 the first appointed prime minister of Taiwan, M. Lau, was the first governor who started to employ western doctors as official medical doctors to treat soldiers and the public. This commenced the western style hospital in Taiwan. In 1895 David Landsborough started his medical service in middle Taiwan at Changhua. At the same time the first health bureau was set up to govern the health affairs of the whole country.

The third period is the Japanese colonisation period (1896-1945). Taiwan was handed to Japan in 1896 according to the Ma-Guan Treaty. The foundation for early Western medical development in Taiwan was laid mostly during this period. The Japanese government realized that their lasting rule in Taiwan hinged on the controlling of epidemics i.e. malaria and black plague. Therefore, they attached special importance to this effort, laying a solid foundation for public health which markedly improved the health status of the Taiwanese. For example, vaccination was widely applied to control smallpox in 1896. Additionally, an isolation institution was built in Taipei in order to manage black plague. Medical training courses started in 1897 in the Taipei Hospital and thereafter formal medical education started in 1899. At the same year, a sanitary sewer system was constructed in Taipei area and harbour quarantine was enforced. In 1905 the first census was executed. In 1907 the first nursing school was set up. In 1910 tap water was used. A leprosarium was built in 1929 and an institution that helped people to withdraw from opium was opened in the next year.

The last period of development of Taiwan's healthcare system started after the Chinese government's relocation into Taiwan (1945-). Because of World War II, Taiwan's medical facilities were damaged seriously and were waiting for restoration. At that time, infectious diseases were still common; for example smallpox prevailed in 1947 and so did Japanese meningitis in 1966. The health authorities decided to give priority to the basic development of public health and put hospital building in second place. As a result, this policy has laid a firm groundwork for Taiwan's medical development in the future. The major measures included the wide establishment of health stations; elimination of malaria, plague, and cholera; application of universal vaccination; promotion of women's and children's health and Planned Parenthood. Furthermore, the health government also aimed to manage specific diseases to which the Taiwanese were vulnerable. Consequently, vaccination of type B hepatitis was implemented in 1980 and lead to the decline in hepatitis B carrier rates among children in Taiwan from 10% to <1% as well as the mortality rate of fulminant hepatitis in infants and the annual incidence of childhood hepatoma (Chan, Lee & Lo 2004). These efforts have promoted the construction of a health network prior to the launching of the National Health Insurance Program.

Now, the Taiwanese healthcare system is divided into the directorial level and local level. At the directorial level, the Department of Health (DOH) is the head agency of health administration system and is responsible for nationwide health matters including the guidance, supervision and coordination of local health bureaus. At the local level, there are 23 county and city governments and two special municipalities (Taipei and Kaohsiung). These public health bureaus run public health centres and are in charge of advancing health and medical affairs within their respective jurisdiction including urban/rural townships. In remote areas, such as off shore islands and countryside in mountainous areas, health offices manage health affairs (<http://www.doh.gov.tw>).

The vision of the DOH has been set on establishing “A healthy Taiwan – providing the public a healthy and safe lifestyle” (<http://www.doh.gov.tw>). The four main missions of the DOH are: “serving

as a catalyst in improving the health of the people, educating the people into having a healthy lifestyle, paving the road for the health industry, and participating in international health affairs". The DOH also promotes medical, health care, disease prevention, as well as food, drug and cosmetic management and health insurance affairs. According to the 2005 - 2008 medium-term projects of the DOH, six strategic performance goals have successfully been established: improving the quality of health care, integrating health management into our lifestyle, making disease prevention a public responsibility, making food and drugs safe, industrializing health technology, and making health affairs an international issue (<http://www.doh.gov.tw>).

Before National Health Insurance (NHI) was applied in 1995, there were a range of insurance plans including Labourer Insurance (1950), Government Employees' Insurance (1958), Farmer's Insurance (1985) and Low-income Household Insurance (1990). NHI is mandatory enrolment with 99% enrolment; the uncovered 1% population is homeless and people staying abroad (<http://www.nhi.gov.tw>). The NHI is operated by the Bureau of National Health Insurance, a subordinate to the DOH. The fund is contributed to by the employer, the employee and the government so that individuals are able to receive health care at an affordable cost; the current premium rate for an individual is around 4.55% of wage. For control of the expenditure of health care, a payment system has evolved: fee-for-service at the beginning, Case Payment (1997), Global Budget Payment Scheme (1998), Quality Based Payment Scheme (2001) and Resource-Based Relative Value Scale system (2004). At the same time, a co-payment policy for outpatient care, inpatient care and drugs is applied. Since the NHI was launched, the rate of satisfaction with NHI services ranges from 39% to 79%, while the rate of dissatisfaction is around 12 to 47 % (<http://www.nhi.gov.tw>).

Another feature of the Taiwanese healthcare system is patients being free to choose care providers. Taiwanese can seek treatment from specialists directly with no necessity of referral in advance. The benefit coverage includes inpatient and out-patient care, prescription medicines, dental services, day care for the mentally ill and also traditional Chinese medicine as well. However, the major healthcare provider is western medicine. Traditional Chinese medicine including Chinese hospitals and Chinese clinics accounts for 11.9% of health providers in Taiwan (<http://www.nhi.gov.tw>).

In terms of mental health, management of chronic diseases has become the main concern for the health departments as a result of infectious diseases being controlled. The Act of Mental Health was enacted in 1980 aiming to protect psychiatric patients and to have equality rights in aspects of education, employment as well as confidentiality. At the same time, compulsory treatment is enforced on patients who have no insight but are considered a likely risk to the safety of the public. In 1986 a mental diseases prevention project was launched. As a result, psychiatric institutions were increased from 79 in 1985 to 263 by the end of 2004. The availability of beds for full day psychiatric hospitalization will be over 1 per 1,000 populations by 2008 (<http://www.nhi.gov.tw>). Currently, mental health policy made by the DOH aims to 'Decrease institutionalization and promote

rehabilitation' (<http://www.doh.gov.tw>). However, there are still many difficulties in Taiwan such as insufficient facilities, uneven distribution of medical facilities between east and west Taiwan and a value system that discriminates against mental illness (Lu 2006, pp15-18).

In terms of the utilization of mental health service, the help-seeking behaviour of Taiwanese has its own style. For example, when mental problems occur Taiwanese used to seek help from Taoism, Buddhism temples or folk therapy instead of western style resources, such as counselling or psychotherapy (Yeh, Lin 2006). Additionally, the Act of Psychologist and Counsellor was not issued until 1991 and there is a shortage in this workforce; by 2007 there were only 715 licences issued among which 554 were practising (<http://www.atcp.org.tw>) However, 2,300 clinical psychologists are needed according to the population size (Wu 2000).

Considering the social and cultural background in Taiwan, Zen meditation might be regarded as an accessible and acceptable way for the public to promote mental health. In section 2.2.1 further information regarding Zen meditation in Taiwan is presented.

1.3 The aims of the study

This study aimed to explore the experience of patients with GAD undertaking a six week Zen meditation programme in Taiwan.

The study aims were:

- To provide a deeper understanding of the experiences of practising Zen meditation among GAD patients;
- To reveal the process of practising Zen meditation in a group of GAD patients;
- To examine the effectiveness of Zen meditation as an intervention to manage anxiety in a group of GAD patients.

CHAPTER II: LITERATURE REVIEW

2.0 Introduction

The literature review is a critical summary of research, often prepared to put a research problem in context (Polit & Beck 2006). In this study, the literature helped the researcher to identify the research problems and refine the research questions at the beginning stage. Furthermore, the literature serves the purpose of identifying relevant conceptual frameworks that provide perspective to interpret study findings (Polit & Beck 2006). Accordingly, the main issues related to this research include generalized anxiety disorder (GAD), meditation and interpretative phenomenology. Firstly, discussions about different aspects of GAD are presented in 2.1, including epidemiology, characteristics, treatment models as well as the prognosis. In 2.2, key issues regarding Zen meditation are presented including the background, skills and process, nature of the evidence, psychological, physiological, adverse effects and qualitative findings of meditation. Lastly, the researcher purposely narrows down onto the relationship between meditation and anxiety where this study is grounded. In 2.3 the theoretical framework used to guide this study is discussed covering issues of the background of phenomenology, justification of using interpretative phenomenology, phenomenological data analysis, justification for choosing Benner's method and rigour related to phenomenology.

2.0.1 Search parameters

In addition to relevant books and government websites, a systematic literature search related to the main issues above was carried out so that current understanding could be accessed. The main databases used for the literature were the Cochrane database of Systematic Reviews, OVID-MEDLINE, OVID-EMBASE, OVIDPscINFO, OVID Cumulative Index to Nursing & Allied Health Literature (CINAHL) and the Web of Knowledge's Web of Science. Additionally, the national databases in Taiwan, Taiwan National Central Library Websites (www.ncl.edu.tw), were also used to collect relevant literature in Taiwan in Chinese as Taiwan was the study site. Related documents and papers published in both Chinese and English were incorporated.

The subjects used for searching were GAD, meditation and phenomenology. Different sets of key words were used alternately as a strategy to conduct the search in the databases so that a comprehensive search could be attained (Table 2-1). The coverage of years for searching was the most recent papers traced back 5 years (2002-2008). However, the coverage of the years was expanded if there was not enough literature in the databases used, such as the epidemiology of GAD in Taiwan and the literature regarding side effects of meditation. Consequently, the number of papers reviewed was 258 in English and 66 in Chinese. These numbers were within a manageable level allowing analysis and appraisal to be processed.

Table 2-1: Databases used for literature search according to subjects and keywords

Subject	Keywords used	Databases
GAD	Generalized anxiety disorder Epidemiology or prevalence Aetiology & diagnosis Treatment or therapy Psychotherapy or cognitive behavioural Therapy or pharmacology Prognosis or clinical course Worry or anxiety	Cochrane database of Systematic Reviews, OVID-MEDLINE, OVID-EMBASE, OVIDPscINFO, CINAHL, Web of Science and Taiwan National Central Library
Meditation	Meditation Zen meditation Zazen Mindfulness	Cochrane database of Systematic Reviews, OVID-MEDLINE, OVID-EMBASE, OVIDPscINFO, CINAHL, Web of Science and Taiwan National Central Library.
Phenomenology	Phenomenology and nursing Interpretive phenomenology Hermeneutic phenomenology Critique or appraisal of phenomenology Study rigour or robustness	OVID-MEDLINE, OVID-EMBASE, OVIDPscINFO, CINAHL and the Web of Knowledge's Web of Science and Taiwan National Central Library.

2.1 Generalized anxiety disorder and anxiety disorders

According to the Diagnostic and Statistical Manual of Mental Disorders (DSM IV-TR), generalized anxiety disorder (GAD) is one of the subcategories within anxiety disorders (American Psychiatric Association, 2000, p 472). GAD as a diagnosis is also based on the ICD diagnostic system (Alonso, Angermeyer, Bernert, Bruffaerts, Brugha, Bryson et al 2004). In this section, aspects profiled are: the epidemiology, health budget consumption, clinical features, treatment models and the prognosis of GAD.

2.1.1 Epidemiology

The newest investigations of prevalence rates specifically focused on GAD among different countries in adult populations, are compared in Table 2-2. As can be seen, firstly, the response rates of these surveys range from 61.2 % to 87.6%. Secondly, the 12-month prevalence rates range from 1.0% (Brazil and Korea) to 2.9% (USA). In terms of lifetime prevalence rates, they range from 1.9% (Canada) to 5.3% (Netherlands). Generally, these prevalence rates appear similar across these countries. These figures indicate that GAD is a highly prevalent mental illness and constitutes the most frequent mental disorder in communities (Kroenke 2007; Wittchen 2002; Kessler 2007).

In Taiwan, according to the most recent epidemiological survey, the Taiwan Psychiatric Epidemiology Project (TPEP) (Hwu, Yeh & Chang, 1989), the statistics of 12 month prevalence of GAD vary in different areas: 3.7% (city, Taipei), 9.3% (suburban, Shu-Lin) and 6.9% (rural, Tsao-Tun). Likewise, the lifetime prevalence rates are 4.8% (Taipei), 13.1% (Shu-Lin) and 9.3% (Tsao-Tun). The overall lifetime prevalence rate is 7.8 %. Compared to other countries including Asian countries such as Korea and western countries such as Germany (Table 2-2), Taiwan has higher prevalence rates of GAD.

Three major reasons have been proposed to explain the discrepancies of the prevalence among different countries (Table 2-2). Firstly, the use of different diagnostic criteria may influence the results of investigations greatly (Bandelow 2003, pp. 49-68; Swedo & Pine 2005). For example, there are two major diagnostic systems applied to these surveys: the DSM and the ICD (International Classification of Disease). Kessler & Bedirhan (2004) point out that the prevalence is higher when the ICD-10 is used as the criteria for surveys. Secondly, the regions chosen to be investigated lead to different results; that is, surveys carried out in communities, psychiatric clinics or primary care produce different results. For example, a survey conducted in psychiatric out-patients in Turkey reported as high as 10.3% of GAD. Moreover, different levels of urbanization may result in different prevalence rates; for example, in Taiwan, suburban areas have the highest prevalence rates of GAD (13.1%) while cities the lowest (4.8%) (Hwu, Yeh & Chang 1989). Finally, the difficulty of differential diagnosis is another explanation for the different prevalence rates. For example, when GAD is combined with panic disorder, panic disorder is easier to diagnose while GAD may be overlooked (Munk-Jorgensen, Allgulander, Dahl et al 2006; Kessler, Andrade, Bijl, et al 2002; Sadock & Sadock 2003, p634; Ozcan, Uguz & Cilli 2006; Michael, Zetsche & Margraf 2007). When a lay interviewer conducts a survey, the ability to differentiate GAD from other mental disorders may be not as good as a psychiatrist (Bandelow 2003). In addition to these possible factors, culture is a key factor that can influence the expression of GAD symptoms (DSM-IV-TR 2000, pp 472-476) and thereby the prevalence rate.

It is believed that prevalence rates of GAD are underestimated as a result of social stigma and atypical symptoms (Bandelow 2003, Munk-Jorgensen, Allgulander, Dahl et al 2006). Social stigma means patients tend to conceal their symptoms from investigators because mental disorders are regarded as dishonourable by the public. Moreover, unlike panic disorder or obsessive-compulsive disorder, GAD features with atypical clinical symptoms, as noted previously, may escape investigators' notice (Bandelow, 2003; Tang, Yen 2003). Additionally, Wittchen (2002) indicated that it may take 5 to 10 years before GAD patients are diagnosed and receive proper treatment. In addition, Munk-Jorgensen (2006) pointed that not all GAD patients are recognized by general practitioners; in Denmark the portion recognized was 33% and 53% in Norway. Therefore, prevalence estimates are considered as conservative (Kessler, Walter & Wittchen 2004).

Table 2-2: Recent epidemiological studies of GAD chronologically

Country	Author(S) /Published year	Sample, criteria used	Response rate	Findings
Brazil, Canada, Netherlands, the USA (International Consortium in Psychiatric Epidemiology, ICPE brought together by WHO)	Kessler, Andrade, Bijl, Offord, Demler & Stein /2002	General adult population (n=20,189), CIDI, DSM-III-R	71.6%	12-month prevalence: Brazil: 1.0 % Canada: 1.2 % The Netherlands: 2.6% The USA: 2.9% Lifetime prevalence Brazil: 2.5 % Canada: 1.9% The Netherlands: 5.3% The USA: 5.0%.
German (German Health Interview and Examination Survey, GHS)	Jacobi, Wittchen, Holting, Hofler/2004	General adult population (n=4,181), DSM-IV	87.6%	4-week 1.2% 12-month prevalence 1.5%
Spain, Italy, Germany, Netherlands, Belgium and France. (European Study of the Epidemiology of Mental Disorders, ESEMeD)	Alonso, Angermeyer, Bernert, Bruffaerts, Brugha, Bryson et al /2004	A representative random sample of non-institutionalized inhabitants (n=21,425), Composite International Diagnostic Interview 3.0	61.2%	12-month prevalence: 1.0% (male 0.5%; female 1.3%) Lifetime prevalence: 2.8% (male 2.0%; female 3.6%)
The USA (National Epidemiologic Survey on Alcohol and Related Conditions, NESARC)	Grant, Hasin, Stinson, Dawson, Ruan, Goldstein, et al /2005	General adult population (n=43,093), DSM-IV	81%	12-month prevalence 2.1% Lifetime prevalence 4.1%
Turkey	Ozcan, Uguz & Cilli/ 2006	Psychiatric outpatients, (n=950), CIDI (composite International diagnostic Interview, version 2.1) and CIDI anxiety and mood disorder modules	-	10.3% (90.8% of the GAD cases in psychiatric outpatients had comorbid any anxiety or depressive disorder)
Denmark, Finland, Norway, and Sweden	Munk-Jorgensen, Allgulander, Dahl, Foldager, Holm, Rasmussen et al / 2006	8,879 patients in general practice; 648 general practitioners, DSM-IV	-	Males 4.8% Females 6.0% (Only 1/3 to 1/2 of the GAD cases were identified by the GPs)
Hong-Kong	Lee, Tsang, Chui, Kwok, & Cheung, /2007	General adult population in Asian communities (n=3,304), DSM-IV	65.8%,	6-month prevalence 4.1%
Korea	Cho, Kim, Jeon, Suh, Chung & Hong, et al /2007	General adult population (n=6,275), DSM-IV	79.8%,	12-month prevalence 1.0% Lifetime prevalence 2.3%

To summarize, the current prevalence rates of GAD across a number of countries in North America, Asia and Europe are similar and are a serious health problem. The statistics are believed to be underestimated as a result of different diagnostic criteria and social stigma. Furthermore, Taiwan's life time prevalence rate is higher than other countries.

2.1.2 Health budget consumption

In terms of medical expenditure, compared with those who have other psychiatric disorders such as schizophrenia, people with anxiety disorders are high care utilizers who present to general practitioners more frequently than to psychiatric professionals, placing a strain upon the healthcare system (Lepine 2002). The economic costs of anxiety disorders include a range of expenditure: psychiatric, non-psychiatric and emergency care, prescription drugs, reduced productivity and absenteeism from work (Antai-Otang 2003a). Wittchen (2002) reported that in the USA the economic and personal cost of anxiety disorders was more than \$42 billion a year, almost one third of the total mental health bill. Based on a national survey on prevalence, correlates, co-morbidity and comparative disability of GAD defined by DSM-IV, Grant et al (2005) concluded that GAD is an independent disorder with significant impairment and disability. For example, disability and impairment in pure GAD were equivalent to pure mood disorders, but significantly greater than pure substance use and other anxiety and personality disorders. Furthermore, Hoffman (2008) argues that in addition to lost work productivity and high medical resource use, impairments in role functioning and quality of life are affected seriously and should be addressed.

Similarly, in Taiwan the phenomenon of doctor-shopping behaviour among GAD patients is common and affects health service consumption greatly (Li 2002, p155, Tang 2003). Taiwanese can seek help from specialist physicians directly without a referring system (1.2). As a result GAD patients in Taiwan visit a wide range of different specialists such as cardiologists, general internal doctors, neurologists, gynaecologists and gastro-intestinal doctors before they step into psychiatric clinics (Li 2002, pp155-156; Tang, 2003). Apart from western medical sources, Taiwanese seek help from folk therapies and this expenditure is hard to estimate (Li 2002, p 155-156; Tang 2003; Yeh, Lin 2006; Table 2-5).

2.1.3 Characteristics, help seeking behaviours and aetiology of anxiety

Characteristics

The characteristics of GAD are described here including clinical features, co-morbidity. Firstly, The onset of GAD is usually in adolescence (Sadock & Sadock 2003). Gender difference is obvious with the ratio of female to male as 2 to 1 (DSM-IV-TR 2000, p 473; Wittchen 2002; Martin 2003; Tang & Yen 2003). Clinical features include emotional (anxiety), cognitive (uncontrollable worry, poor concentration), somatic (muscle tension, autonomic symptom, somatic preoccupation) and behavioural symptoms (irritable, restlessness) (Sadock & Sadock 2003, p 633; Mennin 2004; Grant et al 2005). The diagnostic criteria of GAD have changed over time since the diagnosis first appeared in

the DSM-III in 1980, but the main characteristics have remained almost consistent (Kessler, Walters & Wittchen 2004). The diagnostic criteria of GAD in the newest version of DSM are listed in Table 2-3. The DSM diagnosis system is used in Taiwan.

Table 2-3: Diagnostic criteria for GAD based on DSM-IV-TR

<p>A. Excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least 6 months, about a number of events or activities (such as work or school performance).</p> <p>B. The person finds it difficult to control the worry.</p> <p>C. The anxiety and worry are associated with three (or more) of the following six symptoms (with at least some symptoms present for more days than not for the past 6 months). Note: Only one item is required in Children.</p> <p>(1) restlessness or feeling keyed up or on edge</p> <p>(2) being easily fatigued</p> <p>(3) difficulty concentrating or mind going blank</p> <p>(4) irritability</p> <p>(5) muscle tension</p> <p>(6)sleep disturbance (difficulty falling or staying asleep, or restless unsatisfying sleep)</p> <p>D. The focus of the anxiety and worry is not confined to features of an Axis I disorder, e.g. the anxiety or worry is not about having a Panic Attack (as in Panic Disorder), being embarrassed in public (as in Social Phobia), being contaminated (as in Obsessive-Compulsive Disorder), being away from home or close relatives (as in Separation Anxiety Disorder), gaining weight (as in Anorexia Nervosa), having multiple physical complaints (as in Somatization Disorder), or having a serious illness (as in Hypochondriasis), and the anxiety and worry do not occur exclusively during Posttraumatic Stress Disorder.</p> <p>E. The anxiety, worry, or physical symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.</p> <p>F. The disturbance is not due to the direct physiological effects of a substance (e.g. a drug of abuse, a medication) or a general medical condition (e.g. hyperthyroidism) and does not occur exclusively during a mood disorder, a psychotic disorder, or a pervasive developmental disorder.</p>

DSM-IV-TR American Psychiatric Association (2000) p476.

Secondly, in addition to excessive worry, co-morbidity is another key feature of GAD (Sadock & Sadock 2003, p 632; Ruscio, Chiu, Roy-Byrne, Stang, et al. 2007; Table 2-3). Due to the high level of co-morbidity, the question of the appropriateness of establishing a separate diagnosis of GAD has risen (Kessler, Berglund, Dewit, et al 2002). The relationship between depression and GAD has been inspected in terms of aetiology, treatment and prognosis (Cassano 2003p 74; MacKinnon, Hoehn-Saric 2003, p115). Grant et al (2005) used a national epidemiologic survey in the USA as the data base and compared the differences of disability between GAD and other different disorders; they concluded that GAD as an independent disorder with significant impairment and disability. The most common mental disorders association with GAD include panic disorders, specific phobias and major depression disorder (Kessler, Andrade, Bijl, et al 2002; Antai-Otang, 2003b; Bandelow, 2003, p49; Grant et al 2005; MacKinnon, Hoehn-Saric 2003, p111; Andrade, Jacobi 2004; Sadock, & Sadock 2003, p 634).

The co-morbidity of GAD in Taiwan is similar (Tang, Yen 2003). In Table 2-4, based on both statistics of co-morbidity rate and odds ratio (OR), it was indicated that the most frequent co-morbid diseases with GAD are panic disorder, depression and phobias.

Table 2-4 The co-morbidity of GAD with specific psychiatric diagnoses in Taiwan

	The number of specific mental disorders combined with GAD	Co-morbidity rate**	OR***	95 % C.I.
Panic disorder	30	3.8%	40.5	19.7-83.3
Mania	9	1.1%	11.8	4.8-29.2
Major depression	53	6.8%	10.3	7.2-14.9
Minor depression	43	5.5%	7.7	5.3-11.3
OCD*	26	3.3%	6.2	3.9-10.0
Anoxia	3	0.4%	3.9	1.1-14.2
Phobia	110	14.0%	4.1	3.3-5.1
Substance abuse	2	0.3%	1.7	0.4-7.6
Organic brain syndromes	4	0.5%	1.2	0.4-3.5
Alcoholism	14	1.8%	-	-

Adopted from Tang & Yen, 2003 Epidemiology of generalized anxiety disorder in Taiwan.

OCD *: obsessive-compulsive disorders

Co-morbidity** rate: the number of specific mental disorders combined with GAD divided by the number of GAD, then multiply 100%.

OR***: statistics obtained by the following formula:

$$\frac{\text{The number of cases with the specific mental disorder combined with GAD}}{\text{The number of the pure specific mental disorder cases}} \times \frac{\text{The number of cases with GAD but without combination of the specific mental disorder}}{\text{The number of pure GAD cases}}$$

Help seeking behaviours

The help-seeking behaviour for GAD in Taiwan is shown in Table 2-5. It is noticeable that the trends across the sectors are somewhat similar. In Table 2-5, over 80% to 90% of Taiwanese GAD patients did not seek help and this corresponds to help seeking behaviour of western countries (Wittchen 2002; Bandelow 2003, p 61). However, when Taiwanese tried to seek help, western medical treatment was the priority and was several times higher than for other resources. In terms of psychotherapy, the use of psychotherapy was rare with only 3.4 % in Taipei, 1.48% in Shu-Lin and 0% in Tsao-Tun. On the other hand, the percentages of GAD patients seeking help from folk therapy were equal to or much higher than those who seek help from psychotherapy (3.4% in Taipei, 7.1% in Shu-Lin and 3.0% in Tsao-Tun). Possible explanations for the utilization rate of different resources are that not only is the

accessibility to psychotherapy poor (1.2), but also Taiwanese are not familiar with psychological approaches rooted in western culture (Yeh & Lin 2006).

Table 2-5: The help-seeking behaviour of GAD patients in Taiwan

	city			suburban			rural		
	<u>Not seeking</u>	<u>First</u>	<u>Second</u>	<u>Not seeking</u>	<u>First</u>	<u>Second</u>	<u>Not seeking</u>	<u>First</u>	<u>Second</u>
	<u>help</u>	<u>priority</u>	<u>priority</u>	<u>help</u>	<u>priority</u>	<u>priority</u>	<u>help</u>	<u>priority</u>	<u>priority</u>
	Case No* (%)	Case No (%)	Case No (%)	Case No (%)	Case No (%)	Case No (%)	Case No (%)	Case No(%)	Case No (%)
Western medicine	169(82.4)	31(15.1)	5(2.4)	301(88.5)	30(8.8)	4(1.17)	213(90.2)	21(8.8)	2(0.84)
Chinese medicine	191(93.1)	7(3.4)	7(3.4)	320(94.1)	5(1.47)	10 (2.94)	223(92.5)	3(1.24)	9(3.73)
Western pharmacy	198(96.5)	4(1.9)	1(0.48)	317(93.2)	15(4.41)	5(1.47)	225(95.3)	5(2.11)	2(0.84)
Chinese pharmacy	201(98.0)	1(0.48)	2(0.97)	323(95.2)	3(0.88)	7(2.06)	231(98.2)	0(0)	0(0)
Herb therapy	202(98.5)	1(0.48)	2(0.97)	331(97.6)	0(0)	4(1.17)	233(98.7)	1(0.42)	1(0.42)
Folk therapy	192(93.6)	7(3.4)	1(0.48)	308(90.5)	24(7.05)	1(0.29)	223(94.4)	7(2.96)	3(1.27)
Psychotherapy	196(95.6)	7(3.4)	1(0.48)	332(98.5)	5(1.48)	0(0)	232(100)	0(0)	0(0)

Case No*: Case number

Adopted from Tang & Yen, 2003 Epidemiology of generalized anxiety disorder in Taiwan.

Aetiology

The causes of anxiety disorder are complex, involving a range of theories (Table 2-6). The neurotransmitter study is the one which arguably holds promise for the future (Norman, Burrows & Olver 2003, p 659; Mitt, Noack, Steil & Hautzinger 2005; Bandelow, Wedekind & Leon 2007). Genetic techniques may uncover previously unheralded therapeutic targets. Moreover, psycho-social aspects and knowledge of the relationship between functional processes, i.e. neural circuits involved in anxiety states, is still evolving (Antai-Otang 2003b; Norman, Burrows & Olver 2003, p 675). The major contemporary theories of anxiety disorders are summarized in Table 2-6 in which theories related to GAD are highlighted.

Table 2-6: A summary of major contemporary theories of anxiety disorders

Theories	Explanation
Psychodynamic theories	Anxiety is the core concept of Freud's view of neurosis. He distinguished the concept neurotic anxiety from realistic anxiety. Freud argued that the origins of anxiety in the psychoneuroses related to the unconscious and the psychic apparatus which contain id, ego and super-ego. Freud conceived anxiety as a signal to the ego. When conflicts arise between the psychic apparatus, ego generates anxiety (Norman, Burrows & Olver 2003, p660).
Developmental theories	Developmental theory argues that anxiety experience evolved throughout humans' developmental stages. The prototypical experience of anxiety comes with the act of birth. Then the state of anxiety arose out of separation from the mother. The disappointment and longing for the mother are transformed into anxiety. In later childhood, the anxiety recurrent when confronted with strangers. In later years, such "free-floating" anxiety could readily attach to any suitable idea that relates to modern conceptualization (Norman, Burrows & Olver 2003, p661).
Personality and anxiety disorders	Earlier studies of anxious patients identified related personality associated with anxiety disorders such as premorbid social anxiety, hypersensitivity to criticism, dependence, immaturity and hysteria. Prospective studies reported that nervousness, depressiveness. Instability, inhibition, neuroticism and autonomic lability have linked preexisting personality traits to the later development of anxiety (Hudson & Rapee 2004).
Cognitive and behavioural theories	In generalized anxiety disorder, Beck (1985) suggested there is a reactivation of developmental fears regarding the person's acceptability to others, competence, responsibility and self control (Norman, Burrows & Olver 2003, p663). Covin, Ouimet & Seeds et al (2008) focused on the issue about avoidance theory of worry and GAD as worry is the crucial feature of GAD, and suggested that worry is predominantly thought activity attempting to avoid future catastrophe and functioning as a cognitive avoidance manoeuvre in response to perceived threats.
Existential anxiety	Existential anxiety is the tension that emerges between the knowledge of the inevitability of death and the wish to continue to be. Primal death anxiety is rarely presented in clinical practice and is only seen when conventional defences are take off, i.e. in dreams. Yalom (1980) suggests a number of defences used to reduce death anxiety including denial, suicidal thoughts, compulsive working, aggressive drives for power and control and rescue fantasies (by religions) (Yalom, 1980, p 135).
Neuroanatomical substrates	Based on the studies in animals, the assumption of key neural circuits is noted: signals collected from sensory organs (afferent) input into cortical brain regions by the dorsal thalamus. Next, cortical association areas then process the information. Particular brain regions have been identified as involved in fear and anxiety including the amygdale, hippocampus, entorhinal cortex, orbitofrontal cortex and the cingulated. Processing of information within these regions may explain the anxiety experience, while modulation of neurotransmitter inputs to neural circuits can account for the anxiolytic effect of various therapeutic drugs. (Norman, Burrows and Olver 2003, p664)
Neurochemical basis of anxiety	Three systems are involved in anxiety disorders: noradrenergic, serotonergic and GABA-Benzodiazepine system. Firstly, elevation of adrenaline and noradrenaline corresponds to fear reaction. Over-activity of the nucleus locus coeruleus and the ascending noradrenergic has been linked to anxiety. The locus coeruleus is the major noradrenergic-containing nucleus of the brain. Secondly, the role of serotonergic system in anxiety system is well recognized. The main cell bodies of serotonin-containing neurons arise in the brainstem and innervate virtually all cortical areas. Linked with a plethora of serotonin receptor subtypes, it is clear that the serotonergic system provides multiple anxiolytic targets. Thirdly, although manipulation of GABA levels or use of GABA agonists does not produce anxiety responses, it is clear that Benzodiazepine potentiates and prolongs the inhibitory effects of GABA at central neurons (Norman, Burrows & Olver 2003, p665).

Genetic study	Supported by large twin studies in panic disorder, GAD and phobias, anxiety disorders aggregate in families. The major source of familial risk of an anxiety disorder was shown to be genetic. The estimated heritability across the disorders was a relatively modest 30-40 percent (Williamson, Forbes, Dahl et al 2005).
Social-demographic risk factors	Social support and social position were statistically significant markers to anxiety disorders. Several common risk factors of sociodemographic characteristics associated with anxiety disorders were reported, including unemployment, low education, low income, not being married, separated-divorced and widowed behavioural inhibition and negative life events. (Grant et al 2005; Levecque, K. 2006; Cairney, Corna, Veldhuizen, Kurdyak & Streiner, 2008)

2.1.4 Treatment and prognosis

Pharmacological treatment and psychotherapy are models that benefit patients with GAD (Durham, 2004). Due to the accessibility and the rapid development of psychiatric pharmacology, pharmacotherapy has become the mainstream. As a type of psychotherapy, cognitive-behavioural treatment (CBT) is the most common for treating anxiety disorders (Haby et al 2006; Norton & Price 2007). Brief overviews about these two models and prognosis are presented below.

Pharmacological treatment model

As a result of empirical studies, the advance of pharmacology is remarkable and is a preferred option for patients who are unwilling or unable to benefit from a psychological approach (Durham 2004; Bandelow, Wedekind & Leon 2007; Whalen, Johnstone, Somerville, Nitschke, Polis, Alexander, et al 2008). Benzodiazepines, Azapirones and Antidepressants are three main classes of currently used agents, enabling a number of patients to attain remission from symptoms and experience restoration of normal function (Sadock & Sadock 2003, p635; Mitte, Noack, Steil & Hautzinger, 2005).

The medication treatment of anxiety disorders has changed considerably in prescribing practice in the last decade (Baldwin, Bridle & Ekelund, 2003, pp733-756; Durham 2004). At the beginning, benzodiazepines were used as anti-anxiety medicine and were the usual prescribed medicine; although benzodiazepines are effective in short-term treatment, the side effects associated with dependency and sedation make them not appropriate as a first-line treatment for chronic conditions (Sadock & Sadock 2003, p635). Now, in addition to traditional antidepressants such as tricyclic antidepressants (TCAs), the new generation antidepressants i.e. selective-serotonin reuptake inhibition (SSRI) and serotonin nor-epinephrine reuptake inhibition (SNRI) are used as first-line and long term treatment for GAD on the grounds of safety, tolerability and effectiveness (Durham 2004; Schmitt, Gazalle, Lima, Cunha, Souza & Kapczinski 2005).

Mitte et al (2005) conducted a meta-analysis that examined the efficacy of pharmacological treatment in GAD. Forty-eight studies (over 12,000 subjects) conducted by May 2002 and 26 drugs were included. It was concluded that pharmacotherapy was superior to placebo in all symptom categories. Azapirones and BZDs were equally effective in short-term treatment for GAD. There was no superiority of one drug class in reducing symptoms. However, the side effects of medicine are still

disadvantageous to GAD patients, such as anticholinergic effects, orthostatic hypotension for TCAs; gastrointestinal distress, sexual side effects for SSRI and SNRI (Mitte et al 2005). Furthermore, the REM stage of sleep is deprived in GAD patients when benzodiazepines are prescribed (Li 2002). Additionally, not all anxiety patients respond to treatment (Baldwin, Bridle & Ekelund 2003). Rickel & Rynn (2002) pointed out that the remission rates are still only 40%. Moreover, patients who respond to pharmacologic treatment still exhibit subsyndromal symptoms that predispose to relapse. Currently, many empirical studies have been carried out in order to provide better tolerated, safer medication and even try to prevent the relapse of GAD (Feltner, Wittchen, Kavoussi, Brock & Baldinetti et al 2008).

As discussed above, treatment of GAD has improved considerably (Durham 2004). However, GAD is a difficult condition to treat effectively and there is much room for improvement (Durham 2004; Feltner et al 2008). Cultural factor plays a vital role in terms of feature of symptoms e.g. expressed through somatic symptoms or cognitive symptoms or when evaluating whether worries about certain situations are excessive (DSM IV-R 2000, p473). In addition to these most common western treatment models, alternative therapies may benefit GAD patients as they fit in the social-cultural context (DSM IV-R, 2000, p474).

Cognitive-behavioural treatment model

As a type of psychotherapy, the overall goal of cognitive-behavioural treatments (CBT) is to teach coping skills that encourage an active, problem-solving approach to stressful events and a greater tolerance to or acceptance of anxiety symptoms (Durham, 2004). Hundreds of papers have investigated research topics related to CBT and anxiety disorders (Hunot, Churchill, Teixeira, Silva de Lima, 2007; Wells & King 2006; Pull 2007; Roemer & Orsillo 2007; Hofmann & Smits 2008). However, due to the scope of this study, only papers that incorporated GAD are included here. Moreover, results of meta-analyses are used as main sources here because they produce good quality data compared to single studies. To form a global view, meta-analyses with clear state inclusion and exclusion criteria and published in the last five years are summarized in Table 2-7.

Table 2-7: A summary of recent meta-analyses papers examining the effect of CBT on anxiety disorders

Authors (year)	Purpose	Study included	Major findings
Gould, Safren & Washington (2004)	To assess the outcome literature on CBT for GAD.	16 studies; (n=833).	<ol style="list-style-type: none"> 1. CBT tends to offer significant advantages over no treatment, a pill placebo, or a nonreactive control. The mean effect sizes for anxiety across all studies was 0.73 (Cohen; 95% CI= 0.58-0.85). 2. Combination treatment strategies, i.e. combining cognitive restructuring and relaxation, appear to have an advantage over single treatment element, although this advantage is on the order of a small effect size.
Haby, Donnelly, Corry, Vos (2006)	To determine which factors impact on the efficacy of CBT for depression and anxiety.	33 published RCT studies. Participants were adult with diagnosis of depression, panic or GAD. (n=1071).	<ol style="list-style-type: none"> 1. Cognitive behavioural therapy had an effect size of 0.68 ((Hedges'g; 95% CI= 0.51-0.84). 2. The heterogeneity in the effect sizes was fully explained by treatment, duration of therapy, inclusion of severe patients in the trials, year of study, country of study, control group, language and number of dropouts from the control group. Disorder was not a significant predictor of the effect size. 3. Cognitive behavioural therapy alone is significantly less effective for severe anxiety and depression patients. Trials that compared CBT to a wait list control group found significantly larger effect sizes than those comparing CBT to an attention placebo, but not to a pill placebo.
Norton & Price (2007)	To examine the efficacy of CBT across the anxiety disorders, thereby allowing diagnostic comparisons.	108 RCTs that met their criteria for adults with any anxiety disorder, excepting specific phobia. (n=7228).	<ol style="list-style-type: none"> 1. Cognitive therapy and exposure therapy alone, in combination, or combined with relaxation training, were effective across the anxiety disorders, with no differential efficacy for any specific diagnoses. However, when comparing across diagnoses, outcomes for GAD and post traumatic stress disorder were superior to those for social anxiety disorder, but no other differences emerged. Average weighted effect size for any type of CBT on GAD were respectively 1.8 (pre-post) and 0.21 (post-follow up). 2. CBT effects were superior to those for no treatment and expectancy control, although tentative evidence suggested equal effects of CBT when compared with relaxation-only treatment. <p>Overall, it appears that the various components of CBT, whether individually or in different combination, tend to yield strong effect sizes from pre- to post-test across all anxiety disorders (. However, none of the components of CBT evidenced long-term treatment gains from post to follow-up, suggesting that patients do not continue to improve dramatically after treatment. However, the absence of a negative effect size suggests that, overall, treatment effects tend to be sustained after treatment cessation.</p>

Table 2-7: A summary of recent meta-analyses papers examining the effect of CBT on anxiety disorders (continue)

Authors (year)	Purpose	Study included	Major findings
Hunot, Churchill, Teixeira & Silva de Lima (2007)	To examine the efficacy and acceptability of psychological therapies, categorised as CBT, psychodynamic therapy and supportive therapy, compared with treatment as usually/ waiting list and compare with one another, for patients with GAD.	Twenty five studies randomised and controlled trials in non-inpatients settings, involving adults with a diagnosis of GAD. (n=1305)	<ol style="list-style-type: none"> 1. CBT approach is effective than treatment as usually/ waiting list in achieving clinical response at post-treatment (relative risk 0.64, 95%CI 0.55-0.74), and also in reducing anxiety and depression symptoms. 2. No studies conducted longer-term assessments of CBT against treatment as usually/ waiting list. No significant difference in clinical response was indicated between CBT and supportive therapy at post treatment (relative risk 0.86, 95%CI 0.70-1.06) 3. The body of evidence comparing CBT with other psychological therapies is small and heterogeneous, which precluded drawing conclusion about which psychological therapy is more effective.
Covin, Ouimet, Seeds & Dozois (2008)	To examine the effectiveness of CBT on GAD by using inclusion criteria of cardinal symptom as outcome variable.	Ten studies included that using Penn State Worry Questionnaire as the main outcome variable. (n=528)	<ol style="list-style-type: none"> 1. Previous meta-analyses assess the efficacy of CBT for GAD by using general anxiety scale such as Hamilton Anxiety rating scale but the cardinal symptom of GAD did not measure appropriately. When stringent inclusion criteria were employed, a large overall effect size was moderated by age and modality of treatment (Hedges'g Effect sizes -1.69 for young adults group; -.82 for older adults) (Effect sizes for individual therapy-.72; for group therapy-.91). 2. The largest gains were found for younger adults and for individual treatment, and overall maintenance of gains at 6 and 12 month follow up (Effect sizes of 6 month follow-up, young adults -.009, old adults -.12; Effect sizes of 12 month follow-up, young adults -.027, old adults-.23).
Hofmann & Smits (2008)	To review the efficacy of CBT versus placebo for adult anxiety disorders.	27 randomized placebo-controlled trials studies. (n=1496).	<ol style="list-style-type: none"> 1. Random-effects models of completer samples yielded a pooled effect size of 0.73 (Hedges'g; 95%CI=0.88 to 1.65) for continuous anxiety severity measures. The pooled odds ratio for completer treatment response rates was 4.06 (95%CI=2.78 to 5.92). 2. The strongest effect sizes were observed in obsessive-compulsive disorder and acute stress disorder, and the weakest effect size was found in panic disorder. 3. The advantage of CBT over placebo did not depend on placebo modality, number of sessions, or study year.

As can be seen in Table 2-7, five out of six papers support CBT as effective for anxiety disorders including GAD. According to these meta-analyses papers, the effect sizes reported were between 0.21 and 1.80 and three of them reported around 0.70 indicating fairly good efficacy of CBT for anxiety disorders.

However, only English papers were included in the meta-analyses; papers published in other languages were excluded. Additionally, disagreements can be noticed between conclusions in these meta-analyses papers. For example, Norton & Price (2007) reported that higher weighted effect sizes were gained for diagnoses of GAD and post-traumatic stress disorder, while Hofmann & Smits (2008) pointed out that strongest effect sizes were observed in obsessive-compulsive disorder and acute stress disorder. Several reasons may explain these discrepancies. Gould, Safren & Washington (2004) pointed out three challenges could arise when carrying out meta-analyses of CBT: the heterogeneity of interventions, the heterogeneity of the control groups and the variation of core features of GAD (i.e. chronic worry versus anxious arousal). Likewise, focused on GAD, Covin et al (2008) stressed that cardinal symptom of GAD (pathological worry) should be considered as an indispensable outcome variable rather than using general measurements of anxiety. The directions for further studies regarding the effect of CBT on anxiety disorder were suggested: to maximize the therapeutic effect after treatment courses ceases (Norton & Price 2007; Covin et al 2008); to identify the key components that produce therapeutic effect (Gould, Safren & Washington 2004; Haby et al 2006; Norton & Price 2007); to compare non-CBT models to find out the most appropriate forms in treating GAD (Covin, et al 2007); and to understand the relative factors such as individual and cultural difference (Haby et al 2006).

To conclude, seeking for a suitable psychotherapy model for patients with different anxiety diagnoses is a constant goal and CBT can benefit patients with anxiety disorders generally. However, there are some patients who cannot benefit from CBT and to find an alternative way to benefit them is important.

Prognosis

The prognosis of GAD is chronic, fluctuating and often worsens during times of stress (DSM-IV, 2000, p474); that is, GAD features with frequent recurrences, significant morbidity and long-term treatment (Antai-Otang 2003b). Durham (2004) pointed out several factors associated with poor long-term outcome: comorbid anxiety and depressive disorders, combined with personality disorders, high symptom severity, poor social adjustment, low socioeconomic status and unemployment. Due to the course of GAD intensive therapy and long-term management are needed, including educating patients about the nature of GAD and how to manage it over the short and long term.

2.1.5 Summary

According to epidemiological surveys, GAD is one of the most common mental disorders in different societies. In Taiwan the epidemiological rates are even higher (2.1.1). Due to the chronic tendency of GAD, the economic burden from GAD is heavy (2.1.2-2.1.3). Modern treatments of GAD have improved considerably over the last decade but not all patients can benefit from the current treatment models. Patients with GAD still suffer from symptoms and especially are subject to recurrence (2.1.4). Seeking an alternative and self control way to manage GAD symptoms seems a reasonable way to improve their quality of life (van der Watt, Laugharne & Janca 2008). In the successive section Zen meditation is introduced as a possible way to help to manage the symptoms of GAD as it fits the cultural context of Taiwan.

2.2 Meditation

It was found that the literature focused primarily on Zen meditation was rather limited. Taking the database, Ovid MEDLINE® as an example, in June 2008 using ‘meditation’ as the key words in the title during the period of last five year block, the number of related papers came out at 176, while using ‘Zen meditation’ as key words in the title the number of results showed six. Given that various meditation types have shared features, it was decided that the scope of discussion should be enlarged to allow enough information related to meditation more generally to be presented.

Several aspects regarding meditation incorporated in this section are: the brief history of Zen meditation, different types of meditation, techniques and skills, the process of meditation, the nature of research evidence, the effects of meditation, qualitative research findings of meditation, and lastly, the researcher focus on the issue of meditation and anxiety disorders as this is the main scope of this study.

2.2.1 Brief history of Zen meditation

This section aims to outline the background of Zen meditation: the relationship between Zen and Zen meditation, the development of Zen in China and finally Zen meditation in modern Taiwan.

Zen and Zen meditation

Zen is one of the major branches of Mahayana Buddhism (greater vehicle) also named Zen Buddhism. In fact, the modern word ‘Zen’ has evolved over the centuries. In India, initially the Sanskrit word for meditation was *dhyana* meaning ‘enlightened one’. This evolved into the phrase ‘Chan-Na’, and then into the Chinese ‘Chan’. Later, ‘Chan’ was disseminated from China to Japan by Buddhists in the Tang and the Sung dynasties (918-1127) which was the peak period of Buddhism interflow between China and Japan. The Japanese pronounced it ‘Zen’. After that, ‘Zen’ came to stand for the school of Zen Buddhism that emphasizes meditation (Austin 1999, p7-10).

As an ancient sect of Buddhism in China, Chan (Zen) distinguished itself from many early Buddhism branches by de-emphasizing scriptural studies and giving up esoteric practices (Austin 1999, p9; Gu 2006, p33). For example, traditionally a monk or nun needs to live a monastic life in order to be a Master including, living in a formal institution and studying scriptures. Dissimilar to traditional Buddhist branches, Chan (Zen) teachers abandoned thought-forms and fixed ideas in Buddhism scriptures because scriptures are not Buddha itself but merely a production (Gu 2006, p35) and misconceptions may happen if one learns Buddhism by reading scriptures literally. Chan (Zen) Buddhism breaks the limitation of language, creates a living religion and brings it to personal immediacy (Gu 2006, p9).

Austin (1999, p11-14), an American neuroscientist, describes several concepts to illuminate the ideas of Zen: Firstly, Zen emphasizes meditation as a way to enlightenment. This spiritual awakening focuses on one thesis: we coexist with the universe. This central theme is implied in the term *Maha-prajna-paramita*. *Maha* means great; *prajna* means insight wisdom; *paramita* implies reaching that other shore, the place where there is neither attachment to living nor fears about dying. The term points to that profound insight which frees one from all suffering caused by selfish, egocentric concerns. Secondly, Zen values the simple, concrete, living facts of everyday direct personal experience. Zen training encourages the instantaneous, uncluttered awareness throughout everything else in the here and now and appreciates each moment's sacramental quality. Thirdly, Zen stresses self-reliance, self-discipline and personal effort. Zen deemphasizes not only those behaviours that self-centre from the inside but also any authoritarian doctrines from the outside that might interfere with self-realization. Overall, Zen Buddhism challenges preconceived ideas so students may be free from prejudice and are able to see their own true nature clearly; thereby unnecessary worry around their life can come off and make a liberated life possible (Suzuki, Dixon & Smith et al 1970, p129; Sheng Yen 1995, p 126).

Zen meditation is a practice of Zen. The techniques of meditation stem from ancient yoga practices (Austin, 1999, p 9). It is expected that by practising Zen meditation the practitioner can reach the goal of Zen. In other words, Zen meditation is a pathway that helps the practitioner to cultivate themselves in many psychological, spiritual and religious traditions (Caspi & Burleson 2005; Kelly 2008). Due to the importance of Zen meditation, a term 'ZaZen' is used to refer to the whole process of Zen meditation practising. In the meantime because of the close relationship between Zen and Zen meditation, the term Zen and Zen mediation are often used interchangeably. In this study, Zen is used throughout this thesis.

The development of Zen in China

Chan (Zen) has evolved further in China since it originated in India 3000 years ago. Zen mixed well with Chinese culture and this helped Chan (Zen) develop into one of the main branches of Buddhism.

Chan (Zen) Buddhism features strongly with Chinese culture and the concept of Chan has evolved with Chinese history (Austin 1999, p7; Gu 2006, p 3).

Zen was first introduced to China by the Indian monk Bodhidharma in the year 520 who then was regarded and is respected as the first patriarch of Chinese Chan (Zen) Buddhism. He wrote the quatrain below which expressed the original ideas of Chan (Zen) and also presented its unique essence during the earliest period.

*“A special transmission outside the scriptures
Not depending on words and letters
Direct pointing to the human soul
Seeing into one’s own nature, to reach Buddhahood.”*

---- (Translated by Austin, 1999, p8).

In China, Chan (Zen) inevitably drew its ethical base from indigenous traditions such as Taoist philosophy (400-300 BC) and Confucian thought (551-478 BC). This helped Chan (Zen) thrive well in the Chinese social context. Taoist philosophy and Confucian theory are the two most fundamental traditions in China. The way of Taoist philosophy is nothing less than the basic, unchanging, motionless principle underlying and pervading the whole dynamic universe. Tao highlights a life lived simply and spontaneously within the oneness of nature. Another philosophy, Confucian originated by Confucius stressed realistic and middle way principles. Certain values are highly regarded such as filial piety, respect teachers and elders, harmony relationship, scholarship, hard work, thrift, and perseverance.

After the first patriarch, Bodhidharma, the tradition and the essence of Chan (Zen) were passed down to the following patriarchs. During nearly 1,500 years of development, the content of Chan (Zen) changed over time. At the same time, different schools of Zen Buddhism evolved gradually. Gu (2006, p25) acknowledged that among several Buddhism branches that had imported from India such as Mea-Buddhism and Hwu-Yen branches, Chan (Zen) Buddhism is the most successful transplant in China from India. Gu (2006, p36-186) summarized the long history into six phases. Different content and characteristics associated with each phase are illustrated in his work. The researcher condensed the six phases of history in Table 2-8 with integration the ideas from Yang (2008, p55-176).

This brief history of Zen meditation provides a longitudinal view regarding its origin and how it developed in China over 1500 years. This background of Zen meditation in China is a shared foundation of Zen meditation in Taiwan.

Table 2-8: Six phases of changes of Zen in China

Phase of change	Content	Context
Bodhidharma(?-528)- First change	Enlightenment is very individual. Zazen and avoid human world is the way to enlighten. Calm or still mind is the major principle but this can not be teaching by any words. Once you try to explain it you miss it. Enlightenment is far beyond that words can reach. Wisdom is able to see things as if itself.	Very rare documents can be found about Bodhidharma. He was deified and at the same time his existence was also been questioned. However, when the Dunhuang caves and frescoes were revealed his position in Chan (Zen) history is into position.
Tung-Shan Zen- Second change	Teachers in 'Chan' school focused on direct, concrete, everyday life experience and used simplest, earthy examples to train their students. The most distinguish part in comparison to the first phase of Chan (Zen) is institutionalization as the teaching of Chan (Zen) in first phase was on an individual bases.	By Institutionalization Chan became flourishing and compatible to other religious schools at that time. This is the golden age of 'Chan', because the Tang dynasty (618-907) provided prosperous economic and steady political background. Additionally, Buddhism scripture are easier to access as the transport to India was open wide.
Northern Chan (Tsao River Zen)- Third change	Sean-Shu Master is the representative of Northern Chan. Tsao River school is derived from North Chan and is the represent of North Chan in which emphasized gradual, incremental enlightenment methods. Tsao River school which was rather modest and the temperaments are less activist. They believed that certain procedures are the necessary pathway for earning insight or wisdom of Chan. This procedure including control mind then being calm and development wisdom.	In this period Chan (Zen) meditation became well developed and the techniques of 'Chan' were further developed by masters. However, North Zen and South Zen are very different in terms of philosophy and techniques as left column. The leader of North Chan was revered by the emperor at that time thereby the momentum of the North Chan was superior to South Chan. After an eight year An-Shu political turmoil happened, the leadership of Chan (Zen) Buddhism was shift to South Chan (Zen).
Southern Chan (Zen)- Fourth change	Hui-nan Master is the symbol of Southern Chan. Two major schools, Lin-chi (name after the Master) and Wei-yuan, were born. Compared to the Northern Chan these schools were much activist in terms of temperaments. For example, Zazen (meditation) was less stressed but vigorous methods, such as shouting and beating was used. Additionally, Koan, a riddle, was employ to inspire Chan (Zen) students to develop wisdom. An example of Koan like: "who is the person sitting (meditating) here?" Sudden enlightenment is stressed and there is no certain pathway to peruse.	(Lin-chi imported to Japan and then named Rinza in Japan)
Song-Yuan-Ming-Ching (dynasties) Chan (Zen)-Fifth change	Three characteristics constitute this period include: legitimization, patterning and scholarliness. Chan (Zen) Buddhism gained the recognition from the governments of these dynasties. Chan (Zen) Buddhism became orthodox. The way of passing down tradition from the previous patriarch to Many classic books related to Chan (Zen) were published during this period but some of them were annotation. 'Literal Chan' is main feature of this phase and ironically this is opposite to the original ideas- not depending on words and letters.	After Sung Dynasty (960-1279), the governments developed more close relationship with Chan (Zen) schools. For example emperors provided economic support but also applied more complicated system institutionalize. Consequently, the nature of Chan such as creative, free and diversification is deteriorating. However, the spread of Chan (Zen) around territory of China is successful.
Contemporary Zen-Six change	The meaning of the Six-change of Zen is making Zen become world-wide. Daisetz T. Suzuki (1870-1966) worked as a bridge to introduce Zen ideas into western societies. Mastering several languages, Zen master D.T. Suzuki had published 90 books in Japanese and over 30 books in English introducing eastern culture to Western societies. Several issues in his publications included Tao philosophy, Buddhism scriptures, Japanese culture and mainly Zen ideas. D.T. Suzuki mainly succeeded to Southern Zen school but especially with a world vision. He was able to integrate the terms which are acceptable by both eastern and western societies. For example, he used the idea 'conscious' to interpret Zen experience. He opined that Zen is cosmic unconscious or ontological unconscious which is the highest level of Zen. When an individual able to reach a level of 'no-thought', 'Buddha nature' or 'inner nature' will able to yield a Zen life (Yang, 2008, p315-319).	After World War II, people started to reflect on the power of science and to wonder whether human have come down to the machinery. Based on this background, eastern culture that varies from western culture has gained the attention from Western societies. Western culture emphasised dualism while eastern stresses on oneness. The key Chan (Zen) Master who pushes Zen into world's stage is not anyone who comes from Chan's home town yet from its neighbour Japan. The import of Chan to Japan can trace back to the time of Tsao-River and Lin-chi schools. Both schools were well adapted and flourish under the emperors in Japan's capital Tyoto. Zen was then integrated well with Japan culture such as poem, art, gardening, tea making, Ju-do and Kendo.

Adapted from Gu 2006. Six phases of changes of Zen. Taipei: San-Ming.

Zen meditation in modern Taiwan

Taiwan is closely related to China culturally. Not only do they use the same language but also share history, social customs, belief systems and religious background. Thereby the profound impact of Buddhism in Taiwanese societies is as much as it is in China. Buddhism arrived in Taiwan with successive waves of Chinese immigration (Jones 1996). After World War II Buddhism thrived in Taiwan while in China all religions were suppressed due to Maoism. The study of Chan (Zen) history in Taiwan started around the early 1920s when Hu (1927) examined the historical evidence of the first patriarch and restored Bodhidharma place in terms of Chan (Zen) Buddhism in China (He 2007).

Currently, there are four main Buddhist societies which influence Taiwan society, i.e. all these Buddhist societies publish periodicals and some of them own medias. These four societies are located respectively in the north, middle, south and east Taiwan, namely Dharma Drum Mountain, Chung Tai, FoGauang Shan and Tzu-Chi. The first three Buddhist societies provide Zen meditation courses on a regular basis year-round while the last one emphasizes devotion to charity work instead of self cultivating. In addition to these four Buddhist societies, some other smaller Buddhist societies also provide Zen meditation programmes that claim Zen meditation as their distinguishing feature, i.e. Ling-Jiou Mountain Buddhist Society (<http://www.ljm.org.tw>). The branches of these Buddhist societies are distributed all over Taiwan and even overseas. Additionally, there are a considerable number of scholars devoted to Buddhist-related studies. Latter, a lack of integration in Buddhism study was noticed. Therefore, The Centre for Buddhist Studies (<http://buddhism.lib.ntu.edu.tw>) was established by the National Taiwan University to promote research of Buddhism especially for interdisciplinary study.

Since Buddhism is one of the main religions in Taiwan, ample opportunities with a range of options in types are easy to access for people who want to learn meditation. The types of meditation available in Taiwan include Vipassana meditation, Tibetan Buddhist, Zen meditation and even meditation that highlighted with no religious background (<http://taiwan.acem.com>; <http://letsgo.net.tw>).

Generally, the Zen meditation programmes provided by Buddhism societies are designed for adults both female and male. An essential level of physical and mental health is required such as without serious condition of hypertension or heart diseases, mental diseases and able to participate in running (fast walking) meditation. Different packages of courses are designed to meet the different needs of learners. For example, the most common programmes are carried out on weekends so most employers can participate. Three to four day Zen retreats are held on holidays. Among these various types of programmes the seven-day retreat is regarded as the most traditional one (Sheng Yen 1995, p46). Different levels of Zen meditation courses are also divided in order to fit in with the different levels of learners. These programmes are delivered by venerable masters who are experienced in Zen meditation. In addition, Zen meditation can be delivered to an organization or a company which

makes a request to a Buddhism society. The importance of long term and daily life practising are emphasized by all these societies. Learners are encouraged to participate in meditation practice weekly at a convenient branch near their home so they can have group support to keep practising regularly and obtain benefits.

2.2.2 Different types of meditation

Zen meditation is one of the major types of meditation. A comparison of different types of meditation is shown in Table 2-9. As noted before, different types of meditation have evolved over time in different societies and different cultures. For example, Zen meditation developed in China, Japan and Taiwan but Tibetan Buddhism is dominant in Tibet (Hankey 2006). On the other hand, culture may affect the choice between different types of meditation. For example, western societies appear to favour ‘mindfulness meditation’ in which Mindfulness Based Stress Reduction, a standard 8 week programme designed by Kabat-Zinn in the USA in 1987 (Carlson, Speca, Patel & Goodey 2003; Davidson, Kabat-Zinn, Schumacher, Rosenkranz, Muller et al 2003; Koszycki, Benger, Shlik & Bradwejn 2007; Toneatto & Nguyen 2007). In other words, mindfulness meditation tends to be adopted better than the others types of Zen meditation by western societies.

Table 2-9: Comparison of different types of meditation

Types	Characteristics
Mindfulness meditation	Mindfulness is synonymous with awareness or insight. Mindfulness practices involve allowing any thoughts, feelings, or sensations to arise while maintaining a specific attentional stance: awareness of the phenomenal field as an attentive and non-attached observer without judgement or analysis. The aim is to cultivate stable and non-reactive present moment awareness (Cahn & Polich 2006; Carlson et al 2007).
Transcendental meditation	Mantra is used to guide apprentices to focus their attention; when thoughts stray away return to mantra. The goal is to train attention from active to tranquillity, because the mind of an individual is usually active or even agitated (Arias, Steinberg, Banga & Trestman 2006).
Zen meditation	The student of Zen sets aside a portion of the day to sit motionless, concentrate and focus on one’s own breathing. The aim of this concentration is to suspend the flow of ordinary thoughts without falling asleep or going into a trance. Zazen is the practice system to reach Zen (Lesh 1970; Austin 1999, p13).
Tibetan Buddhist	Performed specifically for spiritual, not-health-related, purposes. Practitioners initially focus their attention on a visualized image associated with clarity of thought and a loss of usual sense of space and time (Hankey 2006).
Sahaja-Yoga	Sahaja-Yoga meditation claims to relax the sympathetic nervous system by activating parasympathetic-limbic pathways the relax body and mind. It consists of two parts: thoughtless awareness and self-affirmations (Arias et al 2006).

In Table 2-9, the characteristics and approaches among different types of meditation vary. However, Cahn & Polich (2006) identified a shared characteristic among different types of meditation--regulation of attention; that is, regulation of attention is the central commonality across these divergent methods. Meditation is described as a practice that self-regulates the body and mind, thereby affecting mental events by engaging a specific attention set (Cahn & Polich 2006; Krisanaprakornkit, Krisanaprakornkit, Piyavhatkul & Laopaiboon, 2008). Likewise, Arias et al (2006) pointed out that the term ‘meditation’ should be limited to only the technique that achieves ‘thoughtless awareness’ as authentic qualities. This quality refers to the ability to focus attention on

the present moment and directs attention away from dwelling on “the unchangeable past or undetermined future”. The essence or the quality of meditation, like the ability to reach “no-thought” status, is also a point that highlighted by Sheng Yen (1995, p 16): if a person meditate but full of day dream in one’s mind then it is useless.

As discussed above, there are different characteristics among different types of meditation but also shared commonality coexisted (Table 2-9). This seems confused. However, this should be understandable because different types of meditation put different emphasis on different points. For example, Tibetan meditation emphasizes the cultivation of the spiritual aspect while Zen meditation focuses on enlightenment and daily living experiences (Sheng Yen 1995, p 18). Two other approaches used to help to describe the diversity of meditation types are namely concentrative and mindfulness. In other words, various meditation types (Table 2-9) are located at some points on the spectrum of concentrative and mindfulness (Cahn & Polich 2006; Krisanaprakornkit et al 2008).

Overall, it can be concluded that meditation is a state of ‘mental silence’, featured by the elimination of unnecessary thoughts, and alert awareness (Jain, Shapiro, Swanick, Roesch, Mills, et al 2007). Based on this mutual ground, the research findings from different types of meditation may be used when there is little study on a given area. For the purposes of this study, no qualitative study of Zen meditation was found.

2.2.3 Techniques and skills of Zen meditation

Basically, Zen meditation trains one’s attention. The special techniques for training attention are simple but actually arduous. According to Austin (1999, p75) four steps involved in the skills are: (1) the eyes are directed straight ahead and down on a small area; (2) the lids are slightly lowed; (3) the inner sounds of numbers are silently counted out from one up to ten, then starting again; (4) each number links with each successive exhalation. However, Zen meditation methods may have slight differences according to different sources. For example, in terms of step 1, Master Sheng Yen (1995, p35), one of the current religious leaders in north Taiwan, provides different ways of Zen meditation practice including fully closing eyes but when a practitioner feels drowsy, eye lids can open slightly.

Details of Zen meditation practice are elaborated in the book ‘Master Sheng Yen teaches Zen meditation’ (1999, pp35-41): (1) to prevent one from habituating of counting and eventually losing attention; one may count numbers backwards from ten to one. The upwards and downwards counting can be used alternatively. (2) Counting should synchronize with breathing out. (3) Adopting a comfortable sitting position, neither rigidly straight nor humpbacked. Relax shoulders and gently place hands on both thighs. Choose a suitably hard cushion that can support your back. (4) Selecting a time of vigour to meditate instead of a time that you are weary. (5) Setting up a suitable environment: mute the telephone, keep good ventilation of the meditation room (breeze is acceptable but not windy), keep body warm especially in winter i.e. covering legs by a blanket is suggested. (6)

Adopt a healthy manner to meditate, i.e. do not expect magic powers; do not crave for rapid progress. Just sit calmly. In fact, the true sense about what Zen meditation really is is when one can begin to breathe with joy, simplicity and feels that whole body is light and stable. Above all, the master emphasizes that if any reader wants to learn Zen meditation by reading then he or she is just adds nonessential knowledge. The ultimate way to learn Zen meditation is by practising.

Another alternation of Zen meditation is 'Walking Zen' and this was introduced early in the Tang Dynasty (618-907). Sheng Yen (1999, p 42) suggests walking Zen is an option for a practitioner who finds it hard to concentrate in a sitting position to practise Zen meditation. The practice of walking Zen requires a practitioner to pay full attention to the touch between sole and the ground: the heel, the arch and the frontmost part of a foot. When a practitioner concentrates on the feeling of touch, walking then proceeds on a very slow speed, as a result the wandering mind can be restrained on the every action of walking. Master Sheng Yen (1999, p 43) further states that different learners might adopt different ways to practise Zen meditation which are more suitable to his or her own nature in order to have better results.

Although there are other types of techniques in terms of Zen meditation, in this study, sitting style Zen meditation was adopted. This is because, firstly, sitting Zen meditation is the traditional one. Secondly, in the design of the Zen meditation programme (Appendix II) warm-up exercises were performed by participants before the sitting Zen meditation started.

2.2.4 The process of meditation

The process of meditation has not yet been studied adequately. The most common areas studied focus on its physiological measurements and effects on health (Arias et al 2006; Cahn & Polich 2006; Krisanaprakornkit et al 2008). Two rationales may likely explain this study gap. Firstly, the main concern for most researchers is physiological evidence or its clinical application, such as neurotransmitters, pain response, distress (Solberg, Holen, Ekeberg, Osterud, Halvorsen et al 2004; Wachholtz & Pargament 2005), blood pressure (Canter & Ernst 2004; Anderson, Liu & Kryscio 2008), anxiety and mood symptoms (Toneatto & Nguyen 2007) and cancer care (Ott, Norris & Bauer-Wu 2006, Smith, Richardson, Hoffman & Pilkington 2005).

Secondly, the drop out rates and monitoring the situation of how subjects practise meditation outside the programme are factors that make the study of meditation process difficult. For example, in Krisanaprakornkit et al's (2008) Cochrane review the dropout from the two included eligible studies was high (33%-44%). Furthermore, Caspi & Burleson (2005) questioned that the self reported compliance rates reported, may not present the quality and durability of meditation practice factually. As a result, the study of the process of meditation is lacking. Therefore, the researcher traced back 15 years to allow enough information to discuss. Two available sources (eastern and western) regarding the meditation process are described here.

Sheng Yen (1995, p77) pointed out that the mind of a Zen meditation practitioner will go through four stages: roaming, concentrating, stillness and then enlightenment. He also emphasized that the progress of meditation varies from one practitioner to another; that is, some maybe faster and some may stuck in one of the stage. Another Master Pumin in China in the Ming dynasty (1368-1661), used a metaphor of cow taming with ten pictures and poems (Appendix III) to illuminate the process of Zen meditation conceptually (Suzuki 1923, pp176-195; Lin 2005).

Based on reviews of several studies on consciousness and personal experiences, Austin (1999, p299) identified nine states of consciousness to describe the various stages within the meditation process from the stage of 'normal waking consciousness' to 'ongoing enlightened traits'. These states of consciousness within the process of meditation have been classified by different criteria as can be seen in Table 2-10. Yet, not all the criteria used in the original text are included in Table 2-10. The rationale for this adaptation is that original table was used to provide a conceptual framework for dialogue and is rather arbitrary. These nine categories are neither standard nor equidistant physiologically. They can be further subdivided and it is a continuing process, showing a spectrum of consciousness states from the basic forms of consciousness to the advanced one.

In Table 2-10, the terms in the first column 'type of awareness' means that an individual perceives the environment from two sources, external (out side of body) and internal (come within inside of body). For example, in ordinary waking states an individual can be aware of the stimulations that come from both internal (i.e. hungry) and external (i.e. traffic signals) while in desynchronized sleep the awareness of external is blocked. The second column 'awareness of ...' is a list regarding the content of awareness. The third column 'Intensity of awareness' refers to how much intensity we will apply and whether we will direct it inward or outward. Neurologically, intensity adjusts the amplitude of an EEG and it starts with the subliminal, grows to a bare awareness, and culminates in that extraordinary hyperawareness called absorption (Austin 1999, p 304). The next column, 'Usual, experiencing, bounded self' refers to awareness of our physical self or sensate physical self. The last column, 'Sense of time and place' refers to the orientation of time and space. Overall, Austin (1999, p 305) highlighted that the meditation process is suitable to be regarded as a prolonged change in traits rather than a brief change in states.

Table 2-10: Ordinary and meditative states of consciousness

Stages/characters of consciousness	Type of awareness	Awareness of...	Intensity of awareness	Usual, experiencing, bounded self	Sense of time and place	Comments
I/Ordinary waking states	External and internal	A flow of perceptions, thoughts, feelings, and images	Usually 2-3	4-5	4-5	May be interrupted by daydreams and by other periods during which there is a variable access to the usual self
II/Slow-wave sleep	External and internal	Usually no content	0-1	0	0-1	A few normals may have vivid hallucinations during transitional phases when going in or out of sleep
III/Desynchronized sleep	Internalized	Vivid, imaginative dream material during REM episodes	1-2	0-1	0-1	Rarely, dream material yields a comprehensive, solving insight
IV/ Levels reached during concentration and receptive meditative modes <u>Shallower</u> <u>Deeper</u>	External and internal	Recurrent thoughts, sensations	1-2	2-3	2-3	More reproducible; with regular practice, a feeling of relief may occur
	External or internal	Transient thoughts, sensations; later, no thoughts	1-2	1-2 transient	1-2 transient	Approaching shallower levels of absorption, there occurs a feeling of becoming continually one-pointed
V/Heightened, emotionalized awareness without sensate loss	External and internal	Sensate impressions, peace and joy	3	1-2	1-2	A heightened plane or "plateau" experience (Maslow); epiphany
VI-A/Absorption without sensate loss: external absorption	Focused on some external source, or on personal action	Ongoing events	3-4	1-2	1-2	Variable in degree; heightened awareness is not emotionalized (play absorption)
VI-B/Absorption with sensate loss: internal absorption	Internal focal and contracted diffuse and expanded Ambient	Awareness itself, permeated with black, Silent space	4-5 Absorption is held	0	0	More common after concentrative meditation approaches; sensate loss is distinctive; variable in depth, duration, quality
VII/Insight-wisdom	External; eternal	Suchness One-ness	4	0	0	Enlightenment, awakening, seeing into your true nature
VIII/Ultimate being, beyond expression	Ultimate source	Primordial emptiness, a groundless void beyond oneness	5	0	0	Rare experiences, beyond seeing and knowing; pure being, beyond subject and object
IX/The stage of ongoing enlightened traits	Unbounded external and internal	The suchness of all things	3	Free access without limitations	Free access without bounds	So in the flow of events that positive things happen with a light touch

0 = none; 5 = maximal

Adapted from Austin (1999): Zen and brain pp300-303

2.2.5 Nature of the evidence regarding meditation studies

The topic of meditation has drawn attention from many researchers since the 1960s and different aspects of meditation have been studied by various disciplines, such as neuro-physiological study, cancer research, cardiac-vascular diseases, blood pressure, cognitive function and mental health (Canter 2003; Davidson, Kabat-Zinn, Schumacher, Rosenkranz & Muller 2003; Kim, Moon, Kim, Jung & Park et al 2005; Cysarz & Bussing 2005; Grossman, Niemann, Schmidt & Walach 2004; Smith et al 2005; Cahn & Polich, 2006; Koszycki et al 2007; Pagnoni & Cekie 2007; Jain et al 2007; Anderson et al 2008). The volume of research regarding meditation is huge; there are over 670 papers related to meditation during the five year block (2002-2008). However, only few papers were qualitative studies (2.0.1). The considerable numbers of quantitative studies allow systematic reviews, meta-analysis and Cochrane reviews to be conducted (Smith et al 2005; Toneatto & Nguyen 2007; Krisanaprakornkit et al 2008). Three major characteristics of the nature of meditation research can be drawn from the previous evidence: methodological issues, inspecting different aspects of meditation intervention and seeking the essential elements within various types of meditation.

Methodological issues

Methodological issues are the most prominent issue regarding the quality of meditation study in terms of methodological rigour. Traditional measures of scientific quality, such as RCTs, have been used as a critical framework to examine the reliability of research findings (Arais et al 2006; Ospina, Bond, Karkhaneh, Tjosvold & Vandermeer et al 2007; Toneatto & Nguyen 2007). The most common critique regarding meditation research is the absence of rigorous study design, as trials of meditation never control for systematic differences between people who elect to learn the technique and those who do not; and between people who persist with the practice and those who abandon it (Canter 2003). The number of subjects is small, with no control groups, without true placebo control, lack of follow-up data, no randomization (Kelly 2008; Ospina et al 2007; Van der Watt et al 2008; Toneatto & Nguyen, 2007). The need for more RCTs in meditation research is strongly addressed in order to prove clear a causal relationship between meditation practice and outcome variable(s) (Smith et al 2005; Toneatto & Nguyen 2007; Ospina et al 2007).

Nonetheless, it seems that research with better study rigour have appeared recently. For example, two studies in the USA used matched control groups to compare the efficacy of meditation: Pagnoni, & Cekie (2007) investigated age effects on grey matter volume and attentional performance and, Kim et al (2005)'s studying on serum nitric oxide activity and lipid peroxidation. In South Korea, an active control (education) group was used to compare the effect of meditation-based stress management programme as adjunct to pharmacotherapy in patients with anxiety disorders. Likewise, in Canada, Koszycki et al (2007) conducted a randomized trial in which intention to treat (ITT) group, cognitive-behaviour group therapy and meditation-based stress reduction programme were used to exclude confounding factors so effectiveness of different interventions can be seen clearly.

In Germany, a randomized, double-blind, controlled study was conducted to examine promoting mindfulness in psychotherapists in training influences the treatment results of their patients (Grepmaier, Mitterlehner, Loew, Bachler & Rother 2007). To summarize, methodological critiques may help the later researcher to improve their study design. In this way, the efficacy of meditation may become clearer.

Inspection on various aspects of meditation intervention

The second feature of the nature of the evidence for meditation is to inspect meditation as an intervention for clinical applications (Caspi & Burleson 2005). After accumulation of meditation studies a fundamental question arises; that is ‘are the aspects of meditation as a clinical intervention entitled ‘meditation’ exactly the same i.e. lengths and types of meditation interventions?’ Caspi & Burleson (2005) examined aspects of meditation applied in research and pointed out that meditation is actually a multifaceted intervention, ‘a mixture of specific and not-so-specific elements of therapy’, resulting in a difficulty to standardize, quantify, and validate for research subjects. For example, the length of meditation programmes among studies varied between 6-18 weeks (Grossman et al 2004; Krisanaprakornkit et al 2008). Mindfulness based stress reduction (MBSR) (Table 2-9) is designed as a standard intervention but modification was made by different researchers in order to suit their individual circumstances (Lee, Ahn, Lee, Choi & Yook et al 2007; Weiss, Nordlie, & Siegel 2005). Some studies failed to adhere to the original design of MBSR appropriately as found in a review of 9 out of 15 papers (Toneatto & Nguyen 2007). Additionally, the situation of subjects’ home practice remains an uncontrollable variable because it is hard for researchers to measure or to monitor (Toneatto & Nguyen 2007). In brief, it appears that the term ‘meditation’ is an umbrella under which diverse meditation models are used resulting in the difficulty of drawing a universal agreement about the effects of meditation (Arias et al 2006). Mixed quantitative-qualitative methods can be one of the possible solutions to manage the variability of meditation intervention (Caspi & Burleson 2005).

Seeking the essential elements within various types of meditation

The third feature of the nature of the evidence for meditation is attempting to identify the essential elements of meditation or what are characteristics of good quality of meditation practice. This has been given attention by researchers because to define the essential quality of meditation should help to understand the disagreement between the wide ranges of studies. Caspi & Burleson (2005) pointed out that there are currently no gold standard physiological measures that would serve as a signature for the quality of meditation, and compliance with meditation instructions does not necessarily mean quality meditation. In short, researchers recently started trying to identify key elements of meditation practice across studies. Furthermore, Arias et al (2006) discussed the topic ‘what is meditation’ and assumed that the term “meditation” should be narrowed and refined to include only techniques that have certain ‘authentic’ traditional qualities. ‘Authentic’ traditional qualities should be identified by achieving a well-defined state called ‘thoughtless awareness’,

focusing attention to the present moment (Arias et al 2006). Similarly, it is reported that meditation induces a state of consciousness referring to “a deep sense of calm peacefulness, a cessation or slowing of the mind’s internal dialogue, and experiences of perceptual clarity and conscious awareness merging completely with the object of meditation, regardless of whether a mantra, image, or the whole of phenomenal experience is the focal point” (Cahn & Polich 2006). To summarize, to better understanding of what the core characteristic that influences meditation work is a prominent nature of current meditation study. Qualitative study may provide insight from meditation practitioners’ perspectives to make a contribution to this issue.

To conclude, as discussed above, various aspects of meditation practice have been explored and also have been reflected upon methodologically and theoretically. These efforts have contributed to and showed influence meditation research in the future. However, the evidence related to meditation study mainly comes from quantitative studies in which the perception of subjects who adopted meditation into their lives remains unknown (Kim et al 2005; Ospina et al 2007). Qualitative study may be an appropriate approach that provides in-depth viewpoints to understand meditation experiences. Especially, if these viewpoints come from participants’ experience and are different from the perspective of quantitative study paradigm. However, the volume of qualitative study is small. There are less than 10 qualitative papers to found in the databases used in this study in the last five year block (2002-2008).

In order to have a global understanding about the effects of meditation, recent research findings related to the effects of meditation are presented next.

2.2.6 Effects of meditation

Study findings related to the effects of meditation are discussed here and are divided into three aspects: physiological, psychological and adverse aspects.

Physiological aspects

Physiological measurements are one of the major aspects in quantitative meditation study. The universal purpose of this kind of study is to discover the evidence or the mechanism of how meditation works (Grossman et al 2004; Cahn & Polich 2006; Hankey 2006; Carlson et al 2007). Wide ranges of areas in the physiological field have been investigated, including neurophysiology parameters, immunity, endocrine and pain outcomes (Wachholtz & Pargament 2005; Cahn & Polich 2006; Carlson et al 2007; Pagnoni & Ceki 2007). However, due to the purpose of this PhD, only the most common studied fields are discussed here: EEG, sleep, cardiorespiratory synchronization, blood pressure, chronic pain, and cancer (Canter & Ernst 2004; Cahn & Polich 2006; Hankey 2006; Smith et al 2005).

Study regarding electroencephalographic (EEG) and meditation are the primary study in terms of effects of meditation. The EEG is a parameter of neurophysiology and has been the most common measure used in meditation physiological studies (Cahn & Polich 2006; Hankey 2006). This is based on the hypothesis that different conscious states are accompanied by different neurophysiological states (Austine 1999, p88; Chang & Lo, 2006). Thus, monitoring the relationship between EEG changes and the consciousness states of meditation can provide solid evidence of meditation effect. Cahn & Polich (2006) carried out a systematic review regarding the relationship between EEG changes and meditating and found that over 50 papers with coverage of 50 years (1957-2005) and with a range of meditation types such as Transcendental meditation, Zen meditation, Tibetan Buddhist meditation and Qigong. Cahn & Polich (2006) concluded that although the neuroelectric correlates of meditative altered consciousness states are not yet firmly established, the primary findings indicate that there is increased power in theta and alpha bands and decreased frequency at least in the alpha band. Overall, these changes are found to be correlated with lower levels of anxiety and feeling of calm and positive effect. At the same time, 'internalized attention' and 'mindfulness' as two major core factors of behaviours of mind during meditation are characterized by different combinations of psychophysiological properties (Takahashi, Murata, Hamada, Omori, Kosaka, et al 2005). In brief, these substantial finding of EEG over 50 years indicated meditation practice can produce some positive effect on meditation practitioners, such as increase in EEG coherence (Hankey 2006).

The effects of meditation on sleep have been assessed. Cahn & Polich (2006) systematically reviewed over 25 studies regarding sleep and meditation in terms of EEG changes since 1970 to 2004. Overall, they concluded that studies findings have been hypothesized to reflect the development of a transcendental consciousness during Transcendental meditation that persists during waking, dreaming, and deep sleep. Meditation experiences may produce neurophysiological changes during sleep that correspond to a progression along a continuum from being totally unconscious to totally conscious during deep sleep.

Evoked potential (EP) or Event-related potential methods (ERP) and meditation provide another aspect to assess the effect of meditation. The human brains potentials can be elicited after a stimulus is presented. The rationale for these investigations is based on early EEG studies where meditation practitioners sometimes produced altered amplitudes and shorter potential latencies when stimuli were presented and EEG were recorded, thereby suggesting increased attentional control and CNS quiescence (Austine 1999, p88; Aftanas & Golosheykin 2005). EPs are evoked automatically with repetitive sensory stimulation such as auditory stimuli produce the auditory brainstem response and middle latency response, whereas ERPs are elicited with cognitive task processing such as performing a stimulus discrimination work (Polich 2004). Cahn & Polich (2006) reviewed 20 studies regarding EP and ERP published from 1978 to 2002. They summarized that sensory EP and cognitive ERP meditation assessments have produced a variety of effects. Some intriguing hints of

meditation changing early cortical auditory processing appear reliable, with suggesting that cognitive task can be affected by meditation practice. However, the major difficulties in many studies are a lack of methodological sophistication, no replication of critical conditions and inconsistency of task and study populations. Possible stimulus modality differences in assessing meditation have not been systematically ascertained (Cahn & Polich 2006).

Brain imaging methods have been used for tracing the corresponding changes between brain and meditation practice since the 1990s (Cahn & Polich 2006). Functional brain imaging enables the processing of information by the centres in the brain to be visualized directly. Compared to EEG meditation studies, brain imaging study is relatively new and thus less published (Cahn & Polich 2006). Cahn & Polich (2006) conducted a systematic review including 12 relative papers in which various types of neuroimaging were included: positron emission tomography (PET), functional magnetic imaging (fMRI) and single photon emission computed tomography (SPECT). Cahn & Polich (2006) concluded that neuroimaging results are beginning to demonstrate some consistency of localization for meditation practice; frontal and prefrontal areas are shown to be relatively activated (increase regional cerebral blood flow). These outcomes appear to in associate with the increased attentional demand of meditative tasks and alterations in self-experience. However, none of the approaches has yet isolated or characterized the neurophysiology that makes explicit how meditation induces altered experience of self. Studies of the reported intense absorptive experience that merges self with the phenomenal world are needed to establish this state effect. A newly published work by Pagnoni & Cekie (2007), examining how the regular practice of Zen meditation might affect the normal age-related decline of cerebral grey matter volume and attentional performance. MRI brain images and a computerized sustained attention task were employed in 13 regular Zen meditation practitioners and 13 matched controls. While controls showed the expected negative correlation of both gray matter volume and attentional performance with age, Zen meditation practitioners did not show a significant correlation of either measure with age. They thus suggested that the regular practice of meditation may have neuroprotective effects and reduce the cognitive decline associated with normal aging. The brain image has a promise future in terms of exploring the relationship between brain image and meditation.

Cardiorespiratory synchronization and meditation is another study interest. Cysarz & Bussing (2005) investigated the impact of Zen meditation on cardiorespiratory synchronization with respect to breathing oscillations and the modulations of heart rate induced by respiration (respiratory sinus arrhythmia, RSA). In their study, four different styles of exercises, spontaneous breathing, mental task, Zen meditation and kinhin (walking) meditation, were consecutively performed by 9 meditation novices. They found that both types of meditation showed a high degree of synchronization, whereas heartbeat and respiration were hardly synchronized during spontaneous breathing. These results were largely determined by the breathing frequency because the two types of meditation induced low breathing frequencies which led to a decrease in high frequency of heart rate variability,

whereas the low frequency and the extent of RSA increased. The high degree of cardiorespiratory synchronization in inexperienced meditation practitioners was found and suggested that the physiological implications of meditation does not require prior experience in meditation.

The effect of meditation on serum nitric, lipid peroxidation was examined. Kim et al (2005) investigated the effect of Zen meditation on serum nitric oxide activity and oxidative stress (lipid peroxidation). The experimental group included 20 subjects who had practised Zen meditation for an average of 56 months while control group included 20 subjects who did not practise any formal stress management technique and were age and sex matched with experimental group. This study showed a significant higher level of serum nitrite concentration and a significant reduced level of plasma lipid peroxide in Zen meditation group than in control group. This can be suggested that stress reduction with meditation may reduce serum MDA level. However, to prove the causal relationship between meditation and level of nitric oxide and oxidative stress in reducing cardiovascular risk factors, comprehensive randomized controls are needed.

Blood pressure and meditation is one of major study interests. Systematic reviews and meta-analyses, however, have shown different results to date. Canter & Ernst (2004) carried out an independent, systematic review of RCTs of Transcendental meditation (TM) for accumulative effects on blood pressure. Electronic databases and papers collected from official websites of the TM organization were included. As a result, six RCTs, without confounding co-interventions met the inclusion criteria. All six RCTs of TM for the control of blood pressure have important methodological weaknesses and are potentially biased by the affiliation of authors to the TM organization. There is insufficient good quality evidence to conclude whether or not TM has a cumulative positive effect on blood pressure. Ospina et al (2007) conducted a meta-analysis by using 17 electronic databases of medical and psychological literature. As a result, 65 out of 813 studies were included. Ospina et al (2007) reported that based on low-quality studies and small numbers of hypertensive participants showed that TM, Qi-Gong and Zen Buddhist meditation significantly reduced blood pressure. However, using the low-quality studies may bear a serious question to the readers concerning about the reliability of results. Anderson et al (2008) conducted a meta-analysis to assess effects of TM on blood pressure; PubMed and Cochrane databases and collected publications on Transcendental Meditation were searched. A specific rating system (0-20 points) was used to evaluate studies quality and random-effects models were used for meta-analyses. Consequently, nine RCTs met criteria with a range of score from 7 to 16 were eligible. They indicated that TM, compared to control, was associated with change of reducing systolic and diastolic blood pressure by approximately 4.7 and 3.2 mmHg, respectively. These are clinically meaningful changes.

Cancer care and meditation is one of main study areas of meditation study. Two meta-analyses tend to support the benefits of meditation on cancer patients. Smith et al (2005) carried out a systematic review to examine Mindfulness based stress reduction (MBSR) as supportive therapy in cancer care;

a comprehensive search of major biomedical and specialist complementary medicine databases was performed. Additionally, unpublished and ongoing researches were also identified. Study design, study types and clinical commentaries were used as appraisal criteria by authors individually. As a result, three RCTs and seven uncontrolled clinical trials were included. Smith et al (2005) concluded that BMSR has potential as a clinical valuable self-administrated intervention for cancer patients as BMSR improvements in mood, sleep quality and reductions in stress. A dose-response effect has been observed between practice of BMSR and improved outcome. However, further research into its efficacy, feasibility and safety for cancer patients in the nursing context is recommended. Ott, Norris & Bauer-Wu (2006) carried out a systematically review, aim to provide a comprehensive over view and to critically evaluate the existing and emerging research on mindfulness meditation as an intervention for cancer patients. Databases used were Medline, PsycInfo, Ovid as well as a review of published abstracts from the annual conferences sponsored by the Centre for Mindfulness in Medicine and Society and the American Psychosocial Oncology Society. Research questions and designs were systematically assessed. As a result nine research articles that met criteria were included. Ott et al (2006) reported that most studies were conducted with breast and prostate cancer patients. Consistent benefits found were: improved psychological functioning, reduction of stress symptoms, enhanced coping and well-being in cancer outpatients. More research in this area is warranted, using rigorous methods and different cancer diagnoses. Finally, Ott et al (2006) concluded that mindfulness meditation has clinical relevant implications to alleviate psychological and physical suffering of persons living with cancer.

To summarize, the mechanism of meditation or how meditation influences human is becoming much clearer; for example, the consistent findings of EEG changes on meditation. However, there are also many physiological parameters which remain unclear such as research on EP or ERP. At the same time, some research findings support the beneficial effects of clinical application such as blood pressure and cancer care, but a number of methodological limitations were also identified.

Psychological aspects

Psychological aspects of effects of meditation have been reported in a considerable number of papers. Several psychological variables have been examined such as cognitive task, emotion related variables (Suneet 2003; Aftanas & Golosheykin 2005; Wachholtz & Pargament 2005; Ortner, Kilner & Zelazo 2007; McGee 2008). However, based on the scope of this study, only psychological areas influenced by meditation such as stress reduction, quality of life and the possible explanations about why meditation can be effective are discussed here.

1) Stress reduction, quality of life and meditation

It has been reported that meditation practice benefits people psychologically. The most common psychological areas reported are stress reduction and quality of life (Brown & Ryan 2003; Grossman

et al 2004; Cohen-Katz, Wiley, Capuano, Baker & Deitrick 2005; Doug 2006; Hankey 2006; Jain et al 2007; Shapiro & Walsh 2007, pp157-176).

Firstly, in terms of stress reduction, in comparison to various control groups, practising meditation over a period of time (6-12 weeks) can reduce stress (Brown & Ryan 2003; Carlson et al 2003; Grossman et al 2004; Cohen-Katz et al 2005). Arias et al (2006) conducted a systematic review of the evidence supporting the efficacy and safety of meditative practice in treating illness and examined areas warranting further study. Searching materials for this review were papers published from March 2001 to November 2005 and interventions included were Yoga, Mindfulness Meditation, Transcendental Meditation and Mindfulness Based Stress Reduction. Inclusion criteria were stated; clinical trials were randomized, and had one of the following types of control groups: wait-list, active, placebo or sham. Outcomes of studies had to be quantitative with standard statistical evaluation. All trials had to be conducted in patients with particular disease or symptom/syndrome entities and intended as a treatment. At the same time, exclusion criteria were also stated, such as studies failing to use a control group were excluded. Studies which met the criteria were rated individually by two reviewers on quality by using a developed scale. Consequently, twenty mid to high quality studies (subjects=958) scored above 0.65 on a validated research quality scale were included. Arias et al (2006) concluded that meditative practices have potential for treating certain illnesses, particularly for disease that mental distress plays a major role in the pathophysiology or morbidity of the illness. Their findings supported the hypothesis that meditative treatments have a multifaceted effect on psychological and biologic function and, that the secondary physical benefits may occur via alteration in psychoneuroendocrine/immune and autonomic nervous system (ANS) pathways. When ANS is influenced positively, anxiety symptoms can be alleviated.

Jain et al (2007) conducted a RCT with medical students reporting distress and divided them into three groups (total n=83): mindfulness meditation (one month), relaxation and control groups to compare several psychological parameters such as rumination and distraction. Psychological measures used in pre and post invention included Daily Emotion Report, Index of Core Spiritual Experiences and Marlowe-Crowne Short Form (assessing socially desirable responding). They reported that compared to non treatment control group, both meditation and somatic relaxation reduced distress significantly (effect sizes Cohen's $d= 1.36$ and $.91$, respectively), whereas the meditation group showed a larger effect size for positive mood states than relaxation (Cohen's $d= .71$ and $.91$, respectively).

Quality of life is another common area that has been reported as benefiting from meditation (Brown & Ryan 2003; Carlson et al 2003; Grossman et al 2004). Lamanque & Daneault (2006) conducted a systematic review to examine the effect of meditation on cancer patients in terms of promoting quality of life. Medline data bank was used (1996-2004). As a result, five clinical trials that met the criteria of inclusion were retained. They concluded that there is increasing recognition of the effect

of tend to improve spiritual well-being on quality of life. Additionally, the quality of life of participants to be improved was likely resulted from the improvement on mood and anxiety parameters. However, they criticized that the study designs limited the generalization of the study results, such as the selection of the study populations favourable to the intervention, a lack of control groups receiving a comparable intervention and also simultaneous evaluation of several interventions, 'diluting' the effect of meditation.

2) Possible explanations of psychological effects of meditation

Possible explanations about why meditation can be effective are presented here and these are a major area that researchers are devoted to (Wells 2003; Cahn & Polich 2006; Ortner et al 2007; Shapiro & Walsh 2007; McGee, 2008). Recently, the study of meditation and psychology has tended to focus on the evidence of psychological changes during meditation practising (i.e. subjective conscious awareness, attention, enlightenment) associated with physiological tests. Several possible assumptions regarding how meditation can benefit psychological health have been proposed (Afteana & Golosheykin 2005; Cahn & Polich 2006; Shapiro & Walsh 2007). The most common shared explanations and the most closed to the scope of this study are discussed here, including self-awareness, altering information processing and emotional arousal.

Firstly, 'Self awareness' refers to a stable internal frame of awareness of self (Hankey 2006). Brown & Ryan (2003) argue that mindfulness meditation training is related to positive psychological outcomes but the role of meditation benefit to well-being has yet to be examined. They conducted five studies in both Canada and the USA from 1999-2002 by using multi-nationalities samples from university students (n=313), college students (n=327), local community adults (n=74) and US-wide mail-out survey to adults (n=239) and administering a range of well established psychometric scales to investigate the relationship between mindfulness and psychological well-being and develop a scale Mindful Attention Awareness Scale (MAAS). Their purpose was to identify inter- and intrapersonal variations in mindfulness meditation, to establish their relations to other relevant psychological constructs. Consequently, they constructed MAAS to discriminate between groups expected to differ in degree of mindfulness. Furthermore, they discussed the nature of mindfulness and its relation to psychological well-being. In their discussion the ideas regarding self awareness was a key issue. Brown & Ryan (2003) suggested that ideas of self awareness in the context of meditation were somewhat different from the meaning of traditional psychology in several ways as described 'beyond the traditional conceptualizations and measurements of self awareness'. In short, firstly, apart from an inherent cognitive and intellectual foundation of self-awareness as commonly defined, mindfulness meditation is to openly experiencing what come up in mind with non-evaluative attitude. Secondly, although mindfulness includes self-focused attention, it also includes an awareness of one's behaviour, experience and the various stimuli encountered as part of waking reality. Likewise, Shapiro & Walsh (2007) pointed out in their book 'The art and science of meditation' that unlike western coping strategies which are about change or adjusting cognitive

models in order to reduce stress, meditation increases the subtle awareness of internal psychological process to a full awakening of mind with calm and peace. To conclude, by practising meditation, a strengthening and stabilizing of self awareness can be achieved because this is consistent with the deepest level of meditation experience (Hankey 2006).

Secondly, altering information processing or changing the way of thinking is likely to be another explanation about the psychological effect of meditation. In a commentary, Wells (2002) discussed the integration of mindful procedures in cognitive therapy of GAD and attempted to answer questions concerning the effects of mindfulness on information processing. Wells argued that meditation benefits GAD by disrupting repetitive styles of dysfunctional thinking in several ways: activating a meta-cognitive mode of processing, disconnecting the influence of maladaptive beliefs on processing and strengthening flexible responding to threat. As noted previously, Jain et al (2007) conducted a RCT and using hierarchical linear modelling reveals that not only meditation group meditation showed a larger effect size for positive state of mind than relaxation (Cohen's $d=.71$ and $.25$ respectively), but also demonstrated significant pre-post decreases in both distractive and ruminative thoughts/behaviours in psychological measurements compared with the control group. Jain et al (2007) concluded that mindfulness meditation may be specific in its ability to reduce distractive and ruminative thoughts and behaviours, and this ability may provide a unique mechanism by which mindfulness meditation reduces distress.

Lastly, the possible explanation is emotional arousal. Meditation has the potential to moderate emotional arousal as supported by two recent studies. Afteana & Golosheykin (2005) conducted a study by using age-matched controls ($n=25$) and Yoga meditation group ($n=25$) to examine how long term meditation practice is manifest in EEG activity under conditions of non emotional arousal (eye-closed and eye-open periods, viewing emotionally neutral movie clip) and while experiencing experimentally included negative emotions (viewing aversive movie clip). As a result, Afteana & Golosheykin (2005) concluded that the changes in the electrical brain activity associated with regular meditation practice are dynamical by nature and depend on arousal level proofing a theoretical assumption that regular meditation practitioners have better capabilities to moderate intensity of emotional arousal. Ortner et al (2007) conducted a RCT in which participants ($n=82$) received mindfulness meditation, relaxation meditation training or no intervention (waiting-list control). Behavioural, self-report and psychophysiological measures were administered before and after a 7 week intervention period. Although both mindfulness meditation and relaxation meditation group resulted in smaller skin conductance responses to unpleasant pictures and increased well-being, reductions in emotional influence from unpleasant pictures were specific to mindfulness meditation. These findings indicate that mindfulness meditation attenuates prolonged reactivity to emotional stimuli.

Overall, as discussed above, most studies' findings suggest that meditation appears to have certain psychological effects. However, to understand the mechanism of the psychological influence of meditation, more solid evidence is needed (Arias et al 2006).

Adverse aspects

To explore the adverse aspects of meditation is crucial especially when meditation is used as an intervention as in this study. The benefits of the participants must be protected in consideration of ethical issues (4.5.2). To date, it is found that the number of published papers that report benefits of meditation or harmlessness for practitioners are much more than the number of papers that report side effects of meditation (Austin 1999, p373-375; Grossman 2004; Arias 2006). This may imply that meditation is likely to provide advantages rather than disadvantages in terms of health. In this section, given that the papers reporting side effects of meditation are relatively rare, the coverage of the year of the literature review was extended to an extra 20 years (1983-2008) to allow enough knowledge regarding adverse aspect of meditation to be discussed.

Otis (1984) carried out a retrospective questionnaire survey of 890 practitioners on the Transcendental Meditation (TM) mailing list in the USA. Most respondents (52-64%) reported no major complications or substantial psychiatric complications such as suicidal attempts, schizophrenic reactions and other psychotic episodes. However, when comparing different length of meditation practice, the TM teacher-trainees with nearly four years experience reported more problems than subjects with 3-6 month practice. These problems included: antisocial behaviours (14%), frustration (10%), restlessness (10%) anxiety, depression, confusion and procrastination (all 9%). However, if the comparison of these statistics with another reference groups such as age matching group may help to bring clear picture for interpretation.

Shapiro (1992) investigated the adverse effects of Vipassana meditation in Barre, Mass. by using both close and open ended format questionnaires. Twenty seven long term meditation practitioners (average 4.27 years) both retrospectively (time one) and prospectively at one month (time two) and six months (time three) following a meditation retreat were assessed. At both time one and time three, subjects reported significantly more positive effects than negative effects from meditation. In terms of adverse effects, seventeen (62.9%) reported at least one adverse effect such as increased awareness of negative qualities and emotions within self; two (7.4%) suffered profound adverse effects such as disorientation and confused. However, when dividing subjects at time one into three groups based on length of practice (16.7 months; 47.1 months; 105 months), there were no significant differences in the frequency of adverse effects between groups (χ^2 3.68, $p=.16$). Shapiro (1992) grouped the reporting adverse effects into three (intrapersonal, interpersonal and society) categories. Intrapersonal adverse effects included dazed, increased negative emotions, more emotional pain, increased fears and anxiety, confused about who I am, get down on self, ego strain, addicted to meditation, boredom and pain. Interpersonal adverse effects included more judgmental

of others and increased discomfort with current friends. Lastly, societal adverse effects included feelings of increased alienation from society and hypersensitive to city environment. On the other hand, higher percentages of positive effects, however, were reported: 24 (88%) at time one; 13 of 16 (81.3%) at time two and 12 of 13 (92.3%) at time three. Shapiro (1992) used individuals' narratives to supplement his findings and these suggested that meditation works differently from individual to individual. The low return rate was a flaw that critiqued by Shapiro (1992) himself, but afterwards he applied Fisher's exact chi-square analysis to compare differences between those who completed follow-up questionnaires and those who did not and found that there were no significant differences in either case. However, there was no clear statement about the conceptual framework that applied to narrative data collection and analysis.

Based on a systematic review, Araís et al (2006) found that no serious adverse events were reported in any of the included or excluded clinical trials. Serious adverse events are reported in the medical literature. The major adverse reactions were limited to brief dissociative-like experiences which resolved spontaneously (Araís et al 2006). However, scatter case report can still be found and suggested that meditation can act as a stressor in vulnerable patients who may develop a transient psychosis or who had psychiatric disorders (Kuijpers, van der Heijden, Tuinier & Verhoeven 2007).

As discussed earlier, unusual body sensations, perceptions and emotional change are regarded as side effects of meditation. However, the view point of religion regarding side effects is actually very different. Master ShengYen (1995, p118) pointed out in his book 'Master Sheng Yen teaching Zen meditation' that adverse effects caused by Zen meditation including leg numbness, hallucination or magic power are temporary. He strongly recommends that supervision from advanced Zen meditation practitioners is necessary. Austin (1999, p376) assumed that these extraordinary experiences during meditation practising, such as a play of colours, hearing noises and tilting is part of a state called 'samadhi' but this is deemphasized because traditional Zen concentrates on the high ground of in-sight-wisdom or enlightenment in living life (2.2.4). These 'side effects' were downgraded as 'epiphenomena' by Austin (1999, p373), suggesting that the explanation for hallucination may be a sign of consciousness state related to an alternate brain state or an example of how meditation influences brain function. For instance, particularly, meditation states illustrate what can happen when the brain opens up some barriers which would otherwise separate its states of walking, sleeping and dreaming. In brief, from the religious viewpoint, it is implied that the adverse effects are part of positive personal transformation, yet there is no evidence based.

To summarize, it seems that positive effects out-weigh adverse effects of meditation practising and this keeps practitioners practising meditation despite sometimes being uncomfortable (Shapiro 1992). However, one should be cautious as meditation brings both benefits and harms despite that the benefits are greater than adverse reactions (Shapiro 1992; Austin 1999, p376; Araís et al 2006). On top of this, although adverse reactions are regarded as transient or preceding reactions from a

religious viewpoint, a middle way is suggested (Shapiro 1992). It is suggested that the provider of meditation or clinical professions should be sensitive to potential adverse reactions. More importantly, any individual who is inclined to psychotic personality should avoid practising any kind of meditation in order to prevent risk (Kuijpers et al 2007). In addition, the provider's orientation and instruction are also cardinal to the learners as to undergo meditation process strength and faith seems inevitable (Shapiro 1992). Thereby, meditation can work on a safe ground for appropriate people as an adjunctive treatment without side effects. In this study, these concerns were incorporated into ethics and study rigours.

2.2.7 Qualitative study findings related to meditation

As noted previously (2.2.5), compared to the huge amount of quantitative studies, qualitative studies are relatively new and rare to date (Cohen-Katz et al 2005; Smith et al 2005). Furthermore, no qualitative studies specifically on Zen meditation and generalized anxiety disorder could be found. As a result, the scope of this section was enlarged to allow relevant qualitative studies to be presented here.

Cohen-Katz et al (2005) examined the effects of mindfulness-based stress reduction (MBSR) on stress and burnout in the USA. Twenty-five female nurses (age range= 32-60) employed in various departments were recruited in an 8-week MBSR programme. These participants were all Caucasian with average of 12 year working experience and the stressors reported mainly came from family (80 %) and work (20%). Data used for analysis including "Getting to Know You" forms, weekly evaluation forms, final evaluation forms, e-mails, interviews and a focus group. As a result, seven categories of benefits were reported: increased relaxation (calmness), self-acceptance (self-compassion), self-awareness, self-care, feeling more self-reliant, decrease physical pain and improved sleep. Moreover, the impact on relationships was also reported, including 'feeling more connected to others in the group', 'wanting to fix others in the group', 'increased presence in relationships', 'less defensive and increased self-confidence in relationship'. These benefits started to be reported in week 5 and continued throughout week 8 and the final evaluation, but the time of the final evaluation did not specified. On the other hand, challenges of practising MBSR were also reported, including restlessness (52%), physical pain (28%) and dealing with difficult emotions (20%). Comments about restless peaked in week 2 and declined thereafter; comments about physical pain peaked in week 4 and were not mentioned after week 5; the discussion about difficult emotions were surfaced during the programme. It was noticed that a wide range of data sources collected in this qualitative study, including written material ('getting to know you' form and weekly and final evaluation forms), individual interviews from different perspective (nurses, observer-MBSR trainee, vice president of clinical service-MBSR supporter), a focus group and unsolicited e-mails. The various resources enriched the data and provided various aspects of understanding in this topic. At the same time, qualitative data were analysed by a research team and this can decrease the personal bias and enhance the robustness of study findings. However, neither time of the participants spent on

meditation practice was reported nor the theoretical framework for data collection and analysis used. Moreover, the concepts between two major themes 'Benefits of participating in the MBSR programme' and 'Impact of MBSR on relationships' appear to overlap and should have been discussed further by the authors.

Finucane & Mercer (2006) explored the acceptability and effectiveness of mindfulness-based cognitive therapy (MBCT) for patients with active depression and anxiety in primary care by using mix methods including semi-structure interviews and scales (Beck depression inventories and Beck anxiety inventories). Both scales were administered pre- and post course three months after completion of MBCT while interviews were conducted after MBCT. MBCT was an 8 week programme that combined mindfulness-based stress reduction (MBSR) with cognitive therapy within a group-based skill training programme, designed to prevent relapse in people who have recovered from depression (Smith, Graham & Senthinathan 2007). Three male and ten females met inclusion criteria with an average age of 43 years old (range 29-58) were included. In terms of symptom measurements, both results of Beck Depression Inventories and Beck Anxiety Inventories showed significant decreases. The mean difference of pre-post depression score was 17.9 and it was 11.45 in terms of anxiety score; effect sizes for MBCT of 1.5 and 0.77 were calculated for depression and anxiety respectively. The results of the qualitative analysis agreed well with the quantitative changes in depression and anxiety reported.

Five aspects were described from their qualitative findings: 'preconceptions, motivations and expectation', 'being in a group', 'length of the course', 'the course exercises', 'the benefits and on-going practice'. Under the title 'preconceptions, motivations and expectation', the most common motivating factors for participants were the chronic problem with anxiety and depression and as self-help strategy. Only one participant mentioned avoiding medication. A variety of experiences were described under the title 'the course exercises' including pleasurable, relaxation, difficult, struggling, as well as adapting a more flexible attitude towards course exercise practice (course exercises involved body-scan and walking meditation). Almost all participants found 'being in a group' was an important normalizing and validating experience. Several participants expressed relief about not having to talk about their personal problems in MBCT. Under the title 'the benefits and on-going practice', benefits identified were increased ability to relax, a decreased tendency to jump to negative conclusions, learning to take time out, learning new ways of dealing with difficult emotions, greater self acceptance, sleep improvement and re-discovering joy. However, a minority of participants (5/11) continued to suffer from depression and anxiety, despite that post MBCT scales of depression and anxiety showed statistically improvements and the majority of participants believed they had benefited from the course. Additionally, one participant who expected meditation would provide a 'miracle cure' found the course less helpful and difficult. Authors suggested that the participants who were able to let go of expectations of results and focus simply on the meditation methods were more likely to persist with the exercises and feel benefit from the course. Overall,

Finucane & Mercer (2006) concluded that mindfulness training was both acceptable and beneficial to the majority of patients and suggested that MBCT may have a role to play in treating active depression and anxiety in primary care.

In Finucane & Mercer's (2006) study, information about a three-month follow up of mindfulness practice was provided which was valuable. They found the majority of participants (8/11) continued to use mindfulness techniques. At the same time, two major obstacles for on-going practice were identified: finding the time to practise and lack of group support. In this paper not only positive but also negative experiences were addressed. In terms of data analysis of individual interviews, it would be more informative, if any kind of qualitative study paradigms had been used as a conceptual framework to guide the analysis, because paradigms can provide a unique view point which help to yield understanding and systematic interpreting of research findings. Generally, the report remained predominantly descriptive rather than interpretative.

On the whole, qualitative studies findings regarding meditation suggest that generally meditation is beneficial to participants physiologically and psychologically although challenges or adverse effects were also reported but with relatively low occurrence. Compared to findings of quantitative studies (2.2.6) qualitative research provides insights that derive from the participants direct experiences' instead of indirect numerical data. Nonetheless, the number of papers exploring experience of meditation experiences is very limited. Meanwhile, qualitative study particularly focuses on the type of Zen meditation is none.

2.2.8 Meditation and anxiety disorders

The scope of this section purposely narrows on examining the relationship between meditation and anxiety as this connects to this study closely. The researcher highlights the research findings in this specific area so that the grounds of this study can be shown clearly. Only papers that deal with issues of meditation and anxiety disorders are incorporated here.

In Table 2-11, a summary of recent meta-analysis and systematic review papers on meditation and anxiety disorders is shown. This is because 1) to date, there are several meta-analyses and systematic reviews published; a summary can help a comprehensive understanding on this topic. 2) Meta-analyses and systematic reviews can provide high level evidence (AHCPR 1992).

Two main points can be seen in Table 2-11. Firstly, the most commonly used meditation style among western societies is MBSR. Secondly, the effects of meditation on anxiety have no final conclusion. Two of four meta-analyses and systematic reviews support the positive influence of meditation on anxiety (Grossman et al 2004; Arias et al 2006), while the other two papers are rather conservative. Toneatto & Nguyen (2007) indicated that the effect of meditation was unclear when factors like active control group and adherence to meditation programme were considered. As to the

Cochrane review, there was no conclusion made as a result of inclusion criteria used, compared to the criteria of other meta-analyses and systematic reviews; only true randomisation technique studies were adopted in these Cochrane reviews (Krisanaprakornkit et al 2008).

In Table 2-11, although these meta-analyses and systematic reviews relate to issues of meditation and anxiety, the scope of each is not exactly the same. For example, Toneatto & Nguyen (2007) focused on MBSR only while the rest of the authors included various types of meditations (Arias et al 2006; Krisanaprakornkit et al 2008). In terms of scope of diagnosis, Krisanaprakornkit et al (2008) focused on subjects with a diagnosis of anxiety disorders whereas the rest focused on anxiety symptoms (Grossman et al 2004; Arias et al 2006; Toneatto & Nguyen 2007). Additionally, unpublished papers were included in the work of Grossman et al (2004), but only published papers were eligible in the rest of the three works. Inclusion of unpublished papers expended the scope of the review but also raised the question of appropriateness; that is, compared to an unpublished paper, a published one had been went through the inspection of peers and is usually with certain quality.

Table 2-11: The summary of recent meta-analysis and systematic review papers on meditation and anxiety disorders

Authors (year)/ meditation type/country	Purpose(s)	Method and results	Major conclusion
Grossman, Niemann, Schmidt, Walach (2004) / Mindfulness based stress reduction (MBSR)/Germany	To examine the assumption that greater awareness will provide more veridical perception, reducing negative affect and improve vitality and coping.	A comprehensive review and meta-analysis of published and unpublished studies of health studies related to MBSR. Twenty out of sixty four studies met criteria with acceptable quality were included (n=1605).	1. Both controlled and uncontrolled studies showed similar effect sizes of approximately 0.5 ($p<.0001$). 2. Although derived from a relatively small number of studies, these results suggest that MBSR may help a broad range of individuals to cope with their clinical and nonclinical problems including anxiety.
Arias et al (2006) / Yoga, Mindfulness meditation, Transcendental meditation and MBSR/ the USA.	To examine the evidence supporting efficacy and safety of meditative practice in treating illness and examined areas warranting further study.	Qualifying studies were systemically reviewed, but studies on healthy populations were not included. Twenty mid to high quality studies scored above 0.65 on a validated research quality scale (developed by Reisch, Tyson & Mize 1989) were included. (n=958).	1. The results supported the safety and potential efficacy of meditative practices for treating certain illnesses, particularly in non-psychotic mood and anxiety disorders. 2. No serious adverse events were reported in any of the included or excluded clinical trials.
Toneatto & Nguyen (2007)/ MBSR/ Canada	To review the impact of MBSR on symptoms of anxiety and depression in a range of clinical populations.	This review included studies that published in peer-reviewed journal, used control groups and reported outcomes related to changes in depression and anxiety. Fifteen studies that adopted a waiting list or no-treatment control group were included (n=1065).	The evidence for a beneficial effect of MBSR was equivocal. When active control groups were used MBSR does not show an effect on depression and anxiety. Adherence to the MBSR programme was infrequently assessed. Where it was assessed, the relation between practising mindfulness and changes in anxiety was vague.
Cochrane review Krisanaprakornkit, Piyavhatkul &Laopaiboon (2008)/ Mindfulness and Concentrative meditation/ The UK	To investigate the effectiveness of meditation therapy programmes in treating anxiety disorders.	Systematic review was conducted. Two studies that meditation was compared with medicine and other psychological treatments (n=45).	1. The firm conclusions about the effects of meditation in anxiety disorders were unable to draw because of the small number of eligible studies. 2. Lack of studies from eastern societies. 3. No report of adverse events

In addition to Table 2-11, a newly published paper related this topic is written by Lee et al (2007) aiming to examine the effectiveness of a meditation-based stress management programme in patient with anxiety disorder as an adjunct to pharmacotherapy in South Korea. Patients were randomly assigned either to an eight-week clinical trial of meditation-based group (n=21) or an eight-week education-based stress management programme (control group, n=20). The outcomes at baseline, 2, 4, and 8 weeks of the programme were measured by using five scales: Hamilton Anxiety Rating Scale (HAM-A), Hamilton Depression Rating Scale (HAM-D), Beck Depression Inventory, the symptom checklist-90-Revised (SCL-90-R) and State-Trait Anxiety Inventory (STAI). They found that compared to the education group, the meditation-based stress management group showed significant improvement in scores on all anxiety scales (HAM-A, $p=.001$; STAI state, $p=.001$; STAI trait, $p=.001$; anxiety subscale of SCL-90-R, $p=.001$). Thus, they concluded that the meditation-based stress programme could be effective in relieving anxiety symptoms in patients with anxiety disorder. Dropout rates of both groups were reported and were low (Three in meditation group and two in education group). The strengths of the study of Lee et al (2007) were that active control group was used and multiple measurements were administered by both clinician and self-rated at an equal interval of 2 week which can provide continuing assessment of symptoms. However, all the participants were motivated because they were recruited through advertisement. In other words, participants in favour of interventions might be a confounding factor.

To summarize, the research evidence regarding efficacy of meditation on anxiety disorders lacks consensus. Methodological issues such as quality and variability of meditation methods used are the major concern of meta-analyses and systematic review papers. To develop a theoretical perspective and to address the extent and quality of meditation during the intervention period is suggested for meditation research in the future (Arias et al 2006; Toneatto & Nguyen 2007).

2.2.9 Summary

In China, meditation has long been a religious practice and has been regarded as a way to promote health. Among various types of meditation, Zen meditation became dominant in Taiwanese society. There are certain skills to practise Zen meditation in order to reach best results. The process of meditation is proposed in neurological terms (Table 2-10) but not yet been studied. Neurologists try to discover the characteristics of meditation state and have found some consistent results such as EEG. In terms of clinical application, the adverse effects of meditation were noticed. However, methodologically sound research is needed for firm conclusions across studies (Grossman et al 2004; Smith et al 2005; Arias et al 2006; Krisanaprakornkit et al 2008). Overall, the amount of qualitative studies is far less than quantitative studies and the insight from the perspective of meditation practitioners' experience is limited. Thus, to discover the essential characteristics in meditation practice can help to contribute the gap of knowledge of meditation study.

2.3 The theoretical framework –Phenomenology

Giving that phenomenology is applied in this study as a theoretical framework, four main aspects related to phenomenology are encompassed in this section: a brief view of the background of phenomenology, the justification of choosing phenomenology, phenomenological data analysis, and rigour issues related to phenomenology. In addition, it should be noted that as a discipline, phenomenology contains a wide range of issues but only phenomenological concepts that closely relate to this study are incorporated here. For example, the debates regarding whether nursing researchers deviate from the fundamental tenets of phenomenology or not are excluded in this section (McNamara 2005).

2.3.1 Brief view of background

To attempt to understand phenomenology, it is necessary to trace back to the very beginning of this paradigm. The history of the phenomenological movement is presented here, as it is generally accepted that there are two major phases in phenomenology development (Moran 2000, pp5-9; Sokolowski 2000, pp298-318).

First phase of the phenomenological movement

The phenomenological movement triggered by Edmund Husserl (1859-1938) almost parallels the twentieth century (Sokolowski 2000, p298; Giorgi 2005). The commencement of the movement may be dated back to 1900 when Husserl published his most influential work ‘Logical Study’ (Sokolowski 2000, p298). Husserl was a mathematician before becoming a creative philosopher. As a philosopher, he was not only concerned about traditional philosophical issues such as objectivity but also much interested in issues related to the constitution of the world and how knowledge is built (Draucker 1999; Moran 2000, p 289; Giorgi 2005). Husserl called his philosophical school ‘Phenomenology’. He perceived the term ‘Phenomenology’ as a way of examining the ‘primordial essence of phenomena’ of consciousness (Koch 1995). For Husserl, phenomenology aimed to describe how the world is constituted and experienced through consciousness (Sokolowski 2000, p 174; Giorgi 2005). He maintained that conscious awareness is the one certainty for humans and thus the starting point of knowledge building (Draucker 1999). Through his discourse, Husserl legitimized the position of phenomenology as one of the main qualitative research paradigms by confronting other long lasting philosophical ideas derived from Cartesianism (Moran 2000, p127-131).

It was Descartes (1596-1650) who asserted the concept of mind-body split known as ‘Cartesian duality’ which was the dominant concept providing the philosophical ground for positivism (Koch 1995; Giorgi 2005); that is, “the traditional paradigm underlying the scientific approach, which assumes that there is a fixed orderly reality that can be objectively studied” (Polit & Beck 2006, p25). For Descartes, duality meant that the world is an object which is set outside the human. Therefore, for humans to know an object is to construct concepts within a human’s brain and at the same time

the human is separated from the object itself. Deriving from this idea, the way for a human to recognize the outside world is to objectify. Realism is emphasized in Descartes's discourse. However, the 'mind-body split' concept was challenged when Husserl provided a rationale and solid background of the epistemology for phenomenology (Sokolowski 2000, p10). Husserl's ideas of 'intentionality' and 'inter-subjectivity' released the restrictions of Cartesianism.

Intentionality, as argued by Husserl, was that every act of consciousness takes an object that transcends the act (Giorgi 2005). For example, many students in Taiwan are interested in studying abroad. For them, studying abroad is the thing which they intend to. Thus, they may take clear actions such as making a practical plan to carry out or to be attracted by information related to studying abroad. Therefore, their act including attention, thoughts and behaviours, reflects the intentionality of their consciousness. According to the ideas of Cartesianism the object (studying abroad experiences) is detached from subjects (the students) and can be objectified. However, from the viewpoint of intentionality studying abroad is not something out there, but inside their mind and connecting their acts. In other words, this intentionality transcends their every act regarding the whole process of the experience regarding studying abroad such as sitting English exams, applications, and fitting in a different life of overseas. Intentionality enables the experiences of humans to be discovered or shaped. Duality, as maintained by Descartes, is the way humans connect to the things in the world, constructing concepts of things in our mind and things that are separate from humans. On the contrary, as a function of consciousness, intentionality can connect the human and the world. Therefore, intentionality, the fundamental concept, was regarded as the remarkable contribution of and distinguished Husserl from previous philosophers. Through the discourse of intentionality, Husserl legitimized a philosophical foundation for the position of a non positivism paradigm that is adopted by human sciences including nursing (Sokolowski 2000,p5; Giorgi 2005).

'Inter-subjectivity' is another important notion of Husserl's phenomenology. The stance of inter-subjectivity diverges from subjective-objective relationship which supports realism and natural science (Alvesson & Skoldberg 2000, p53); that is, the viewpoint of inter-subjectivity provoked a reflection on positivism or logical empiricism that dominated the 19th and 20th centuries (Moran 2000, p167-169; Giorgi 2005). The goal of quantitative study is to find the epistemological 'single truth' that lies in an objective real world and is informed by the positivist world view. For Husserl, however, the goal of phenomenology was to increase understanding of the 'multiple interpretation' of the meaning of human experience (de Witt & Ploeg 2006). Husserl claimed that cognitive activity stands on the ground of inter-subjectivity meaning that knowledge exists on a comprehension of mutual construction (Moran 2000, p229). For Husserl, the objects we are interested in do not have existence independent of our perception. Rather the concepts or meanings that objects have, are actually shared with others (Moran 2000, p205). In the world we live, we share language, share environments and meaning. For example, when a teacher stands in front of a classroom and starts to talk, all students should be quiet. The norm of behaviour expected in a classroom (environment) is

shared and mutual constructed. If one student whispers to another student while the teacher is teaching, this is regarded as an inappropriate behaviour (meaning).

Given the unique perspective of attempting to understand human experience held by phenomenology, the number of nursing researchers using phenomenology has been increasing (Priest 2002; de Witt & Ploeg 2006). This is because nursing philosophy and nursing art seek to “understand unique individuals and their meanings and interactions with others and the environment” (Lopez & Willis 2004). The concept of inter-subjectivity justifies that experience of daily-life as an important source of acquiring knowledge. The rational empiricism that focuses on physical nature and cause-effort analyses is not the only way of acquiring legitimized knowledge (Giorgi 2005).

Husserl intended to pursue the truth and reality of phenomena without taking any position or determining anything in advance (Beech 1999). In this manner, he proposed his famed method-- ‘epochē’ (in German), which has been translated to ‘bracketing’. Bracketing means that by suspending commonly held beliefs or presuppositions about the world, we can describe the fundamental structure of our life-world (Cohen & Omery 1994). In other words, bracketing is an essential concept of ‘Phenomenological Reduction’ which means that past knowledge concerning the phenomenon of interest should be put aside (Rapport & Wainerigh 2006).

Reduction originates from the Greek ‘reducere’ or ‘directing back’ which is similar to the essential notion: return to things themselves. Through bracketing the researcher resolves to hold all preconceptions in abeyance in order to reach experiences before they are made sense of (Beech, 1999). Presumption is a barrier that prevents things from been seen. In other words, presumption, presented to consciousness, should be seen without the automatic positing of existence. As a result of this, the essence of things can be revealed by researchers (Giorgi 2005). For example, according to the DSM IV-TR, compulsive behaviour is one of the main criteria for diagnosis of Obsessive Compulsive Disorder (OCD). Repeating hands washing is a common symptom of OCD patients. Due to patients spending excessive time washing hands and causing skin problems, hand washing is labelled as a ‘pathological symptom’. As a result, the whole ‘professional team’ and family members of the patient set a ‘therapeutic goal’ to eradicate this ‘pathological behaviour’. Nevertheless, this presumption of ‘hand washing’ equals ‘pathological behaviours’ should be suspended. In fact, the ‘pathological behaviour’ provides the sense of control and also decreases the level of anxiety for patients with OCD; strict forbiddance of hand washing behaviour provokes higher levels of anxiety (Stuart 2005, pp 278-280). Yet, anxiety is the essence of OCD rather than hand washing. When medical professionals focus on decreasing hand washing behaviour it is argued that they do not see the essence of the phenomena but are deceived by presumption. For Husserl, ‘epochē’ strips away all pensive elements concerning phenomena in order to reveal those phenomena as they are (Beech 1999).

In summary, Husserl broke new ground between the idealism and rationalism of traditional philosophical schools (Moran 2000, p243) and has become characterized as descriptive (Preiest 2002; Giorgi 2005). For Descartes, idealism refers to epistemological idealism, which is awareness of the difference between the world as an ideational mental picture and the world as a system of external objects. During the 1950s to 1960s the foundation of Phenomenology was built as a result of Husserl's considerable publication. Consequently, the first phase of the movement spread the notions of phenomenology internationally followed by philosophers such as Paul Ricoeur, M. Merleau-Ponty in France and Sokolowski in the USA (Moran 2000 pp1-4; Sokolowski 2000 pp 298-299).

The second phase of the phenomenological movement

The second phase movement of phenomenology started around 1920 and was led by Martin Heidegger (Sokolowski 2000, p230; Giorgi 2005). Heidegger was a student of Husserl but developed notions of phenomenology that differed from Husserl's phenomenology ideas (Taylor 1995). Consequently, Heidegger's school was known as the interpretive phenomenology school which differed from Husserl's descriptive school (Polit & Beck 2006, p221). Despite the considerable differences existing between Husserl and himself, Heidegger still claimed to be a philosopher of phenomenology. This is because the core philosophical ideas remained unchanged from Husserl's tradition: phenomenological philosophers shifted the focus of knowledge from things and their nature toward human beings and their worlds (Giorgi 2005; Sokolowski 2000, p12). In other words, the focus of phenomenology philosophy remained consciousness, human existence, or the very nature of being itself (Draucker 1999).

Discrepancies, however, between the phenomenological ideas of Husserl and Heidegger existed and started with the origin of the term 'phenomenology' (Moran 2000, p8). According to Heidegger, 'Phenomenology', derived from Greek and combines 'phainomenon' and 'logos'. Phainomenon is the source from which the verb phainesthai which means 'showing itself' is derived (Moran 2000, p8). Logos usually refers to 'words' 'concept' or 'thinking' but Heidegger translated it into 'Rade' (in German) which means hermeneutics or discourse (Moran 2000, p259). Furthermore, Heidegger discarded philosophical concepts held by Husserl such as objectivity, noesis and noema. In addition, Heidegger challenged the notion of bracketing proposed by Husserl (Draucker 1999; Moran 2000, p 294). Heidegger transformed phenomenology in some ways. Basically he wanted phenomenology as a way of embodiment in a human's life. At the same time, Heidegger asserted phenomenology possessed the quality of history, life and practice that fit better into a human's life in comparison to Husserl's philosophical school that was concerned much with the conduct of science (Taylor 1995; Moran 2000, p296). Three main points of Heidegger's interpretative phenomenology are discussed as follows: the importance of hermeneutics, the concept 'dasein' (in German) and his viewpoint regarding bracketing.

Firstly, as noted, the importance of hermeneutics or the interpretive aspect of narratives is stressed by Heidegger (Lopez & Willis 2004). For Heidegger, the quality of interacting between human and things is comprised in the language we use or is expressed by our narratives. All experiences are interpreted by humans and are arranged by our presumptions which are concealed within the context (Moran 2000, p304). The way people use language or expression is a crucial path to reach understanding the lived experiences of humans. For example, the same nurse may be valued differently from the discourses provided by different patients. One patient may be satisfied with the care provided by the nurse as she shows excellent wound care skill while another patient thinks the nurse is bad as the nurse only pays attention to the wound but never spends time on his concern regarding the wound. The narratives from the two patients reveal their various presumptions; the presumption of a good nurse, for the first patient is technically skilful while for the second patient is showing care. That this nurse is good or bad is not the point, but in which way the patient interprets their experience reveals their concealed presumptions about how they construct the idea of good care in this context. People give out the meaning of phenomena in his or her lived world in their way of interpretation. Heidegger elaborated the process of hermeneutics in detail and the 'hermeneutics circle' was developed (Figure 2-1). Heidegger focused on analyzing narratives to approach the lived experience, while Husserl stressed the aspect of description (Taylor 1995; Moran 2000, p 305; Polit & Beck 2006, pp 220-221).

Secondly, Heidegger was concerned how humans connect (Sorge, in German) to the world or are in the world (Moran 2000). 'Dasein' is an essential philosophical term used by Heidegger to demonstrate the way of 'there-being' (Taylor 1995). He made an effort to illuminate the idea of 'dasein' (in German) in his work 'Being and Time' (1962) constituting a major part of his theory. 'Verfallen' (in German) is how humans exist in their world; that is, a human is embedded in a world which is inextricably linked with, social, cultural and political contexts (Kari, Eva & Marit 2002); For example, when an individual is born, he or she accepts everything, including the time, the innate gender, the body, the economic state of the family, and the cultural of the society; e.g. there is a huge difference between the 'Dasein' of a woman who was born one hundred years ago in China's countryside and the 'Dasein' of a man who was born in modern London. When we want to understand 'being' itself and its phenomena, the key lies in the historical and temporality of the human way of being (Taylor 1995). For instance, an anxious patient may complain that her teenage daughter deliberately disobeyed her and this aggravated her illness. The patient believed that she has tried her best to be a good mother. Through the narrative of the mother, the way of her being (Dasein) is revealed, including how seriously she valued the role of being a mother, what is the appropriate mother-daughter interaction, and what is the good parent-children relationship in the context of Taiwanese culture at her time and at her daughter's generation. Therefore, the meaning of being a mother for the patient can be revealed in various aspects and thus construct a part of her life 'Dasein'. In this way she situates herself in the world.

The third point made is Heidegger's viewpoint regarding bracketing or 'epoch'. Heidegger disapproved that by bracketing a researcher can attract the essence of phenomena. Instead Heidegger argued that presuppositions cannot be bracketed or suspended because presuppositions actually "constitute the meaning and the possibility of intelligibility" so they cannot be suspended (Draucker 1999). Husserl maintained that cognition is the main way that people connect to the world while Heidegger asserted that people are subject to their situation and are embodied in their social context, while cognition is a way of revealing how people try to control or live in their situation of 'Dasien' (Moran 2000, p249). People construct their world and interpret the meaning of lived phenomena; therefore for Heidegger bracketing presuppositions would block the model of living which had been built up. In other words, Heidegger assumed that "presuppositions or expert knowledge on the part of the researcher are valuable guides to inquiry and makes the inquiry a meaningful undertaking" (Lopez & Willis 2004).

To conclude, Heidegger made a sharp turn from his teacher Husserl; otherwise, the phenomenology movement may have subsided (Sokolowski 2000, p300). In this way Heidegger consequently sustained the development of phenomenology. The influence of phenomenology towards different disciplines is still evolving. For example, influenced by Heidegger, schools of deconstructionism and postmodernism have spread into North American and Europe (Sokolowski 2000, p311). Recently, in Taiwan, a cross-discipline phenomenological association was founded in December 2006 by a range of academic fields to test the appropriateness of applying phenomenology within their professional fields.

In this study, Heidegger's interpretative phenomenology was adopted. This is mainly because the researcher identified the idea that the lived experience is not explored as held by Husserl but is an interpretative process through which humans construct their Dasein (Moran 2000, p 308; Racher & Robinson 2003). The details of the rationale related to choosing interpretative phenomenology are presented next.

2.3.2 Justification of using interpretative phenomenology as a theoretical framework

For the purpose of this study, Heidegger's interpretative phenomenology was adopted.

- The phenomenology approach was considered an appropriate way to answer the research question "what are the experiences of meditation practising among the GAD patients". Given that the meditation process involves a delicate internal process such as different mind states (2.2.4), a qualitative paradigm that helped the researcher to explore the experience of the meditation process was suitable. The phenomenological perspective can guide the researcher as the main interesting of the phenomenology is about human consciousness (2.3.1).
- The aim of this research was not to develop prescriptive nor predictive theory, but aimed to understand the meditation experience among GAD participants (Van der Zalm 2000). Phenomenology fits this goal. Phenomenology, unlike empiricism, does not aim to pursue

causal explanations, but is about how to reveal the nature of human experience and how people make sense of their experience (Hallett 1995; Sjostrom& Dahlgren 2002; Giorgi 2005).

- Anxiety is one of the key concepts in this study. Heidegger elaborated concepts regarding anxiety when discussing the main idea 'Dasein' in his book 'Time and Being' (Moran 2000, p290). Heidegger (1962) considered anxiety the result of when humans' sense of nihilism or realizes our existence is rootless. Anxiety reveals that we are, in a certain way of connecting, to the world. We are concerned with the world we live in and knowing that we are living towards death. Although these concepts of anxiety mentioned by Heidegger were general ideas related to the human situation rather than limited to the psychiatric view point, the nature of anxiety is similar. In addition, Heidegger's philosophical ideas are easy to access as translation of his publications in English is common (Moran 2000, p3). This was crucial as the research process needed to adhere to the philosophical concepts in terms of rigour (de Witt & Ploeg 2006).
- To the researcher, several notions mentioned in Heidegger's philosophy provided a good approach to interpret the narratives including both understanding and experience. For example, the idea, 'understanding' (Verstehen in German), is emphasized by Heidegger and calls for living (thinking, feeling) oneself into the situation of the acting (writing, speaking) person. With the help of imagination one tries to put oneself in the agent's (speaker's) place, in order to understand the meaning of the act (the written or spoken word) more clearly (Alvesson& Skoldberg 2000, p 89). Another notion, 'Experience' used in the 1870s, refers to active, creating and provided with intention, meaning. Additionally, experience is 'global' rather than a single perception, covers an overall subjective situation, not an isolated fragment thereof and connects with the whole life of the individual (Alvesson & Skoldberg 2000, p 67). In this study, the purpose was to develop an understanding of Zen meditation among participants. Therefore, the notions of understanding and experience were valuable to this study.
- An important advantage is that there are clear steps to data analysis developed by Benner (1994, pp 99-127) following Heidegger's ideas. Therefore, these steps can benefit researchers who apply Heidegger's paradigm as a research approach. In this way, the researcher can driven philosophical idea from the original notions as well as the data can be lighted by interpretative phenomenology.

Through the discourse above the appropriateness of the phenomenological approach in this study can be illuminated. For application of interpretative phenomenology into a specific research context and purposes, the researcher should follow the logical steps of methodology to carry out a scientific practice (Giorgi 2000; Dowling 2005). The follow section discusses phenomenological data analysis.

2.3.3 Phenomenological data analysis

The process of how data should be analyzed or interpreted is a decisive element as it affects the quality of a study (Draucker 1999). In terms of an interpretative phenomenological study, a range of

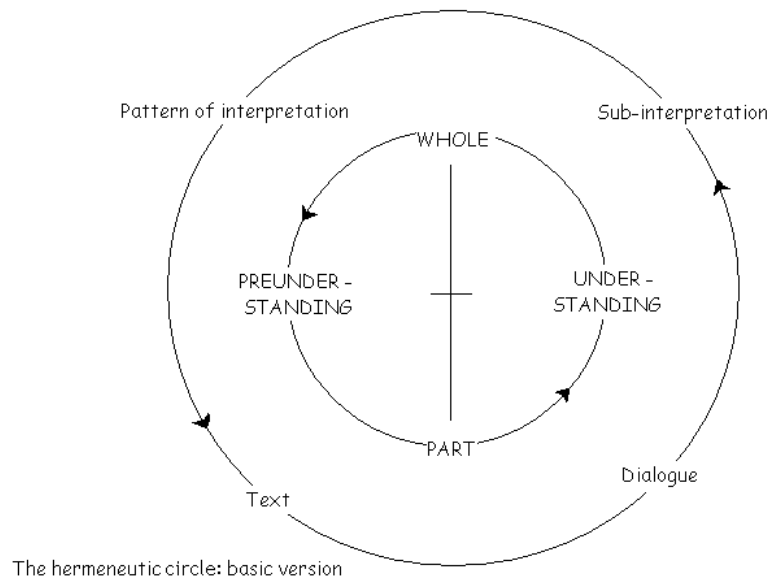
approaches to data analysis under the banner of interpretative phenomenology have been proposed (Sjostrom & Dahlgren 2002; Polit & Beck 2006, pp411-412). In order to have a global understanding, two parts of phenomenological data analysis methods are incorporated here including the earliest data analysis methods proposed by the philosophers and the later methods developed by the human scientists.

Data analysis methods proposed by Philosophers

The first phenomenological method of data analysis was proposed by Husserl (1859-1938). To reach the essence of things, 'things itself', he offered a procedure of 'reduction'. He suggested researchers suspend (Epoch) their presuppositions when applying reduction methods (Paley 1997; Beech 1999); whereby, the essential of consciousness could be revealed (Hallett 1995; Beech 1999). Polit & Beck (2006, p 410) conclude that the three major scholars of data analysis procedures based on Husserl's descriptive phenomenology are Van Kanen (1966, pp294-329), Colaizzi (1978, pp48-71), and Giorgi (1985, pp8-22). Although there are differences among these frequently used methods, the central outcome of all three methods is the description of the meaning of experiences, often through the identification of essential themes (Polit & Beck 2006, p410). This researcher does not intend to detail these data analysis procedures here, because Husserl's paradigm was not adopted for this study.

After Husserl, Heidegger stressed an interpretive viewpoint of phenomena rather than description of phenomena. Heidegger declared the importance of meaning or understanding that derives from humans' concern (Sorge, in German) and hermeneutics (Moran 2000, p305). Hermeneutic (interpretation) is a key concept in his phenomenological theory. The hermeneutic circle (Figure 2-1) is a metaphor taken from Heidegger and signifies a methodological process in which continual movement between the parts and the whole of the text is analyzed (Polit & Beck 2006, p411). The hermeneutic circle is central to analyzing data (Alvesson & Skoldberg 2000, p66). During the analyzing process, the shifting between pre-understanding and understanding of the given study phenomena occurs so that researchers are able to form a holistic understanding of the phenomena (Koch 1996; Alvesson & Skoldberg 2000, p 65). As shown in Figure 2-1, the entire process of emerging patterns of interpretation, textual analysis and dialogues should be permeated by the basic hermeneutic circles (Figure 2-1). In this way, the interpretation of the whole text is successively developed by the interpretations of its parts and conversely the views of the parts are illuminated by the view of the whole (Alvesson & Skoldberg 2000, p 67). In brief, understanding must continually refer back to the earlier pre-understanding and pre-understanding must be fertilized by the new understanding.

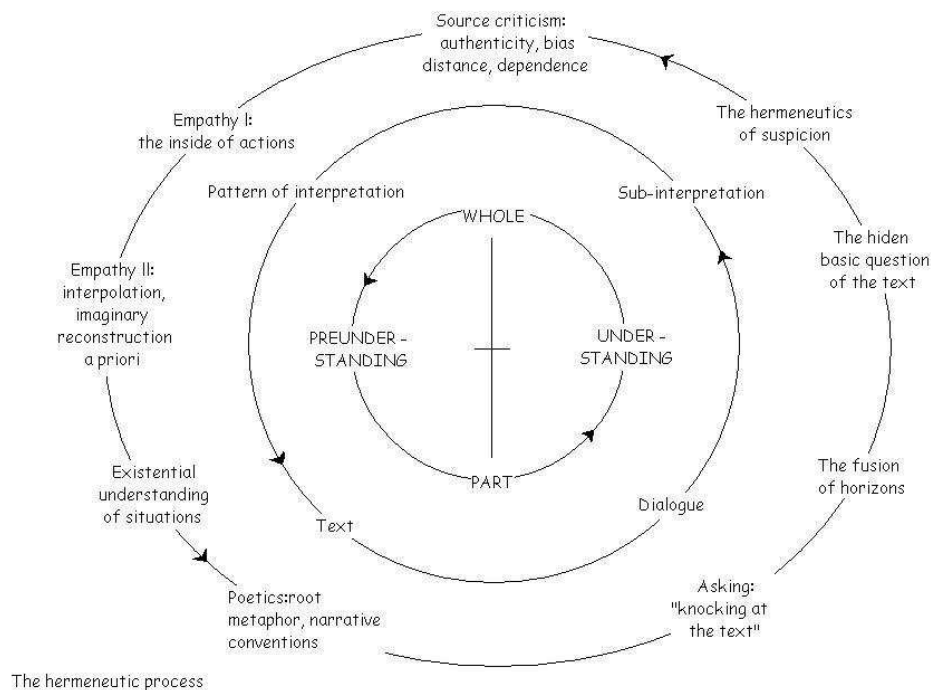
Figure 2-1: The hermeneutic circle- the basic version, adopted from Alvesson & Skoldberg 2000 (p 66)



As the theoretical framework of Heidegger's interpretative phenomenology was adopted in this study, the hermeneutic circle (1962) was used to guide the process of data analysis conceptually in order to underpin the research findings. The details about how this study adhered to the theoretical background are presented in 3.2.6.

After Heidegger, the original hermeneutic circle was further expanded by succeeding philosophers such as Gadamer (1976, pp3-43) and Ricoeur (1984, pp17-46), attempting to integrate various philosophical notions that developed later (Alvesson & Skoldberg 2000, p99). As a result, a new hermeneutic process was produced (Figure 2-2). Nevertheless, it was decided to adopt Heidegger's basic hermeneutic circle for this study. This is mainly because it fit with the study framework but also is concise. At the same time, this provides the theoretical ground from which many practical analysis procedures were derived.

Figure2-2: The hermeneutic circle-new hermeneutic process adopted from Alvesson & Skoldberg 2000 (p 99)



However, the methods provided by philosophers are rather abstract or too conceptual for the human sciences that feature practical procedures such as psychology and nursing (Draucker 1999). As a result, scholars in human sciences developed more practical pathways in order to link philosophical concepts and practical research tasks, and analyse data in the light of philosophical notions by following clear illuminated and specific steps; that is, these concrete steps fit the context of various clinical disciplines and yet enable researchers to adhere to philosophical ideas (Giorgi 2000). The specific methods attached to interpretative phenomenology are presented next.

Data analysis methods proposed by humanistic science scholars

Because Heidegger's phenomenological school was adopted in this study, only analysis methods that derived from Heidegger's phenomenology school are presented here and summarized in Table 2-12 (Diekelmann, Allen & Tanner 1989, pp11-12; Benner 1994, pp99-127; Sjostrom & Dahlgren 2002; Crist 2003; Polit & Beck 2006, pp 411-412).

As can be seen in Table 2-12, several concepts of interpretative phenomenology are shared including emphasizing the application of the hermeneutic circle, understanding the study phenomena in depth, inspecting the pre-understanding and treating the analysis process as a whole. On the other hand, there are some differences between these methods. For example, both Diekelmann et al (1989, p11-12) and Crist (2003) require a team while Benner does not. In addition, in terms of analytic procedure, Benner (1994, p99-125) stated the steps conceptually and simply. As a consequence

Benner's method was adopted.

Table 2-12: Summary of the data analysis methods derived from Heidegger's phenomenology

Scholars	Process of analytic method	Features
Diekelmann, et al (1989, pp11-12)	<ol style="list-style-type: none"> 1. Reading all interviews or texts for an overall understanding 2. Preparing interpretive summaries of each interview 3. Analyzing selected transcribed interviews or texts by a research team 4. Resolving any disagreements on interpretation by going back to the text 5. Identifying recurring themes that reflect common meanings and shared practices of everyday life by comparing and contrasting the texts 6. Identifying emergent relationships among themes 7. Presenting a draft of themes, along with exemplars from texts, to the team; incorporating responses and suggestions into the final draft. 	Involves collaborative effort by a research team. The centre of data analysis is the hermeneutic circle in which the researchers try to reach understanding and continual movement between the parts and the whole text. The parts may consist of a section of dialogues or a discourse that contained an idea or an assumption. By penetrating the meaning of different parts the whole transcription can be comprehended.
Benner (1994, pp113-118)	<ol style="list-style-type: none"> 1. The search for paradigm cases 2. Thematic analysis 3. Analysis of exemplars 	Three interrelated processes. Paradigm cases are used early in the analytic process as a strategy for gaining understanding.
Crist (2003)	<ol style="list-style-type: none"> 1. Early focus and lines of inquiry 2. Central concerns, exemplars and paradigm cases 3. Shared meanings 4. Final interpretations 5. Dissemination of the interpretation 	The interpretive team acknowledges any assumptions that could both influence the investigator's conduct of interviews as well as the whole team's interpretations. Recognizing assumptions made by the interpretive team has been described as the forward arc of the "hermeneutic circle" and the interpretation as the return arc. This is the "movement of uncovering" of the circle. Application of interpretative phenomenology into the method of observation is discussed.

2.3.4 Justification of choosing Benner's method as a data analysis tool

Benner's method was chosen as a data analysis tool in this study. Reasons for supporting this decision are justified here. The two main reasons are: firstly, the connection between Benner's methods is close as illustrated in Table 2-13. Secondly, Benner's method is conceptual but also provides specific steps making it clear for researchers to follow (3.2.6).

First of all, the connection between Benner's methodology and Heidegger's notions is close. Following Heidegger's paradigm (*The second phase of phenomenological movement* 2.3.1), Benner, a nursing scholar, stated that the goal of interpretative phenomenology was to uncover commonalities and differences (Benner 1994, p 104) She proposed five sources of commonality explored in phenomenology: situation, embodiment, temporality, concerns and common meaning (Benner & Wrubel 1989, pp51-69). These ideas correspond with the essential concepts of Heidegger's phenomenology; that is situatedness, comportment, time, 'Sorge' and pre-understanding. The details of how Benner's method traces back to Heidegger's notions are elucidated in Table 2-13.

Table 2-13: The connections of notions between Benner and Heidegger

Five sources of commonality: Benner & Wrubel (1989, pp51-69)	Heidegger's concepts
Situation: includes an “understanding of how the person is situated, both historically and currently”.	Situatedness: refers to how an individual is embedded in a position and in a circumstance which interweaves a specific time, social and political context (Skolowski 2000, p72).
Embodiment: refers to “an understanding of embodied knowing that encompasses skilful comportment and perceptual and emotional responses”.	Comportment (Verhalten in German): A human's understanding is interpretative. The interpretation regarding the world may not exist in the cognitive or theoretical level but rather is built upon the participation in the world (Moran 2000, p306).
Temporality: refers to “the experience of lived time is the way one projects oneself into the future and understands oneself from the past”.	In the publication ‘Being and Time’, one of the major discussions focused on time dimensions of humans. Humans are flung into history and always plan for the future (Moran 2000, p305).
Concerns: refers to “the way the person is oriented meaningfully in the situation”.	Sorge (in German): Humans are fallen (Verfallen in German) in the world so humans are concerned about the world and interaction with it (Moran 2000, p304).
Common meanings refer to “taken-for-granted linguistic and cultural meanings that create what is noticed and what possible issues, agreements, and disagreements between people” are.	Pre-understanding: notions of background, co-constitution and perceptions. Pre-understanding of tradition operates of in advance of our reflection (Koch 1996).

In addition to the ideas presented above, several other concepts are further stressed by Benner as they link to the tradition of Heidegger's philosophy as well.

- Developing ‘lines of inquiry’: Benner (1994, p105) emphasized the importance of developing ‘lines of inquiry’; that is, researchers must have a clear sense of how to find a suitable way to explore phenomena. This reflects Heidegger's ideas of hermeneutics. Heidegger reminds us that we need to notice the nature of inquiry. For example, when we bring up a question we need to reflect the things we are asking for. In addition, an inquiry itself already contains our presumption and even further an inquiry also constrains the answer that we are going to collect (Moran 2000, p308). For example, an inquiry about “why have you not married?” contains a presumption of social judgement that ‘an individual should be married before a certain age’ and the person who tries to respond to this question is most likely to give explanations and is already been given a position of defence. Therefore, developing appropriate lines of inquiry in research can help researchers to collect wide-ranging data and also reflect on what presuppositions have been concealed in research inquiries.
- Benner (1994, p108) highlighted ‘communicative context and dialogue’ and this links to the idea of ‘expression’ (‘Aussage’ in German) in Heidegger's philosophy. For Heidegger, the nature of interaction with things or the way in which an individual situates himself or herself in the world is included in the use of language (Moran 2000, p304). For example, in the way that a child talks to a (toy) bear reveals that the bear is alive for the child rather than a stuffed toy or a commodity for adults. Additionally, the dialogue between the child and the bear can reveal their live experience. For example, a girl may talk to the bear as a mother comforts a baby showing her experience of being cared for by her mother. The concept that

via 'aussage', an individual can reveal the meaning of a phenomenon by 'assage' was exhausted by Heidegger in his book 'On the way to language' (1971). Benner (1994, p109) applied these ideas to nursing by using terms familiar to nurses, 'communicative dialogue', and that fitted the context of nursing fields. In this way, the unique perspectives of interpretative phenomenology could nourish the nursing profession. For example, these concepts can guide how narrative data can be analyzed in terms of context and dialogue (3.2.6).

The second reason for choosing Benner's data analysis method was because it is well structured at both the conceptual level and practical process. In other words, the method contains three main steps (Table 2-12) and under each main step, clear and definite procedures are provided (3.2.6). Therefore, the narrative data can be analyzed under interpretative phenomenological notions.

In conclusion, the relationship between Benner's methodology and Heidegger's notions is closely connected. By following Benner's analysis methods, the main ideas of Heidegger's phenomenology remain and the interpretation of the data is within interpretative phenomenological concepts.

2.3.5 Issues related to rigour in the interpretative phenomenological nursing research

This section discusses the issue of rigour in the context of using interpretative phenomenology as a research approach, incorporating both qualitative and phenomenological research. This is because phenomenology is one of the paradigms in qualitative research and the development of rigorous concepts of qualitative research was earlier than the development of rigour specifically related to the phenomenological approach. Therefore, the earlier concepts of rigour of qualitative study provide the grounds for the later criteria of rigour to develop and simultaneously influence the construction of rigour in terms of interpretative phenomenological nursing research (Polit & Beck 2006, pp 332-337; de Witt & Ploeg 2006).

Rigour is crucial because it ensures that the research methodology is systematic, accountable and high-quality so that sound research findings can be produced (de Witt & Ploeg 2006). In terms of qualitative studies, it is expected that the data collected should be able to reflect the truth or the truth state of human experience (Polit & Beck 2006, p332). The appearance of qualitative criteria for rigour was in the early 1980s when the legitimacy of qualitative study was being debated (Sandelowski, 2006; de Witt & Ploeg 2006). These debates resulted from different epistemologies of quantitative and qualitative research. Historically, the research approaches that featured empirical, objective and reductive characteristics were held as the traditional paradigm in nursing research (Corben 1999). However, because the raising of another paradigm, empiricism, asserts that knowledge cannot be built from outside of the human's experience but can only be structured by humans, this challenges the stand point of the traditional paradigm fundamentally.

Accordingly, due to the different stances of epistemology the concepts of rigour in qualitative research are different from the criteria of rigour in traditional scientific paradigms (Polit & Beck 2006, p332; Sandelowski 2006). However, apart from the disagreement over rigour between these two major paradigms, ironically the scholars of qualitative paradigm have no consensus. When different styles of qualitative research, such as phenomenological research, have been evolved further, the unified set of criteria of rigour faces challenges (Lincoln & Guba 1985, p289; Koch 1998; Merilyn 1999; de Witt & Ploeg 2006). In what ways the viewpoints differ are shown in Table 2-14. Scholars' attempts to build suitable criteria specifically may be regarded as a signal implying that the notion of rigour was being re-conceptualized (Koch 1996).

In order to have an overview about how concepts of rigour have changed over time, the comparison criteria of rigour are listed chronically in Table 2-14. Furthermore, comments made by this researcher are also shown. In this way the rationales for the adoption of criteria in this study can be traced.

Table 2-14: The comparison of concepts of rigour in qualitative research chronologically

Scholars	Criteria for assessing rigour	Comment
Lincoln&Guba 1985, pp289-331	<ul style="list-style-type: none"> • Credibility • Dependability • Confirmability • Transferability 	Originated from social science, the notions of these criteria are parallel to traditional quantitative paradigm. These terms may help to create a bridge for dialogue between these two distinctive paradigms, quantitative and qualitative study. Qualitative researchers are expected to achieve the rigour that conceptually similar to quantitative study in order to underpin their findings. These four criteria are the origin many new criteria derive from.
Sandelowski 1986	<ul style="list-style-type: none"> • Truth value (credibility) • Fittingness (applicability) • Auditability (consistency) • Confirmability 	Sandelowski, a nursing scholar, further describe the essence of rigour especially in qualitative study. More subtle notions and words are applied. Concept of trustworthiness is emphasized. However, Sandelowski (2006) later acknowledged that post-modern ideas of the narrative quality are inherent in all inquiry and state her notions of rigour no longer fitted into today's philosophical treatments of qualitative study. The relatively new viewpoint of post-modern challenges previous ideas of rigour, especially the criteria parallel to traditional ones.
Beck 1993	<ul style="list-style-type: none"> • Credibility • Fittingness • Auditability 	These criteria are very similar to Sandelowski's (1986), but particularly focus on phenomenological research. For instance, the term 'fittingness' refers to when data can fit into another context rather than the one in which they were generated. It was clear that in general the aims of phenomenological study are not to perusing generation rather in favour of gaining an insight of in-depth (Walker 2007).
Koch 1998	<ul style="list-style-type: none"> • use philosophical hermeneutics to guide self-critique and self-appraisal • Incorporate a reflexive account into the research product. 	The importance of reflexivity and achieving an internal logic is stressed. Reflexivity should be added into the concept of rigour. Reflexivity is regarded as a crucial approach to make the study plausible. The authority of reflection has been emphasized in qualitative study and specially stressed in phenomenological study. Self-critique and self-appraisal is emphasized an on going process to achieve reflexivity (Hallett 1995; Koch 1998; Alvesson & Skoldberg 2000, p79 & 276).
de Witt & Ploeg 2006	<ul style="list-style-type: none"> • Balanced integration • Openness • Concreteness • Resonance • Actualization 	They reject the idea that a generic set of criteria can be applied to all types of qualitative research and further narrowed their criteria into interpretative phenomenological study only: (1) Balanced integration: the intertwining of the philosophical concepts in the study methods and findings and maintaining a balance between the voices of participants and philosophical explanation. (2)Openness: a systematic explicit process of accounting for the multiple decisions made throughout the study process. (3)Concreteness: usefulness of implementation of research findings. (4) Resonance: the experiential or felt effect of reading study findings upon the reader. (5) Actualization: the future realization of the resonance of the study findings.

Overall, the core concepts of rigour remain somewhat consistent over time. For example the idea of reflexivity had been discussed in Lincoln & Guba's (1985, p70) work under the criteria of dependability but the concept was further discussed by Koch (1998). However, compared to the earlier criteria of rigour, later criteria of rigour for individual qualitative paradigms show more prominent features. For instance, when a phenomenological approach is claimed to be used in a study, the integration of philosophical notions and perspective of phenomenology in research products should be highlighted (Benner 1994, p99; Crotty 1995; Stubblefield & Murray 2002; Crist & Tanner 2003; Lopez & Willis 2004; de Witt & Ploeg 2006).

Whether or not a general framework is adequate for evaluating rigour in all types of qualitative study has been widely debated (Koch 1998; de Witt & Ploeg 2006; Sandelowski 2006; Rolfe 2006; Spear 2006). It is generally agreed that because of the differences between various types of qualitative research, such as grounded theory, ethnography and phenomenology, these differences should be identified in terms of rigour (Koch 1998; de Witt & Ploeg 2006; Sandelowski 2006). For example, Koch (1998) disapproved of “borrowing evaluation criteria from one paradigm of inquiry and applying them to another”; Sandelowski (2006) stated that “I have long wished that researchers would stop using my 1986 paper, because at that time the purpose of the argument was to draw general lines between qualitative and quantitative research”. She further pointed out that more sophisticated treatments of rigour in qualitative research are needed. However, the development of a range of criteria suitable for each type of qualitative study, is not yet formed and is still being debated (Sandelowski 2006).

Therefore, this researcher decided to adopt a middle and comprehensive way; that is, following the golden rules of criteria of rigour proposed by Lincoln & Guba (1985, p289) (Polit & Beck 2006, p332). At the same time, the researcher attempted to link the major concept held in interpretative phenomenology to the research findings in this study. Thus, the hermeneutic circle that illuminates the interpretation process was emphasized in this study. Rationales that account for applying these criteria in this study are discussed next.

Firstly, the most important reason is that procedures regarding each criterion proposed by Lincoln & Guba (1985, p289) were clear for researchers to follow to access and enhance study robustness. These are the earliest criteria used to evaluate the quality of qualitative research and were also the foundation for the new criteria of rigour to develop (Polit & Beck 2006, p332).

The second reason is that the usage of these criteria is helpful in terms of communication and making comparisons between studies. Given that the criteria proposed by Lincoln & Guba (1985, pp289-331) have been widely adopted by researchers, as a result, efforts were made to enhance the rigour in this study to allow comparisons. For readers, it is much easier to transfer the ideas of rigour described in this study to other research.

The third reason is that the criteria proposed by Lincoln & Guba (1985, p289-331) are precise. Although de Witt & Ploeg (2006) developed a set of criteria of rigour for interpretative phenomenology, some are rather abstract and therefore may result in difficulties for a researcher to follow e.g. ‘Resonance’ and ‘Actualization’ (Table 2-14). Additionally, some of the new terms proposed by de Witt & Ploeg (2006) for replacing the traditional terms of rigour failed to distinguish the features of interpretative phenomenology from other qualitative research paradigms. In other words, the meanings of the new terms parallel the meaning of traditional terms; for instance, the new criterion ‘Openness’ compared to the traditional one ‘Auditability’ (Sandelowski 2006, Table 2-14).

Criteria of rigour adopted in this study

The details of these four criteria are explained below as the criteria of Lincoln & Guba (1985, p289-331) were adopted. Additionally, the researcher attempted to improve the linkage between the interpretative phenomenological framework and this study. Therefore, the application of hermeneutic circle is included here.

- **Credibility:** Credibility (truth-value) indicates the truthfulness of data and data interpretations (Polit & Beck 2006, pp332-333). To improve credibility, several strategies can be used including prolonged engagement and persistent observation, triangulation, external checks (peer debriefing and member checks), searching for disconfirming evidence or negative case analysis and researcher credibility. Among these various strategies, triangulation is a subject that has been discussed (Foss 2002; Annells 2006; Tobin & Cecily 2004; Polit & Beck 2006, p333) and helps to capture a more complete and contextualized portrait of the phenomenon under study. There are four types of triangulation identified by Denzin & Lincoln (2000, p391): data, investigator, theoretical and methodology triangulation (3.8.1). In addition, Kimchi et al (1991) added another category of triangulation, 'analysis triangulation' which refers to the use of different statistical tests or qualitative modes to analyse data. In this way, analysis triangulation enables researchers to identify similar patterns of data and thus verify their findings.

In this study, prolonged engagement, methodology and investigator triangulation, member checking, and researcher credibility were used to enhance study rigour (3.8.1; 4.11.4).

- **Dependability:** Dependability (Consistency) refers to data stability over time and over conditions and is comparable with reliability in terms of quantitative research (Tobin & Cecily 2004; Polit & Beck 2006, p335). Dependability can be achieved through a process of auditing and demonstrated through an audit trail. As a result others can examine the inquirer's documentation of data, methods, decisions and product. Inquirers are responsible for ensuring that the research process is logical, traceable and clearly documented. Many approaches can be used to assess dependability such as stepwise replication and inquiry audit. Moreover, reflexivity is crucial as researchers keep a self-critical account of the research process, including their internal and external dialogue (Tobin & Cecily 2004).

In this study, the delivery of the Zen meditation programme (4.12.1) and how the prompt schedules were modified are described (5.1.9, 5.1.11, 5.2.8, 5.2.10). In addition, an audit trail including outlines of themes and categories of both focus groups and individual interviews is presented (Appendices IV and V).

- **Confirmability:** Confirmability (Neutrality) is comparable with objectivity in terms of quantitative language. It is concerned with establishing that data and interpretations of the

findings are clearly derived from the data (Tobin & Cecily 2004, p336). In addition, Polit & Beck (2006, p336) state that confirmability refers to the potential for congruence between two or more independent people about the data's accuracy, relevance or meaning. Inquiry audits can help to build up confirmability by providing different classes of research records to produce an adequate audit trail, including raw data, data analysis products, process notes and material relating to intentions. As a result, an independent auditor can come to a conclusion about the data.

In this study, supervision continuously provided by the supervisor throughout the whole study process started with very beginning of research design. The mentor in Taiwan discussed with the researcher mainly about overcoming difficulties when conducting this study, the data analysis procedure and issues regarding language translation (4.14). Thus, the researcher was enabled to maintain neutrality as much as possible.

- Transferability: Transferability (Applicability) parallels external validity or generalizability of inquiry. Lincoln and Guba (1985, p110) considered that researchers can provide only a 'thick' description to enable someone interested to reach a conclusion about whether transferability can be contemplated as a possibility. Likewise, Donmoyer (1990) argues that the rejection of traditional perspectives of generalizability is required as naturalistic inquiry has individual subjective meaning as central.

In this study, the researcher aimed to explore the meaning of Zen meditation for the participants. Additionally, the researcher tried to provide thick description of aspects related to the study site in terms of social context and historical background (1.2; 2.1.1; 2.1.3, 2.2.1). Therefore, readers can refer to the context of Taiwan and are able to consider transferability in their own social context.

- Linking the study findings with interpretative phenomenology: the lack of connection between notions of theoretical background and study findings are the most common critique in terms of phenomenological research (Koch 1998; Witt & Ploeg 2006). Research findings should be underpinned by theory so that the integrity and legitimacy of rigour in interpretative phenomenological study can be enhanced (Beck 1993; Koch 1998; Witt & Ploeg 2006).

In this study, how the hermeneutic circle was used to guide self appraisal is described (*The application of hermeneutic circle into this study* 3.2.6). Moreover, reflection on the researcher's position to this research and reflection on the pre-understanding related to this study such as Zen meditation and GAD are also addressed (3.2.6).

2.4 Summary

As a school of philosophy, the paradigm of interpretative phenomenology with its unique view of lived experience is highly valued. Because of this perspective and the philosophical concern about how to approach reality as closely as possible (2.3.1), the ideas of this school attract other disciplines such as psychology and nursing to apply the philosophical concepts to their own professions. Nursing scholars have developed practical procedures in order to enable these ideas to make a contribution to nursing knowledge (2.3.3). The legitimization of the knowledge of nursing produced through the interpretative phenomenological paradigm has developed over time (2.3.5).

2.5 Overall summary

In this chapter, current research findings regarding GAD and meditation were presented. Particularly, the historical and social context of Taiwan in terms of Zen meditation were incorporated. Following these two major topics, the theoretical framework applied to in this study, interpretative phenomenology, was articulated. In the next chapter, literature pertaining to the selected methods in this study is presented.

2.6 Research questions

Following the review of the literature and the identification of the gap in knowledge, this study set out to answer the following questions:

1. What are participants' experiences regarding practising Zen meditation?
2. What is the process of participating Zen meditation in a group of GAD patients?
3. What is the effectiveness of Zen meditation as an intervention to manage anxiety in a group of GAD patients?

CHAPTER III: LITERATURE PERTAINING TO THE SELECTED METHODS

3.0 Introduction

To answer the research questions in this study (2.6), a mixed method approach was adopted. Repeated focus groups were applied to trace the longitudinal features of experiences of Zen meditation practice among participants. In-depth individual interviews were used to probe insight, using an interpretative phenomenological paradigm as a theoretical framework to guide the interpretation of the qualitative data. At the same time the RSTAI was adopted to trace the changes in anxiety levels among study participants throughout the intervention period. In addition, diary and field notes were also applied to strengthen the robustness of this study. Therefore, the chosen methods and issues pertaining to the selected methods discussed in this chapter include: focus groups, individual interviews, RSTAI, diary, field notes, mix-methods methodology, translation and the study rigour.

3.1 Focus groups

It is well established that the focus group method is a useful and effective mechanism for deriving collective opinions, values and beliefs (Halcomb, Gholizadeh, DiGiacomo, Phillips & Davidson 2007). Focus groups have been used increasingly among a number of studies across various disciplines either as an adjunct or primary data collection approach (Fern 2001, p2; Curtis & Redmond 2007; Happell 2007; Kidd & Parshall 2000). Several aspects regarding focus groups are discussed here including justification of using focus groups as an approach, basic concepts of focus groups, conducting focus groups, moderating focus groups, and data analysis.

3.1.1 The justification of using repeated focus groups

In this study, there were two main purposes of using repeated (periodical) focus groups as a key method for data collection. Firstly, the researcher attempted to collect data as widely as possible. Therefore, the focus group approach was adopted to collect various experiences of Zen meditation of the participants over time. At the same time, it was expected that the group dynamic would stimulate diversity in responses and generate rich data.

Secondly, when the researcher wants to track changes in perceptions over time, repeated focus groups are helpful in this situation (Krueger 1994, p192). In considering that the responses or experiences of the participants might differ during the six week period of Zen meditation programme, the repeated focus group method was then chosen. By tracing the longitudinal changes of participants' Zen meditation experience the research questions of this study could be answered.

3.1.2 Basic concepts of focus groups

Given that focus groups are used as a data collection tool in this study, to understand the basic concepts of focus groups is necessary. The fundamental concepts regarding focus groups incorporated here are: background, definition and application, strengths and limitations and the validity, generalization and transferability of focus group findings.

Background, definition and application

Originating from social science, the focus group is a relatively new research method (Curtis & Redmond 2007). Robert K. Merton is considered to be the father of focus groups. He used focus groups to study people's reactions to wartime broadcasts and then published an influential book on focus groups in 1956 (Puchta & Potter 2004, p4). In addition, Morgan (1998, kit1 pp37-38) described three periods in the development of focus groups: initially focus groups were carried out by both academic and applied social scientists; then they were used for market research between the Second World War and about 1980; recently focus groups have been used in academic, market research and political settings (Morgan 1998, kit1 pp39-43).

Several definitions describe the nature of focus groups. Vaughn, Schumm & Sinagub (1996, pp 4-6) state that a focus group usually contains two core elements: (1) a trained moderator who sets the stage with prepared questions or an interview guide; (2) it has the goal of eliciting participants' feelings, attitudes and perceptions about selected topics. Krueger & Casey (2000, p21) stated five characteristics of a focus group: (1) people who (2) possess certain characteristics and (3) provide qualitative data (4) in a focused discussion (5) to help understand the topic of interest. To sum up, a focus group is a carefully planned discussion designed to acquire perceptions on a defined area in a non-threatening environment where participants share and respond to comments, ideas and perceptions (Litosseliti 2003, p1; Halcomb et al 2007).

In general, the application of focus group is diverse (Krueger & Casey 2000, p23; Litosseliti 2003, p3; Curtis & Redmond 2007). Focus groups work particularly well to determine the perceptions, feelings and thinking of people about issues, products, services or opportunities (Krueger & Casey 2000, p12). Fern (2001, p3) stated that there is no workable typology of focus groups in which categories are collectively exhaustive. The fact is that to serve diverse purposes or projects focus groups must be designed uniquely (Fern 2001, p 3). In terms of nursing research, focus groups present a helpful way for nurse researchers to collect preliminary information from an area of research interest. The information obtained can lead to greater understanding of phenomena or can be used to develop more extensive quantitative studies (Dilorio, Hockenberry-Eaton, Maibach & Rivero, 1994; Gulanick & Keough 1997).

Strengths and limitations of focus group approach

Generally, compared to individual interviews, one source of focus group reputation is ‘quick and easy’ in terms of gathering equivalent amount of data (Morgan 1997, p13). Several advantages to using focus groups as an approach are identified, including discovering new information and consolidating old knowledge, obtaining a number of different perspectives on the same topic, gaining information on participants’ views, attitudes, beliefs, responses, motivations and perceptions on a topic, examining participants’ shared understandings of everyday life and the use of language and culture of a particular group (Litosseliti 2003, pp19-20). Furthermore, it is agreed that the group interaction or dynamic is an important strength because group interaction helps researchers to compare the opinions and experiences among participants which can be a valuable source of insight into complex behaviours and motivations (Morgan & Krueger 1993, pp3-19; Kitzinger 1995; Morgan 1997, p13; Myer & Macnaghten 1999, pp173-185; Freeman 2006).

On the other hand, several limitations of the focus groups approach have also been identified. Firstly, the danger is that the researcher (moderator) might lead participants and encourage participants to respond to the views that the moderator holds. This would be regarded as bias and manipulation (Fern 2001, p80; Litosseliti 2003, p40). Secondly, some participants with strong personalities or similar views may dominate the discussion, while others may remain silent and this may lead to ‘false consensus’ (Litosseliti 2003, p55). Thirdly, data of focus groups are more difficult to analyze compared to data of individual interviews. The difficulty in interpretation of focus group data results from the open-ended nature and the influence of many immediate situational factors. Fourthly, the researcher has less control in the group situation as compared to the one to one interview situation (Krueger 1994; 2000). The final weakness of focus groups is difficulty in generalization because of the limited number of participants, the difficulty of having a representative sample and that the research cannot be replicated exactly, such as different approaches or tone used by the moderator (Fern 2001, p 84).

Additionally, the advantages and disadvantages of focus groups are determined by other factors, such as the proficient level of moderating skills and the characteristics of participants (Fern 2001, p112). Morgan (1998, p11) stated that both the strengths and the weaknesses of the focus group approach rely on two defining features: the researcher’s focus and the group’s interaction. Moreover, the strength and weakness are actually reciprocal. For example, when a moderator keeps participants’ discussion precisely on the research topic, the natural course of discussion may be interrupted (Morgan 1997, p14). Overall, to keep a balance between strength and limitation is an art. Researchers must consider all factors in order to benefit most from using focus groups.

The truth-value and transferability of focus group findings

The issue of validity is essentially a question about trusting or judging the research findings. Krueger (1994, pp14-15) argued that focus groups are valid if they are used carefully for a problem that is

suitable for focus group inquiry. Focus groups are much like other measurement procedures in which validity not only depends on the procedures used but also on context. Scholars make the case for robust external validity of focus group studies following Krueger's (1994, pp197-198) methodological precepts of segmentation and homogeneity i.e. given an adequate number of homogenous groups with randomly selected participants, study results may be transferable to the population(s) from which the groups were drawn. In addition, some strategies are suggested to improve the trustworthiness of data and to provide insight into research findings. For instance, a teamwork style of analysis and feedback group; in feedback groups the researchers can feedback the key points and seek verification from participants (Krueger 1994, p 197-200; Kidd & Parshall 2000; Twinn 2000).

However, despite the point of view held by Krueger as discussed above, Krueger & Casey (2000, p201) later asserted that validity is overemphasized in qualitative study. They suggested that the researcher worry less about the traditional concerns of validity but instead be ready to answer the question of what you have done to ensure that you have followed the steps associated with quality research. Therefore, from a strict sense, the findings of focus groups cannot be generalized, but they suggest a concept of transferability; that is, the reader considers the methods, procedures and audience and then decides the degree to which these findings fit the situation the reader faces (Krueger & Casey 2000, p201). This position is quite similar to that of Kitzinger (1995) who is more wary of claims of external validity of findings, asserting a much weaker criterion of transferability.

To sum up, it is agreed that the findings of focus groups cannot be generalized, but that the researcher refines the emergent categories and themes in sufficient detail so the reader can make a judgement on their credibility and trustworthiness (Kitzinger 1995). In other words, the point is that researchers concentrate on good practice including planning, asking questions, moderating, analyzing, reporting and going in-depth into a topic and gain richness in data in a context under study rather than with intention to generalize (Krueger & Casey 2000, p203).

3.1.3 Conducting focus groups

To conduct a focus group smoothly, many key elements need to be taken into account, including selecting a physical space conducive to discussion, assessing potential risks and benefits to both the facilitators and the participants in particular confidentiality issues, providing ongoing support to participants particularly in vulnerable groups (Beng 2004, p135; Bryman 2001, p479). Other considerations including selecting participants, group size and the number of focus groups, style of focus group, composition of focus groups and group dynamic are discussed next.

Selecting participants

Generally, anyone for whom the topic is relevant, can be an appropriate participant (Bryman 2001, p473); that is, potential participants are selected on the basis of their ability to provide insight into and information about research topic (Krueger & Casey 2000, p25). However, sometimes some screening of participants may be required. For example, some people are uneasy to attend a group that discusses about heart disease as one of their family is a victim of coronary disease (Bryman 2001, p 343). The selection of diverse strategies should be based on study purposes. Kitzinger (1994) suggested that to enhance the quality of data, naturally occurring groups or pre-existing groups may be adopted. However, Morgan (1998, kit1 p49) suggested that groups of strangers are likely to work better than people who know each other well who are likely to operate with taken for granted assumptions and do not bring their ideas to the fore. In terms of selecting characteristics of group members, researchers need to consider the aims of their research to work as a guide for arranging other related factors such as ethnicity, class or gender.

Composition of focus groups

Composition of focus groups includes many factors, such as race (ethnicity), age, sex, socioeconomic status and individual characteristics (Fern 2001, p23). It is certain that the composition affects the character and process of the group profoundly (Morgan 1998, kit2 p59). The extent of shared characteristics among participants in a focus group decides whether a focus group is homogenous or heterogeneous. For example, when most participants in a group are middle aged, with the same diagnosis and all female, this group tends to be classified as a homogenous group (Morgan 1998, kit2 p59). Fern (2001, p3) suggested that the decision about which kind of group should be adopted in a study depends on the study aims. For example, if a researcher studies an issue related to sexual practices and HIV infection then homogeneity is much more suitable than heterogeneity (Bryman 2001, p 346). However, there are diverse standpoints regarding the application of composition of focus groups in terms of homogeneous versus heterogeneous characteristics. Krueger (1994) recommended using homogenous groups in order to compare variables in sub-groups. In other words, homogeneity can facilitate an analysis of differences between the sub-groups. In contrast, Kitzinger (1994) favours heterogeneous groups because a homogenous group may lead to conformity in effects and inhibit discussion; that is, both homogenous and heterogeneous focus groups own their distinct strengths and limitations (Macnaghten & Myers 2004). However, due to the considerable influences of composition on a focus group, to control the composition at the planning stage of a focus group study according to study purposes, may be a pragmatic strategy (Fern 2001, p47).

Group size and the number of focus groups

Focus groups are typically composed of 6-10 people, but the size can range from as few as four to as many as twelve (Morgan 1998, kit2 p71). The size should be small enough for everyone to have the opportunity to share experiences or ideas and yet large enough to provide diversity of perceptions

(Krueger 1994). Smaller size is recommended when topics are controversial, complex or participants are likely to have a lot to say (Morgan 1998, Kit2 p77; Bryman 2001, p341). Larger groups may be used when involvement with a topic is likely to be low or when the researcher wants to hear numerous brief suggestions (Morgan 1998, kit2 p71). One problem that is almost impossible to control is people who agree to participate but do not attend. A strategy, over-recruiting, is advised to manage this problem (Bryman 2001, p343; Halcomb et al 2007).

In terms of how many groups are needed for a study, a criterion may be applied 'The number of focus groups is determined by continuing until comments and patterns begin to repeat and little new material is generated' (Morgan 1998, kit2 pp79-81). Based on the review of focus group studies, Bryman (2001, p472) reported that there was a variation in the numbers of groups used from 9 to 52. However, there seem to be a tendency for the range to be from 12 to 15 which is middle way. Kreeger (1994 p67) identified that the complexity of the topic is the major consideration for a decision on the suitable number of focus groups. Yet, time and resources are also key factors that influence the determination, as too many groups will be a waste of time or represent an unnecessary expense (Bryman 2001, p 474). Additionally, Krueger (1994, p7) stated that groups can vary considerably. For example, one group can be lethargic, boring and dull while another one may be exciting, energetic and invigorating. Because of the differences existing between groups, it is recommended to include enough groups to balance the idiosyncrasies of individual sessions (Morgan 1998, kit2 p77). On the whole it is suggested that if the moderator reaches the point that s(he) is able to anticipate fairly accurately what the next group is going to say, then there are probably enough groups (Krueger 2006).

Group dynamic

The importance of group interaction in a focus group has been overlooked according to Kitzinger (1994). Yet group dynamic or group interactions are regarded as a key feature that distinguishes itself from the individual interview approach. Additionally, group dynamic plays an important role in terms of data analysis in the insight produced by the interaction between participants (Puchta & Potter, p6). For instance, Kitzinger (1994) drew attention to two types of interaction in focus groups in her work on AIDS in the mass media: complementary and argumentative. The former, complementary interaction, brings out the elements of the social world that provides participants' own frameworks of understanding; a broad view of agreement between participants can emerge as a product of the interaction. The latter, argumentative interaction can help to reveal arguments in focus groups when the moderator can identify differences of opinions and can explore with participants the factors that lie behind the arguments (Kitzinger 1994). Freeman (2006) pointed out that for Krueger, group interaction is a helpful device for encouraging discussion performing a useful instrumental function, whereas with Kitzinger, group interaction was identified as more central and as the central analytical resource, to the point of making it a defining feature of the technique rather than an effective way of gathering data.

To sum up, group interaction, the unique feature of a focus group is a strength of this approach (Myer & Macnaghten 1999). Group interactions provide opportunities to revise participants' opinions or to think more about why they hold the views they do. Arguably, researchers should be able to appreciate and interpret it leading to a greater insight into issues, rather than using a single participant stratum to gain information. For researchers, to capture the group dynamic and interactions between participants is a key challenge in managing data and undertaking analysis. In addition, the group dynamic influences the level of disclosure and comfort in discussion (Halcomb et al 2007). Group interaction can help build up a trust relationship between group participants and this can result in richer data. At the same time, group dynamic can be an analytical resource that helps to reveal hidden beliefs (Fern 2001, p140; Halcomb et al 2007).

3.1.4 Different styles of focus groups and repeated focus groups

Different typologies of focus groups have emerged according to distinct perspectives of the focus groups. For example, Krueger & Casey (2000, p157) identified several approaches: market, academic, non-profit and public and participatory research. This classification seems to be based on the purposes of carrying out focus groups. On the other hand, Fern (2001, pp5-9) with a more abstract viewpoint, re-examined commonly held assumptions about the conduct of focus group research and identified three types of focus group: exploratory, experiential and clinical. At the same time, Fern (2001, p4) attempted to use two types of application, 'effects' and 'theory', to make normative prescriptions for each type. Taking the exploratory group task as an example, the 'effects' application of exploratory focus groups is to create new ideas, to collect unique thoughts; at the same time the theory application is to develop model, hypothesis or theories.

There are different ways in terms of executing focus groups in practice. Traditionally researchers conduct a number of focus groups and recruit different participants to one session; that is, each participant attends only one focus group (Krueger & Casey 2000, p157). However, for collecting diverse data and for the purpose of data saturation, modifications or different styles of focus groups are designed to serve individual objectives of a study or to adjust to limited research resources (Krueger & Casey 2000, p159). These may include periodically repeated focus groups, focus groups with two moderators, internet focus groups and media focus groups. A periodically repeated focus group can be done with the same participants or with different participants. Yet in a situation that the researcher wants to track changes in perceptions over time, repeated focus groups conducted with the same participants with a time interval between sessions can be helpful (Krueger & Casey 2000, p187).

To sum up, different types of focus groups have been advocated (Krueger & Casey 2000, p171; Fern 2001, p3). It may be expected that other styles of focus groups will emerge to reflect other needs of research in the future (Krueger & Casey 2000, p185). Nevertheless, researchers should consider

them in theoretical and applied contexts to provide clues as to how to design a focus group project in order to achieve their study aims (Fern 2001, p3). Therefore, in this study repeated focus groups were used in order to collect Zen meditation experience over time.

3.1.5 Moderating skills

Several aspects regarding the issue of moderating have been discussed, such as the degree of involvement on group discussion, styles of moderating and the background of the moderator (Bryman 2001, p477; Fern 2001, p95). These factors of moderating need to be considered as much as possible before conducting a focus group so that good quality data can be brought out. Among these factors, moderating (facilitating) skill is a determinative one for gathering data in depth. Therefore, in this section moderating skill will be discussed further. The attitude of a good moderator (facilitator) is described in Table 3-1.

Table 3-1: The attitude of a good moderator

- | |
|---|
| <ul style="list-style-type: none"> • “A good listener, having a curiosity and respect for the participants” • “Able to make the necessary transitions from one topic or issue to the next” • “Appears neutral, opinion free and non-judgemental, encouraging both positive and negative comments” • “Confident and in control, being flexible and adaptable” • “Does not hold a position of power or influence, or inhibit the flow of ideas by intervening” • “Promotes debate and interaction among participants, and at certain points may challenge participants or draw out their differences to tease out a diverse range of meaning on the topic under discussion” |
|---|

Adapted from Litosseliti (2003, pp40-46) Using focus groups in research. London: Continuum.

Practically, it is crucial at the beginning of focus groups to clarify important rules and responsibilities applied within the group session (Krueger 1994, p39). Generally, several points need to be conveyed and stressed, including every opinion is important, you should speak freely, there are no wrong answers; both positive and negative comments are interesting, allow others to speak and do not talk at the same time. Among many useful skills, skills of probing are essential and should be used appropriately so that important data can be noted at the right time. Especially, probing skills help to explore ideas when participants express them in a broad way or too vague. For example, participants may say “I feel it is good” or “for me, it is not surprising”, and then it is necessary to look into those expressions which may contain hidden ideas. Litosseliti (2003, p59) suggests some questions to probe topics in depth, such as “How do you mean this”, “In what way is this linked to...”, “What make you say that?” “Could you explain further?”, and “How important is that concern?”

However, many unexpected situations may occur such as the group not wanting to talk (Krueger & Casey 2000, p115). Discussions in focus groups may be unpredictable and may not flow precisely as planned or might detour (Krueger 1994, p86). A moderator should anticipate the various directions the discussion might take and recognize beneficial topics of discussion as opposed to dead ends, be flexible and be sensitive to group dynamic and keep study aims in mind.

3.1.6 Data analysis of focus groups

Data analysis is the core for producing results or findings of a study, but ironically there is a scarcity of discussion in the literature related to focus groups (Frankland & Bloor 1999, p144). Myer & Macnaghten (1999, p173) noted that most guides on focus groups give plenty of advice on setting up and conducting groups but say little about what to do after them. However, discussion of data analysis of focus groups has increased (Frankland & Bloor 1999, p144; Macnaghten & Myers 2004, p173). For example a discussion regarding methods of data analysis has become an independent chapter in Krueger & Casey's later work (2000, pp125-141).

Principles that help researchers to ensure that the findings reflect what was shared in the groups are recommended by Krueger & Casey (2000, p139) and Krueger (2006):

- “Keep the purposes in mind as they determined the depth or intensity of analysis”
- “Develop good questions: some questions are difficult if not impossible to analyze”
- “Maintain a systematic and sequential analysis procedure”
- “Have a clear sense of the study field including the background information and the past research”
- “Be practical: in addition to academic consideration, such as strengthen research design, a practical mindset is open to setting aside early hunches”
- “Be present: many things are learned by just watching the group and listening to how they talk”
- “Consider other factors: the words (the tone), the context of the interaction or group situation and the internal consistency of opinions within an individual”
- “Take a few steps back to allow big ideas to percolate”.

It should be noted that data from focus groups owns its special features; therefore researchers need to be prepared for managing these features. Clark (1999) pointed out that the key difference between focus groups and other interview techniques is that the group is the unit of data analysis instead of the individuals. Moreover, Krueger (2006) made a clear statement about dissimilarity between focus groups and individual interviews: “A focus group is more like a conversation than an interview. Most qualitative analysis procedures are designed for textual materials such as manuscripts, transcripts of interviews....whereas in a focus group there is usually not the opportunity for a single person to lay out in detail of experience or thoughts. Instead, it comes in bits and pieces as he or she responds to a variety of questions. During the time the participant is interacting, talking to, arguing

with, or agreeing with others in the group. Group discussions do not flow smoothly and may not be either linear or sequential.”

Regarding the analysis of focus group data, strategies of comparing and contrasting are emphasized. Tesch (1990 pp103-106) stated that these two strategies are used to form categories, to establish the boundaries, to assign data segments to categories, to summarize the content of each category and also used to find negative evidence. Similarly, Krueger (1998, kit 6 p17) considered that comparison is a vital element of data analysis occurring within a group and also among groups. Although there were many different methods regarding analysis methods proposed by various scholars, mainly sociologists, some similarities are shared within these diversities (Bowling 2002, p398; Morgan 1997, p 13-14; Frankland & Bloor 1999; Krueger & Casey 2000, p132). For example, in terms of practical procedures, Bowling (2002, p399) stated that a single item is permitted to be coded in more than one category so it can permit cross-referencing and the generation of several hypotheses. Similarly, Frankland & Bloor (1999) asserted that there is no necessity at the indexing stage to settle on a final interpretation of an item of text. These instructions emphasize common notions to researchers: firstly, the importance of openness to all kinds of assumptions towards the phenomena under study; secondly, the importance of viewing the data as a whole rather than as segments. This also suggested that the data analysis is a delicate and time-consuming process.

In addition, when conducting data analysis three considerations are stressed (Clark 1999; Freeman 2006; Halcomb et al 2007; Krueger 2006). Firstly as mentioned above, to be aware of the unit of analysis is a group session thus the perspective of data analysis is different from individual interviews (Clark 1999; Halcomb et al 2007). Secondly, to be systematic and verifiable which means the use of an analytic process in a consistent and predictable manner and be able to articulate the process (Krueger 2006). Thirdly, the value of group interaction and group dynamic are highlighted (Kitzinger 1994, pp93-96; Halcomb et al 2007; Freeman 2006; Krueger 2006). The interpersonal communication between participants additionally helps to clarify similarities and dissimilarities in expressed opinions (Freeman 2006). For researchers, capturing the group dynamic and interactions between participants is a key challenge in managing data and undertaking analysis (Kitzinger 1995). Software is one of the options for focus group data analysis. Software can save a great deal of time and make analytic efforts systematic, but software was not adopted by the researcher in this study because of Chinese transcriptions and also given the limitations of software. For example, although software is a powerful indexing and cross-referencing tool to facilitate analysis process, the computer does not actually ‘do the analysis’ (Morgan 1998, kit6 p57).

It was decided that the analysis procedure proposed by Frankland & Bloor (1999) be adopted in this study after comparison with a range of different analysis methods. This decision was made because their procedure meets the considerations discussed. Most importantly, the major advantage of their

method is how to analyze data in a systematic way. Two main stages of analysis of focus group data are incorporated in Frankland & Bloor's (1999, pp147-151) method. Purposes and steps incorporated in each stage are shown in Table 3-2.

Frankland & Bloor (1999, p153) further point out some difficulties may occur when analyzing focus group data. Firstly, the risk is either making the data more than necessary or finding that data is lacking once the data analysis has begun. In this study, repeated focus groups were used. Therefore, the risk of finding a lack of data was avoided. Secondly, a degree of indeterminacy is introduced into the analytic system. This is caused by the nature of group interaction, as data from focus groups typically contains instances of unfinished speech when the respondents are interrupted or where their views are silenced by disagreement from other group members (Kitzinger 1994).

Through the examination of the analyzing task of focus group data, the strengths and the limitations are clear beforehand and this benefits the researcher on conducting analysis of focus group data.

Table 3-2 Focus group analysis procedures (Frankland & Bloor 1999)

Stages	Purpose	Steps
Data indexing	The purpose of indexing is simply to facilitate comparative analysis by gathering all data on a particular topic so make the study material manageable.	<ol style="list-style-type: none"> 1. All audio-taped focus groups transcribe verbatim transcripts. 2. The texts are read through as a whole to re-familiarize the researcher with its content and to note pattern or themes of interest that are recurring in the data. 3. The data are then re-read and process of attaching index-code words, or labels, that related to the content of the text started. At the beginning the index-codes were quite broad and general. 4. All data under same label group into a subcategory 5. This is a cyclical. New index-codes may emerge in later transcripts and the researcher then returns to earlier texts to add this new index-code to them.
Interpretation the data	The purpose of the method is to derive propositions which apply generally across all the data to the entire universe of relevant cases or transcript items. This stage requires a method of making systematic comparisons within the data.	<ol style="list-style-type: none"> 1. The focus group is taken as the case for analysis purpose. Each case has already been index-coded. 2. For all the cases, all data under each subcategory were examined in turn in order to produce a provisional description of the phenomena. 3. By studying each of the subcategories of a phenomenon, an initial understanding on a phenomenon is formulated. 4. Examine subsequent cases (other focus groups) to see whether they confirm, refute or extend the initial understanding. Then re-examine the earlier indexing decision so the deviant case is no longer defined as part of the phenomenon. 5. This process of considering the fit of data from a new case and reformulating the understanding where applicable was, and then continued with the rest of the cases.

Adapted from Frankland & Bloor (1999, pp 144-155): Some issues arising in the systematic analysis of focus group materials. In Barbour and Kitzinger: Developing focus group research. London: Sage.

3.1.7 Summary of focus groups

The focus group approach is a relatively new research method that generates data through the opinions expressed by participants in a group situation. Due to the advantages of focus group, it has been adopted increasingly in health care research (Halcomb et al 2007; Freeman 2006). Through careful design including participant selection, group size control, group dynamic consideration and skilful moderating, focus groups can be a proper tool to collect research data. For the purpose of gathering data widely and grasping the longitudinal changes in the Zen meditation experience, repeated focus groups were used in this study. In terms of data analysis, focus group data vary from individual interviews and many principles are suggested such as researchers regarding a group as a unit. However, there are limitations of focus groups, such as an individual viewpoint being suppressed when similar views dominate group discussion (Litosseliti 2003, p20; Puchta & Potter 2004, p25; Morgan 1997, p22). Therefore, in conjunction with focus groups, individual interviews were used to compensate the limitations of focus groups.

3.2 Individual interviews

Individual interviewing is one of the most widespread and powerful way in which researchers try to understand the scope and the depth of a certain topic (Flick 2002, p74; Lambert & Louiselle 2007). Silverman (2005, p5) pointed out that 71% of qualitative health research uses individual interviews while 29% use other methods. Given that individual interviewing was used as a data collection tool in this study, several aspects regarding individual interviews are discussed here, including justification of using individual interviews as an approach, basic concepts of individual interviews, conducting individual interviews, individual interviewing skills, and data analysis.

3.2.1 The justification of using individual interviews

In contrast to focus groups which provide wide and general information (Morgan 1998, kit1 p57), individual interviews were used for the purpose of gathering in-depth data on an individual basis (Morgan 1997, p22). This approach allowed participants to gain more attention and more privacy so that they could talk about any aspect of Zen meditation especially that which might be suppressed in the focus groups. In other words, participants could supplement their opinions or experiences in the individual interviews. Especially, after the six week Zen meditation experience, it was expected that the individual interview approach could bring out deeper narratives.

3.2.2 Basic concepts of individual interviews

The fundamental concepts regarding individual interviews discussed here are: background, definition and application, strengths, limitations, and the truth-value and transferability of individual interviews findings.

Background, definition and application

It is believed that interviewing has been with us for a long time. In more recent times, the tradition of interviewing evolved in two ways. Firstly, interviewing is used frequently in clinical diagnosis and counselling for the purpose of gaining information to a certain depth. Secondly, in World War I interviewing became widely adopted in psychological testing (Fontana & Frey 2000, p647). Since the emergence of the classical social survey interview, the interview has been deconstructed, theorized and re-emerged in various guises (Fontana & Frey 2000, p646).

A definition of the individual interview is “conversations with a purpose” (Burgess 1984, p3). Yet the research interview is more than a conversation and ranges from the informal to the formal. Holloway & Wheeler (2002, p79) identified two rules of individual interviews: Firstly, an asymmetrical relationship exists as an individual interview is set up to elicit information from the participant only, rather than expression of the researcher’s ideas. Secondly, the researcher attempts to guide interviews towards the discovery of informants’ feelings, perceptions and thoughts. Lambert & Louiselle (2007) believe that an individual interview approach allows a researcher to be able “to collect detail accounts of participants” thoughts, attitudes, beliefs and knowledge pertaining to a given phenomenon. It is assumed that if questions are formulated correctly, participants’ expressions of their experiences will reflect their realities. Overall, although the above definitions of individual interviews are somewhat different, there are shared features; that is, the core characteristic of this approach is the interaction between two people, when an interviewer can create an atmosphere that facilitates the interview process.

The application of interviewing is wide ranging from market research, political opinion polling to academic analysis. For example, social science, health care and education are disciplines in which the individual interview method is widely adopted (Lambert & Louiselle 2007).

Strengths and limitations of individual interviews

Several advantages of individual interviews have been discussed (Rapley 2004; Lambert & Louiselle 2007) and are listed below:

- Individual interviews allow participants to feel more relaxed to explore their personal experiences especially on negative aspects or worries. As to focus groups, participants need to expose themselves in front of other group members when they try to express themselves. Yet in individual interviews, participants are free from judgements by others ensuring better privacy so that deeper thoughts can be revealed.
- In individual interviews the interviewee can feel less pressure. For example, they do not need to be concerned about occupying too much group time or feel they need to say something when the focus group is in silence.

- With the interviewer's probing skill, participants have more chance to describe their inner thoughts, feelings in detail and on specific aspects as requested by the interviewer. In other words, interviewees are given full attention and followed carefully by the interviewer.

Overall, the primary advantage of individual interviews is to allow in-depth exploration on an interpersonal interaction basis compared to focus groups (Holloway & Wheeler 2002, p93). On the other hand, like other research methods, there are limitations of individual interviews and they need to be taken into account (Gerg 2004, pp79-80; Lambert & Louiselle 2007). These are:

- Interviewers may unconsciously demonstrate a preference for a particular perspective and this may bias the findings.
- The words of an interviewee do not always express exactly what he or she means, i.e. some interviewees may embellish their answers if they wish to impress the interviewer or the truth does not fit with their preferred self-image.
- The demographics of an interviewer may cause a barrier for an interviewee to respond freely. For example, a female interviewee may find it is hard to share her experiences of delivering a baby to a male interviewer.
- The analysis of word data is time-consuming. Compared to digital data, data collected from individual interviews require researchers to spend considerable time to read and re-read the verbatim transcripts in order to make sense between the lines. Due to time, the cost of data analysis is high.

The truth-value and transferability of individual interview findings

In general, the rigour issue related to individual interview findings parallels those of the principles of qualitative research (2.3.5). Like other qualitative approaches, the findings from individual interviews are not intended for generalization but rather to gain insights and a holistic view of a given phenomena (Polit & Beck 2006, p291). Some strategies, however, are suggested to improve the truth-value of findings especially in individual interviews i.e. considering how data is contextualized in a particular organizational setting, interaction processes or sets of experiences (Silverman 2005, p210). Additionally, comparison is another method used to enhance the trustworthiness; researchers can find ways of dividing data into different sets and comparing. In this study interpretative phenomenology was applied and so the hermeneutic circle was used to check between parts and entire interview transcriptions so the accuracy of interview data was assured (Silverman 2005, p97).

As to transferability of individual interview findings, it is argued that each qualitative study owns its unique features such as the time and situation of each study (Chen 2008, pp533-538). However, qualitative researchers hope to make a contribution to knowledge that is useful for other studies that are similar or by providing interpretation of phenomena. Thus, it was expected that the findings of

individual interviews in this study could produce elements which could be compared to other studies and also could act as a reference for studies in the future.

3.2.3 Conducting individual interviews

There is no perfect interview because there are multiple factors that can potentially influence the conduct of individual interviews i.e. the characteristics of an interviewer or even the usage of tape-recorder. Some factors are not possible to change, such as the gender of an interviewer (Rapley 2004). However, to achieve better quality in an individual interview, researchers need to consider the related factors of conducting individual interviews as much as possible so that they can run smoothly. Some scholars discuss the conduct of individual interviews in detail, i.e. how to address appropriately (Chen 2008, p233). However, essential elements for conducting individual interviews are discussed here: the relationship between interviewers and interviewees, awareness of non-verbal behaviours and the interview environment.

Building up appropriate relationship between interviewers and interviewees

The relationship between interviewers and interviewees is vital to produce quality interview data. Rapley (2004, p57) indicated that the ideal shared by all interview methods texts is building up 'rapport and neutrality' relationship. 'Rapport' refers to interviewers working to establish a suitably relaxed and encouraging relationship so the interviewees find it easier to talk to the interviewer. Building up rapport in the relationship is agreed universally but the neutrally or asymmetrical relationship is debated. Weiss (1994, p56) stated that an un-neutral attitude may cause bias or contaminate the data while Holstein & Gubrium (1995, p14) argued that a neutral interviewer creates a hierarchical relationship in which a interviewee is treated as an 'object' instead of human. Eventually, 'deep disclosure' is impeded when interviewees sense that interviewers are entirely neutral. Fontana & Frey (2000, p650) pointed out "interviews are not neutral tools of data gathering but active interactions between two people leading to negotiated, contextually based results". In other words, for Fontana & Frey (2000, p650), staying totally neutral for an interviewer seems impossible. In this study, the researcher built up rapport to create friendly situations for interviewees (4.7, 4.8) so that good quality of data can be produced.

Awareness of non-verbal behaviours

For researchers, in addition to collecting verbal information from interviewees, non-verbal messages should be noted and recorded (Chen 2008, p240). Non-verbal messages, such as facial expression, body gestures, tone and volume of speech and eye contact may bring one closer to the interviewee's real world. The researcher (interviewer) may try to feedback the disagreement between verbal and non-verbal to the interviewee and can elicit data that is nearer the interviewee's reality. Silence is another non-verbal message. Silence happens in a wide range of various situations, such as the interviewee hesitates to say, the interviewee does not know how to say, not willing to say or has strong emotions or conflict. Researchers need to record non-verbal behaviours when conducting

interviews or right after an interview is finished. To record non-verbal behaviours is helpful in terms of making sense of the whole picture (Berg 2004, p110).

Using suitable interview environments

A comfortable and quiet place is recommended when conducting interviews (Berg 2004, p110). When interviewees feel comfortable, it is easier for them to express themselves and usually they are willing to answer questions in an unhurried manner. Quiet and no disruption are critical as noises may cause great difficulty in transcription work. Additionally, privacy is usually needed for interviewees as lacking privacy may cause inhibition of their disclosure (Chen 2008, p233).

3.2.4 Different styles of individual interviews

According to different levels of the structure, there are three types of individual interviews: structured (standardised), semi-structured (focused) and unstructured (non-standardised) interviews (Berg 2004, p78; Polit & Beck 2006, pp291-292). It should be noted that these three types of interviews do not have a clear cut line between them but rather are a continuum (Berg 2004, p78). Each type of interview owns its unique features offering various options for researchers. The comparison of different styles of individual interviews is in Table 3-3.

In general, semi-structured interviews have attracted much interest and have been used widely as they avoid two extremes of the continuum, allowing flexibility but not complete freedom (Flick 2002, p75; Holloway & Wheeler 2002, p82). The choice of a suitable style among these interviews styles depends on the purposes of the study. For example, unstructured interviews are used “when researchers have no preconceived view of the content or flow of information to be gathered” (Polit & Beck 2006, p 291), such as starting explore an entirely new study field. In this study, semi-structured interviews were used.

Table 3-3: The comparison of different styles of individual interviews

Styles of individual interviews	Structure of interview schedule	Features	Strengths/ limitations	Examples of questions
Unstructured	Relatively low; interviewees have greatest freedom.	Starts with a general question in the broad area of study. Then followed by more focus questions or guided by the initial responses of the interviewees (Polit & Beck 2006, p291). That is, interviewers must develop, adapt, and generate questions and follow-up probes appropriate to each given situation and the central purpose of the study (Berg 2004, p79).	<ul style="list-style-type: none"> • Provide a greater breadth data. • Interviewees can use their own ideas or vocabularies to shape their talks. For example, they determinate the order of events or the sequence of stories of a given topic. New ideas are easier to emerge. • Irrelevant data may be reported and probably consume more time. • Usually required an experienced or skilled interviewer (Chen 2008, p229). 	<p>“Could you tell me your illness experience regarding the cancer ”</p> <p>“What is the life like of hospitalization?”</p>
Semi-structured	Middle; interviewees have a certain range of freedom.	Involving the implementation of a number of predetermined questions and special topics. The questions are typically asked of each interviewee in a systematic and consistent order, but the interviews are allowed freedom to digress and expected to probe far beyond the answers to their prepared standardized questions (Berg 2004, p81).	<ul style="list-style-type: none"> • Interviewers can accomplish interview by adjusting the level of language of given scheduled questions (Berg 2004, p81). • Interviewers can probe unscheduled issues that arise from the interview process itself (Berg 2004, p81). 	<p>“What the international student lives like, in terms of the social life?”</p> <p>“What is your experience of the hospital in terms of medical treatment?”</p>
Structured	Relatively high; the interviewees can not control the pace of the interview because they are required to follow the questionnaire as if it were a theatrical script.	A formally structured schedule was used to process the interviewing. The interviewers are required to ask interviewees to respond to each question, exactly as worded. It assumed that when interviewees respond to the same stimulus, the responses are comparable (Berg 2004, p78).	<ul style="list-style-type: none"> • Interviewer may be over active and have overarching control as guide the talk closely. • There is very little flexibility in the way questions are asked or answered in the structure interview setting (Fontana & Frey 2000, p649). 	<p>“When is the first time that you feel your are over weight”</p> <p>“What is the first thing you do to deal with the problem”</p>

3.2.5 Individual interview skills

The quality of interviewing skills is the key element that determines the quality of interviewing data (Chen 2008, p263; Berg 2004, p108). Firstly, interviewers should be curious learners, paying

attention to listening and to encourage expression of interviewees (Berg 2004, p107). Also, showing a respectful attitude to interviewees is essential. The practical skills of interviewers are shown in Table 3-4.

Table 3-4: The useful interviewing skills of individual interviews

Interviewing skills	Rationales
Giving recognition	Giving recognition to interviewees such as smiling, nodding head, looking at them appropriately conveys the message that their opinions or experience is contributory and interesting (Chen 2008, p274).
Reorganization	At an opportune moment, an interviewer can base on his or her own understanding restates what he or she has learned to the interviewee. This can ensure that the interviewer's understanding fits the expression of interviewees. Meanwhile, by reorganization the ideas, the interviewers have a chance to view the world from the aspects of the interviewee (Chen 2008, p275).
Self disclosure	Appropriate self disclosure may facilitate participants to speak more as this shows sincerity and building closer relationship between the interviewers and interviewees. For instance, letting an interviewee knows that the interviewer is a mother could help when study topic related to parenting. However, it should be cautious that self disclosure can damage the interview if an interviewer does not use it at the right time or the portion of disclosure is unsuitable (Chen 2008, p276)
Probing (Bring out details)	Probing technique can be used when interviewees respond in a general, abstract or obscure way. Probing skill help to bring out details as well as to clarify hidden meaning. It is assumed that the hidden meaning was clear enough to both researchers and the participants. However, even for some participants, they felt surprised when they narrated down to details they might discover something new for themselves. Probing skill is vital as it increases the depth of the data (Berg 2004, p86).

Secondly, what an interviewer should not do is to judge or to criticise what a interviewee has said as this can block what they initially want to express and impede further interviewing. Interviewees may hold back their responses to avoid being judged or be unwilling to express real thoughts when they feel not accepted. In addition, an interviewer should avoid teaching or a dogmatic style of response as this creates a hierarchy in the interview.

To summarize, although different interviewers have different styles of interviewing, the general principles and skills are universal. The overall goal of these interview skills is to bring out the whole picture related to the topic under study (Chen 2008, p283).

3.2.6 Data analysis of individual interviews

The overall purpose of data analysis is to “organize, provide structure to and elicit meaning from the data” (Polit & Beck 2006, p397). This goal is universal, yet there are no standard rules to analyze qualitative data and this challenges qualitative researchers (Polit & Beck 2006, p397). Consequently, a wide range of analysis procedures have been stated based on different traditions or paradigms following different theoretical ideas.

In this study, Heidegger's interpretative phenomenology was used as a theoretical framework. Derived from Heidegger's phenomenology, Benner's phenomenological data analysis method was applied to analyze the individual interview data (2.3.4). Thus, the application of Benner's phenomenological data analysis procedures and hermeneutic circle (Figure 2-1) are incorporated here.

The application of Benner's phenomenological data analysis procedures

Three steps incorporated in Benner's method are elucidated, namely, paradigm cases, thematic analysis and analysis of exemplars.

(1) Paradigm cases

Benner defined "paradigm cases as the most usual point of entering the dialogue with the text and are strong instances of concerns of ways of being in the world, doing a practice or taking up a project". Paradigm cases are used as a strategy of perceptual recognition and understanding early in the research process. To identify a paradigm case, a researcher does not need to determine the features of ideal cases in advance nor to find a contrast case but to choose cases which the researcher thinks they understand well or even a case that they find puzzling or unsettling. Benner (1994, p113) stated that "identification is an open descriptive approach allowing a researcher to understand the case in its own terms". The procedures involved in identifying the paradigm cases are:

- Reading the whole transcription to gain a global understanding of the story.
- Selecting topics, concerns, or events for a more detailed interpretation.
- Looking at the ways the speaker moves from one topic to another.
- Looking at what similar and dissimilar stories are created.
- Seeking to identify the everyday reasoning and associations made by the participants.
- After developing one paradigm case, a second case is examined in its own terms and in light of the first paradigm case.

(2) Thematic analysis

Meaningful patterns, stances or concerns are searched during the steps of thematic analysis. This process may be done when the researcher compares cases to clarify similarity and differences (Benner 1994, p115). Several features involved in this step are:

- The interpreter engages in cycles of understanding, interpretation and critique.
- The interpreter shifts between parts and wholes of the text to analysis (from themes and situations, and from thematic analyses to paradigm cases).
- Inconsistency and incoherent aspects of the text may be identified.
- Efforts made to understand the text and make it more rational.
- The researcher should be open and listen to the text as bias may occur and preunderstanding can be challenged and change during this step. Bias is actually an essential aspect of

everyday understanding and perceptual grasp, even if it is often regarded negatively, but it is a way of understanding.

The above features of thematic analysis are closely associated with the hermeneutic circle (2.3.3; Figure 2-1), such as engaging in cycles of understanding, interpretation or shifting between parts and wholes of the text to analysis. Researchers need to immerse themselves into the data, but they also need to stand back so that the whole picture and possible bias can be seen.

(3) Analysis of exemplars

Exemplars help to augment and to convey aspects of a paradigm case or a thematic analysis (Benner 1994, pp116-118). In the interpretative process, the exemplars are all grouped together and then further refinements of the grouping by identifying similarities and dissimilarities take place. When the meanings of pattern and embodied experience have been identified by the previous steps, exemplars can be drawn from the text to demonstrate the similarity or distinction. Multiple exemplars can be used to describe themes in gradation. By presenting a range of exemplars, the readers can recognize the distinctions between themes. Exemplars are evidence that capture a growing, living tradition.

By keeping track of exemplars, researchers can follow their train of thought. The key to interpretive work is the collection and aggregation of exemplars (Benner 1994, p116). The developing of understanding is in the wake of the researcher's reasoning and consideration of the exemplars. Through many distinct exemplars the researcher can help to build up the manifold and nuance features of phenomena under study. For example, when studying the phenomena of expert nursing practice, Benner (1984, p41) found that multiple exemplars of the healing relationship may transcend traditional clinical boundaries, and each exemplar can add qualitative distinctions and nuances that were unavailable in previous exemplars. Consequently, a cultural field of relationships and distinctions is revealed. Benner (1994, p118) further added: "the goal of analysis exemplars is to make qualitative distinctions having to do with intents and meaning". She also addressed that these qualitative distinctions are not the same as establishing mutually exclusive categories with no shared attributes. Rather, "by identifying both intents and practice in their contexts, each characteristic became clearer". As a result of this articulation strategy, practical distinctions can be identified.

Overall, Benner (1994, p104) stated that using pre-existed theoretical frameworks to analyze, or to examine the text in relation to the pre-established lines of inquiry, may cause difficulty by generating their own dialogue and aspects of comparison and similarity. For Benner (1994, p99), interpretive phenomenology aimed to use discourse to uncover meaning and occurring concerns in narratives; in order to emerge a fresh understanding grounded from exemplars' expression, to prevent the influence from previous frameworks is suggested. To conclude, Benner's analytic strategy is that via these three relating steps, a researcher can identify strategies, structures and

processes in the narratives. In this procedure, the power of engaging one direct discourse with another practical world is emphasised. Meaning emerges from data through these three steps to reflection the phenomena itself.

The application of hermeneutic circle into this study

The hermeneutic circle (Figure2-1) is an important concept in Heidegger's phenomenology and was adopted in this study. Based on the ideas emphasized in the circle, three points related to this study are: reflecting on pre-understanding related to this study, examination of the structure of the inquiry and considering historical characteristics of human experiences as well as the culture aspect.

(1) Reflecting on the pre-understanding (general understanding) of this study

The idea to identify pre-understanding of phenomena rather than to bracket it, is one of the key features that distinguish Heidegger's phenomenology from Husserl's phenomenology (*the second phase of phenomenological movement*, 2.3.1). The idea of reflecting the pre-understanding of a researcher is highlighted in the study process where interpretive phenomenology is claimed (Lopez & Willis 2004). This is because a researcher's presumption can strongly influence the interpretation or may distort the understanding of a phenomenon (Dowling 2005; de Witt & Ploeg 2006). In this study, the pre-understanding that may have influenced the data-analysis is related to two issues: the knowledge of GAD and Zen meditation and the position of the researcher.

Firstly, for the researcher, when reflecting on her pre-understanding of Zen meditation and GAD, the experiences of her previous study appeared (Appendix I). The previous study was a quasi-experimental design; participants were divided into control and experimental groups in conjunction with usual (medication) treatment; anxiety scales, self-rated RSTAI and professional-assessed Hamilton Anxiety Rating Scale (HARS), were used. The results showed that anxiety symptoms improved significantly as measured by the RSTAI score only in the experimental group, especially on the trait anxiety score. However, both groups showed significant improvements in the HARS, but the experimental group shown greater improvement. Furthermore, no relationship between meditation practising time and improvement of anxiety symptoms was found in either scale. Consequently, the questions left from the previous study were whether there are other key elements that influence the effectiveness of Zen meditation, such as the quality of Zen meditation? Overall, the idea that exploring the qualitative aspects of Zen meditation can help to fill the gap of knowledge led the researcher throughout the whole study process.

Secondly, the reflection on the researcher's position actually began at the study design and throughout the whole study process. For example, at the very beginning, the researcher's position was established (4.12.4) so that the supervisor in the UK could discuss it with the researcher in advance of the study. Then, the role of the researcher in conducting Zen meditation, focus groups

and individual interviews was also considered, such as how to respond when participants inquired about the Zen meditation experiences of the researcher.

It is hard and may be inappropriate to show indifference or to deny that the researcher is in favour of Zen meditation. This is because a researcher is a tool in qualitative research and cannot 'bracket' some idea or belief when doing the research (Benner 1994, p103; Alvesson & Skoldberg 2000, p 79). In this case, the fact that the researcher tended to believe that Zen meditation could work on patients with anxiety disorders in some way was reflected upon. It was found that the source of the belief was interwoven with her previous study experience, from personal experience of Zen meditation and from the cultural influence of Taiwan (2.2.1). This prepared this researcher to answer the questions that participants might have, i.e. 'what is your experience or what do know about Zen meditation?'

As discussed above, what preunderstanding is held by the researcher and how this interacts with the research are reflected upon as an essential part of analyzing and reporting interpretative phenomenology findings (Alvesson & Skoldberg 2000, p57; Mackey 2005).

(2) Examination of the structure of the inquiries

In order to explain the phenomena under study, philosophical and systematic inquiry is emphasized to guide the interview procedure (Benner 1994, p105; Packer 1985). The questions designed for the individual interview prompt schedule (Appendix VI) were able to create a dialogue of practical concern and lived experience of the participants' world as the prompt schedule was critically evaluated and improved by both pilot study 1 and 2 (5.1.11, 5.2.10). Furthermore, several strategies were proposed in order to explain the analysis procedure. Table 3-5 shows how these strategies were applied in relation to this study.

Table 3-5 The strategies used to develop inquiry lines based on interpretative phenomenology

Strategies illustrated by Benner (1994, p108-112)	The application in this study
The researcher critically reflects on what their biases and blind spots might be.	The researcher reflected that with the background of a trained psychiatric nurse, the researcher may tend to lead the inquiries grounded on health issue. The perspective from health professional view may affect other possible viewpoints. For example, to a doctor of a child with ADHD, the major concerns would be the medication treatment; as a nurse the main concern towards the child would be the drug compliance as well as adaption problems in family and school; yet to the playmates of the child the term 'ADHD' has never ever been existed in their world of play. The background and the position may decide what can be seen and what can not be seen (blind spots). In addition, as a care provider the researcher may unconsciously to care participants rather than act as a researcher only.
Following critical reflection, creating a sense of openness and ability to hear questions and challenges from participants	The researcher allows the participants to express their ideas of their Zen meditation experience or illness talk. In addition, the researcher tried to remain neutral attitude when repose to their narrative. For example, the researcher told participants that the researcher is not an expert of Zen meditation that is why an experienced instructor was invited to teach the Zen Programme and why their experience was so valuable.
The researcher makes explicit as many assumptions as possible before the study commences and sets boundaries to inquiry lines. Moreover, these assumptions are tentative and allowed to be challenged and be altered.	<p>The assumptions held by the researcher come from the literature review and Buddhism culture in Taiwan. However, these assumptions were not conveyed to the participants when interviewing.</p> <ul style="list-style-type: none"> • Zen meditation benefits human's spirit and mental health • A Zen meditation programme may help to reduce anxiety symptom. • Traditional Taiwanese viewpoints of Zen meditation may influence their acceptance of Zen meditation programme. • A certain progress may occur among the participants when keep practising Zen meditation. • The full picture of mechanism about the Zen mediation effect on brain is still unclear, but some physical evidence has provided some evidence of Zen's effects.

(3)The importance of the historical characteristics of human experience and culture

Heidegger founded hermeneutics on the ontological thesis that 'lived experience' is an interpretative process; understanding is the outcome of interpretation and is linking to cultural norms (Racher 2003). The importance of social context is emphasized in interpretative phenomenology (*The secondary phase of phenomenological movement* 2.3.1). When conducting data analysis, the culture in which we live should be incorporated into interpretation (Alvesson & Skoldberg 2000, p96).

The background and culture related to GAD and meditation in Taiwan are described in 2.2,1 (*Zen meditation in Taiwan* 2.2.1). At the same time, the researcher attempted to interpret data from a Taiwanese cultural perspective with which the researcher has a certain level of intimacy.

3.2.7 Summary of individual interviews

Individual interviewing is a research approach in which the participants' 'lived experience' or the truth of their living world can be revealed (Berg 2004, p75; Polit & Beck 2006, p241). However, to

produce good quality of data, researchers need to consider many aspects of this approach carefully, including the aims of a study, the style of interviewing, building up rapport, improving interview skills and analyzing the verbatim transcript data in an appropriate way. Individual interviews are time-consuming (Raply 2004; Chen 2008, p 221), but by their very nature, the phenomena under study can be understood meaningfully. In addition, the use of individual interviews in this study was to triangulate with the focus group method.

3.3 The Revised State and Trait Anxiety Inventory (RSTAI)

There are a range of instruments which have been developed to measure different aspects of anxiety or to serve a range of research purposes. For example, the Hospital Anxiety and Depression Scale (HADS) is designed to screen for relatively mild degrees of mood disorder among medically ill patients (non-psychiatric participants) (Wilkin, Hallam & Doggett 1992, p78; Arbabzadeh-Bouchez & Lepine 2003). Another popular scale, the Beck Anxiety Inventory (BAI), with a focus on somatic symptoms, was designed specifically to discriminate between anxiety and depression (Arbabzadeh-Bouchez & Lepine 2003). In this study, a self-evaluation scale, the Revised State and Trait Anxiety Inventory, was used. It was applied to unmatched sample groups. However, the results generated from the RSTAI could be integrated with findings from qualitative approaches (3.6) so that an insight into the study phenomena could be obtained through the comparison of different sets of data. The rationale for adopting this inventory and the development of the RSTAI are presented next.

3.3.1 Justification for using the RSTAI

To trace the changes in anxiety levels over time in the Zen meditation programme, the RSTAI was chosen for following reasons:

- The RSTAI is a Chinese version of the STAI and has acceptable reliability and validity (3.3.2).
- The population used to validate the reliability and validity of the RSTAI is the same study population as this study; that is Taiwanese.
- The RSTAI contains two subscales, state and trait anxiety, both of which provide more precise information regarding aspects of anxiety to be measured.
- The researcher is familiar with the administration of the RSTAI through the previous research (Appendix I).

Therefore the use of the RSTAI in this study could be justified.

3.3.2 The development of the RSTAI

Designed by Spielberger, Gorsuch & Lushene (1970), the State-Trait Anxiety Inventory (STAI) is one of widely used scales, aiming to measure anxiety among adults of general population (Hunot,

Churchill, Teixeira & Silva de Lima 2007; Covin, Ouimet, Seeds & Dozois 2008). Two dimensions of anxiety are measured in the STAI: state anxiety and trait anxiety. State anxiety evaluates the anxious, restless perception and auto-nerve system arousal at a specific state. State anxiety varies in different situations and at different moments (Zhong & Long 1984). In other words, the experience of state anxiety is rather temporary or transient. When the level of threat in a situation decreases, state anxiety reduces correspondingly. On the contrary, trait anxiety is a rather stable anxiety tendency as a personal trait. Each individual has a different anxiety personal trait which is a tendency of reaction to a threatening situation. When individuals face a similar stressful situation, individuals with higher trait anxiety perceive more serious levels of anxiety.

The RSTAI is a Chinese version of STAI, translated and revised by Zhong & Long (1984) and has the same STAI content-20 items in each anxiety dimension. There were two reasons to support the use of RSTAI. Firstly, the RSTAI can provide two dimensions of anxiety features. Moreover, studies of meditation using STAI as outcome measurements indicated that trait anxiety was a significant variable related to Zen meditation (Murata, Takahashi, Hamada, Omori & Kosaka 2004; Appendix I). The second and practical rationale is that a Chinese version of STAI is available so that participants in Taiwan were able to respond. Additionally, the reliability and validity of RSTAI are well established.

Reliability and validity of RSTAI were tested with students of the three secondary schools in Taipei (n=1543) and have high internal reliability and good validity. The test-retest (one week) reliability is respectively .74 (State Anxiety) and .76 (Trait Anxiety); the Cronbach Alpha reliability is respectively .90 (State Anxiety) and .86 (Trait Anxiety). Concurrent and construct validity were used to test validity. Concurrent validity was tested by using Autobiographical Survey Chinese version (ASCV) (Hung & Lin 1978). As a result, significant correlations were found between RSTAI and five of six subcategories of ASCV including 'Test Anxiety', 'General anxiety', 'Lack of Protection', 'Defensiveness' and 'Hostility' (correlation coefficient between 0.30-0.46). The only subcategory that fails to reach the significance level is 'Demand for Achievement' and this appears reasonable as the concept of 'Demand for Achievement' distinct from the rest of five subcategory. Construct validity was tested on 175 subjects under two conditions: 'Exam condition' (after English test) and 'Norm condition'. Consequently, mean scores of RSTAI in 'Exam condition' were two points higher than that in 'Norm condition' in both male and female groups. Meanwhile, many items of RSTAI reached significance level based on critical ratio and point-biserial correlations.

Furthermore, the norm of RSTAI was established as shown in Table 3-6 and can be a reference for other studies to compare. However, it should be noted that this norm was established based on teenage sample rather by adults. Scott & Melin (1998) created modern norms for the State scale by an adult sample in Scandinavia, yielding a mean of 35.57 (SD=9.40) which is 7 points less compared to Table 3-6. This huge difference may be accounted by the culture difference in Taiwan and

Scandinavian as well as the age differences. Thus, it is noted that when generalizing these statistics to different populations, these related factors must be taken into account (Zhong & Long 1984).

Table 3-6 The norm of the RSTAI-Chinese version in Taiwan

	State anxiety			Trait anxiety		
	Mean	SD	n	Mean	SD	n
Male	42.20	10.52	370	44.85	8.59	382
Female	45.42	12.19	367	47.36	8.69	424
Total	43.80	11.50	737	46.16	8.64	806

Adopted from Zhong & Long (1984): A study of revised version of state and trait anxiety inventory (in Chinese).

3.4 Diaries

Personal diaries have long been used as a source of data in historical research, providing evidence from subjective viewpoints (Polit & Beck 2006, p293). According to Bolger, Davis & Rafaeli (2003) diary keeping is that “people provide frequent reports on the events and experiences of their daily life”. Diaries have their own independent functions. In other words, reports of diaries can capture the particulars of experience in a way that is not possible with quantitative methods. If participants are able to maintain a diary or journal over a specific period it can help to generate new data.

Several advantages of using diary methods have been identified (Laurenceau & Bolger 2005). Firstly, diary methods provide data that happened in the ‘natural manipulation’ or contextual boundaries rather than a controlled or in a lab setting. Secondly, diaries allow researchers to be close to the micro level process such as events on a daily basis or an actual event rather than focus on a macrolevel data such as on a global-self report, general impression or an unspecific event. Thirdly, utilizing a diary methodology can allow researchers to tap into the process nature of phenomenon over time within a person, couple or family. Overall, with no necessity to interact with people (interviewer or other focus group members), participants have more freedom to express ideas or feelings and focus more on themselves. Therefore, a diary can take researchers closer to the phenomenon. However, despite the strengths of the diary approach, not all research questions are suitable for diary methods. Researchers need to consider the nature of the study problems (Laurenceau & Bolger 2005).

The format of diary can vary from unstructured to a structured format. The commonly-used format is semi structured in which participants are asked fill a diary on some aspect of their experience.

However, in terms of pragmatics, the key to using diaries successfully is to make them easy to use for participants. To improve the feasibility of diary keeping, technology such as electronic devices can be an option. Again, to choose a high-tech or traditional way depends on many factors such as research purposes and participant characteristics. For example, asking patients with insomnia to keep

a sleeping diary, paper and pen methods function well, but for patients with an overactive bladder, an electronic device would be most suitable for measuring water intake and the duration of urination at a precise level (Wein, Khullar, Wang & Guan 2007). Overall, it is believed that a diary method can enrich the data by providing a perspective that can complement other approaches (Laurenceau & Bolger 2005). In this study, paper and pen record methods were used and the content of diaries is detailed in 4.11.4.

3.5 Field notes

Field notes are a form of record aiming to provide narrative accounts of what goes on in the lives of study subjects (Berg 2004, p173). By using field notes data can evolve to a higher interpretative level (Montgomery & Balley 2007). Polit & Beck (2006, pp306-307) pointed out that field notes are much broader, more analytic, and more interpretative and represent the researcher's efforts to synthesize and understand the data by recording information. Field notes serve as aide-memoirs so that the research findings can be richer by providing a different perspective.

There are a various ways of taking field notes such as logs, field notes, photographs and videotapes. Once out of the study field, the researcher can use these notes to write full accounts (Berg 2004, p173). General suggestions related to taking field notes are listed below:

- Write freely to maintain flow of ideas (Montgomery & Bailey 2007)
- Establish a regular time and space for writing up fields notes (Burgess 1991, pp43-52). The researcher may take completed records soon after left the study field or taking abbreviated notes covertly while in the field and later translate them into complete field notes (Berg 2004, p173). However, to record field notes as quickly as possible is essential.
- Although note-taking is a personal activity, the research context, the objectives of the research and the relationship with informants are decisive factors that influence the way of taking field notes (Burgess 1991, pp43-52).
- Content of field notes should include date, time and place, specific facts, numbers, and details of what happened at the site; sensory impressions such as sights, sounds, textures, smells, tastes, personal responses as recorded in the field notes; specific words, phrases, insider language, questions about people or behaviours at the site for future consideration (Sunstein & Chiseri-Strater 2006, p35). This form of field notes is called 'descriptive notes' which are objective descriptions of events and conversations (Polit & Beck 2006, p307).
- Impressions, preconceived notions and subjective reflection can be included in field notes such as feelings, personal observation or comments that the researcher may have developed from the phenomena under study. This could help against the erosion of memory (Berg 2004, p175; Montgomery & Bailey 2007). This type of field notes is also called 'reflective notes' which document researchers' personal experience, reflections and progress (Polit & Beck 2006, p307).

In brief, field notes can help to record the atmosphere, the whole situation or the texture of the scenes under study and all these are hard to capture by tape recording only. The advantage of field notes is to complete the study scenes, helping the researcher understand the research phenomena as a whole. In this study, field notes were used to capture the holistic pictures of focus groups and individual interviews (4.11.5).

3.6 Multiple methods research design

Multiple or mixed methods research is a combined research design used to address a problem and usually includes both qualitative and quantitative research procedures (Polit & Beck 2006, p244; Lambert & Loiselle 2007). Qualitative approaches are often fertile with insights about the relationship of phenomena while quantitative research provides information with numbers. In other words, the use of multiple methods is for richness of analysis rather than for consensus of data collection (Lambert & Loiselle 2007). Therefore, mixed methods research helps to achieve a more robust methodology.

Multiple methods are popular in research design because of several advantages (Polit & Beck 2006, p245; Lambert & Loiselle 2007). First of all, the strengths and weaknesses of qualitative and quantitative data are complementary. Thus the limitations of each single approach can be decreased. Secondly, multiple methods can help to enhance study validity when hypotheses or models are supported by multiple or complementary types of data, the validity of data are boosted; that is, the striving for consistency of meaning between multiple data analysis as a reliable check (Freeman 2006). Thirdly, mixed methods can help to create new frontiers when inconsistent findings are found between qualitative and quantitative research. This opens another way of thinking for researchers; that is, the discrepancies can be used as a facilitator for further exploration (Polit & Beck 2006, p245).

Due to the above advantages, the mixed method approach can function in a range of ways: developing or validating instruments, testing and generate hypothesis, refining and building theory, understanding relationships and causal processes and illustration, i.e. qualitative data sometimes help to clarify important concepts and further illustrate statistical analysis (Polit & Beck 2006, p246). Likewise, Thomas, Harden & Oakley (2004) argued that qualitative can produce valuable evidence and the insistence on RCTs as the sole source is probably too limiting. After reviewing methodological challenges in meditation research, Caspi & Bursleson (2005) suggested that all future meditation studies should use mixed qualitative-quantitative methods “Whether those studies focus on efficacy- effectiveness or are explanatory in nature, subjectives should be 1) encouraged to reflect on their experience with mediation during the trial, and 2) invited to make attributions about what in their minds might have led to any change in their outcome as a result of participation in the study.”

To summarize, in the past qualitative and quantitative were considered mutually exclusive whereas now multiple methods studies are adopted strategically because many areas of research inquiry can be enriched through the blending of qualitative and quantitative data (Caspi & Burleson 2005; Polit & Beck 2006, 245). In this study, in maximizing the breadth and depth of data collection, both individual interviews and focus groups were adapted as these two approaches could supplement each other in terms of weakness and strengths. Moreover, diaries, field notes and quantitative data were also included (4.2). At the same time, quantitative data in this study could provide a general picture as a background for this study.

3.7 Translation

Translation is defined as the transfer of meaning from a source language (such as Chinese) to a target language (such as English) (Esposito 2001). In terms of cross-cultural and international collaborative studies, language translation is at the core of many research projects as translation is directly involved in the quality of data (Hatton 1992; Esposito 2001; Maneesriwongul & Dixon 2004). A translator is, at the same time, an interpreter who bridges the meaning between two languages while considering the individual situation and the overall cultural contexts (Esposito 2001). Translation issues have been examined in both quantitative as well as qualitative studies (Esposito 2001; Maneesriwongul & Dixon, 2004). For the purpose of this study, the discussion here is focused on the translation issue related to qualitative studies.

In order to form translation accurately, technical issues of translating have been addressed in the literature (Twinn 1997; Esposito 2001; Maneesriwongul & Dixon, 2004). Several challenges have been identified in the translating process. These are linguistic factors (i.e. no true equivalent notions or little similarity in the grammatical structure of two languages), translating situation, translators' training, using different translators and cultural differences (Hatton 1992; Twinn 1997). Although there is a standardized procedure for measurement tools or scale, there is no standardized procedure for translation for qualitative study (Chen & Boore 2009). However, some principles are suggested:

- Meaning-based translations rather than word-for word translation (Esposito 2001).
- Using one translator for all the interviews carried out in a study so that the consistency in translation can be obtained and reliability in the analysis of data can be maximized. If there are more translators, discussions between translators regarding meaning of participants between languages should be held frequently in order to improve the accuracy of translation (Twinn 1997).
- When a researcher is collecting data in focus groups or individual interviews with a different language, a real-time and fluent interpretation is necessary or the researcher will lose the ability to redirect the discussion as well as the chances to analyse the data as they are collected (Esposito 2001).

When the translating procedure is applied properly, such as following the principles noted above and considering related factors cautiously (i.e. cultural context), evidence shows that there is no significant difference between findings from different data sets using different languages as a medium. Twinn (1997) conducted six individual interviews in Hong Kong and then compared the differences of categories that emerged from Chinese and English transcriptions. In her study, the original data were Chinese and then were translated into English by two translators independently, after that a third translator translated it back to Chinese. Consequently, there was no significant difference to major categories generated between these three data sets. However, to achieve validity and reliability of data analysis in terms of translation relative issues addressed were the complexity of translating data. For example, the difficulties caused by using different interpretations (translators) and there is no true equivalent within the source language to translate into the target language. This implies that the more translation is used in the data analysis process, the greater the risk of losing the richness of the original meaning because a translator is a human being rather than a machine that can detach personal interpretation from the original text (Hatton 1992; Twinn 1997).

In brief, to improve truth-value of data analysis, accurate translation is needed in cross-cultural studies. To minimize meaning loss and prevent translation bias from the source language, related factors need to be taken into account carefully in study circumstances.

3.8 Establishing study rigour

Rigour seeks to reflect the true state of human experience. The core concern of both quantitative and qualitative paradigms is the same: data quality (Polit & Beck 2006, p41). Yet, the concepts of rigour in qualitative studies have been subject to much discussion. There are difficulties in achieving universally accepted criteria in qualitative research (2.3.5). In terms of an interpretative paradigm, a trend generally accepted currently is, emphasizing the connection between the research process and the theoretical notions (de Witt & Ploeg 2006; Sandelowski, 2006).

Therefore, four criteria (credibility, dependability, confirmability, transferability) asserted by Lincoln and Guba (1985, pp289-331) are a well accepted standard to assess the trustworthiness of a qualitative study (2.3.5). How the criteria were applied to the main study are elaborated next.

3.8.1 Credibility

Credibility refers to confidence in the truth of the data and interpretation of data (Polit & Beck 2006, p332). Two aspects, 'prolonged engagement and persistent observation' and 'triangulation', emphasized by Lincoln and Guba (1985, p289) were applied in this study. Additionally, other strategies including member checking, and the researcher's credibility were used to boost the credibility of this study (*Criteria of rigour applied in this study*, 2.3.5).

In terms of 'prolonged engagement and persistent observation', the researcher had conversations with potential participants to invite them into the study early at the first meeting in the out patient department (OPD) and then contacted consenting participants by phone weekly; that is, the researcher engaged in persistent observation with participants over a 6 week period benefiting the credibility of data collected. In addition, this study was conducted in Taiwan where the culture and the language was not a barrier for the researcher. Therefore, the context of interaction between the participants and the researcher could be understood clearly. Most importantly, the time used for the researcher to build up rapport with participants was around 7 to 9 weeks which was much longer than a one-off relationship. During this period the researcher met and called participants consistently so that a persistent engagement was maintained to benefit data truthfulness.

In terms of triangulation, two types of triangulation were applied in this study. Firstly, methodological triangulation was used; that is, data were collected from multiple sources including focus groups, individual interviews, RSTAI, diaries and field notes. It was expected that through these diverse data collection tools, rich and different perspectives on the study phenomena could be captured comprehensively (*Criteria of rigour applied in this study*, 2.3.5). Secondly, investigator triangulation was used to decrease the potential of bias in gathering, coding, or analyzing or reporting of the data (Thurmond 2001). There were two supervisors involved in the research process to minimize the researcher bias. Associate professor provided supervision in the stage of data gathering and analysis in Taiwan. The other Professor Smith in Glasgow provided constant discussion throughout the whole study process, particularly in the stage of data analyzing and reporting.

Member checking was undertaken to strengthen the credibility of this study. Feedback groups were designed and conducted in pilot studies (5.1.18; 5.2.13) as well as in main study (5.3.3). In this way, the researcher created opportunities to hear the participants' voices directly and was able to reflect the interpretation from wider viewpoints and in a context of group interaction.

Researcher's credibility refers to the faith that can be put on a researcher, based on his/her training, qualification and experience. The preparations of the researcher are presented in 4.13. As to reflection on the researcher's position and the pre-understanding of concepts related to this study such as Zen meditation and GAD, these are also presented in 3.2.5 (*The application of hermeneutic circle into this study*, 3.2.5)

3.8.2 Dependability

Dependability refers to how rigorous the stability of data is over time and over situations (Polit & Beck 2006, p498). In this study, to decrease the variation of quality among the Zen meditation programme as much as possible, the instructor of Zen meditation remained the same throughout the pilot studies as well as main study. At the same time, the content of the six sessions of Zen

meditation programmes was standardized so the participants in different groups received the same teaching in the same meditation style. Furthermore, the researcher was both the data collector and the analyst so the context regarding the situation or study field was clear and easy to follow. This design advanced data stability. To strengthen the rigour and robustness of data analysis, a technique of inquiry audit was adapted; that is, the associate professor in Taiwan was engaged to scrutinize the data along with the supporting documents to audit the analysing process. In addition, the researcher supervisor in the UK was involved with data collecting process by offering advice based on the weekly e-mail reports written by the researcher as well as personal discussion during the stages of analysis and reporting. By these efforts, the dependability of the study data could be enhanced.

Focusing on interpretive phenomenology paradigm, it is argued that criteria of rigour used in a study should fit into its original study paradigm (deWitt & Ploeg 2006, Table 2-14). Voices of participants and philosophical explanations are equally important and should be a balanced between them (deWitt & Ploeg 2006). It was expected that by the efforts made above, the data could be interpreted in a dependable way following the criteria (3.2.6).

3.8.3 Confirmability

Confirmability refers to the neutrality of the data. In other words, it means the potential for congruence between several independent people about data accuracy, relevance or meaning (Polit & Beck 2006, p336).

In this study, multi-methods (3.6) were used to enhance the confirmability. Reflexive field notes and diaries were maintained. Different records including raw data, data analysis products and data reconstruction products (reports of feedback groups) (Appendix IV & V), were provided to the associate professor and the research supervisor so that the confirmability of this study could be boosted.

3.8.4 Transferability

The concept of transferability is similar to the idea of external validity in quantitative studies (*criteria of rigour applied in this study* 2.3.5). In other words, transferability is the possibility of whether the findings of a qualitative study can be applicable to other similar situations. According to Lincoln and Guba (1985, p321), transferability refers to the extent to which the findings from the data can be transferred to other settings or groups. Through research design and sufficient information can increase transferability or applicability (Polit & Beck 2006, p336). Research design; a researcher needs to describe the methodological issues, participants and the research setting. As to sufficient information, the strategy of 'thick description' was proposed to ensure that the researcher provided sufficient information to the reader so that the reader had adequate information to judge about contextual similarity (Alvesson & Skoldberg 2000, p96; Polit & Beck 2006, p336).

In this study, the study design, including sample selection, research setting, data collection procedure, data analysis as well as translation procedure are described (4.2- 4.14). Furthermore, verbal and non verbal data gathered from focus groups and individual interviews were detailed in transcriptions. Thus, efforts were made to produce a thick description so the possibility of transfer of this study's finding to similar situations can be judged by the readers.

3.8.5 Linking the research process with interpretative phenomenology

It has been emphasized in the research process including reports of findings, that the linkage between methods used and the philosophical underpinnings should be reported (2.3.5).

In this study, the important tenets of interpretative phenomenology (2.3) along with the justification of choosing this theoretical framework (2.3.1) were explained. How to apply Benner's analysis procedure and how the hermeneutic circle connected to this study is detailed in 3.2.6. In this way, how this research is underpinned by interpretative phenomenology and how this researcher developed the interpretative phenomenological perspective to interpret data can be legitimized.

3.9 Overall summary

In order to answer the research questions (2.6) theoretical tenets and methodological issues were introduced and examined in the sequence as they were used. Benner's (1994, pp99-125) approach derived from the essential concepts of Heidegger's philosophy (2.3.3& 2.3.4) is justified in section 3.2.5 as it was considered to be the most suitable framework to use. Therefore, the theoretical framework as well as the interpretation of data adhered to Heidegger's philosophy. Moreover, due to this study being conducted in Taiwan but reported in English, the translation issue was also explored along with study rigour. In the following chapter, the conduct of this study is described.

CHAPTER IV MATERIALS AND METHODS

4.0 Introduction

Research objectives, materials and methods used to carry out this study are illustrated here, including study design, study site, issue of ethics, study sampling, data collection tools, administration of Zen meditation and translation.

4.1 Research objectives

The overall goal of this research was to explore the experience of participants with a diagnosis of generalized anxiety disorder undertaking the Zen meditation programme in Taiwan. Specific objectives include:

- To provide a deeper understanding of the experience of Zen meditation practising among GAD patients.
- To reveal the process of Zen meditation practising in a group of GAD patients.
- To evaluate the effectiveness of the Zen meditation as an intervention to manage anxiety in a group of GAD patients.

4.2 Study design

In order to achieve the research objectives, a mixed methods study approach was adopted including qualitative and quantitative research paradigms. A purposive, convenience sample was used. A 6-week group Zen meditation programme (Appendix II) was designed and provided for all participants. A focus group was held each week following each Zen session to obtain cross sectional data throughout the Zen programme. Individual interviews were carried out after the programme was completed to probe the meditation experience over the entire intervention. The RSTAI was administered at three points (at baseline, post and follow up) to measure changes of anxiety over time. In addition, diaries (3.4) and field notes (3.5) were applied (Table 4-2). To boost trustworthiness, several strategies were applied (3.8). This study was conducted from September 2005 to August 2006 in Taiwan. Table 4-1 shows the study process.

Heideggerian interpretive phenomenology (Draucker 1999; Koch 1995) was applied as the theoretical framework and Benner's data analysis procedure was adopted (Benner 1994, pp 99-125). For promoting more insightful understanding, a senior associate professor from a nursing college in Taiwan acted as an auditor when the data was collected and analysed. She is a graduate of the University of Ulster and applied phenomenology in her PhD study of 'The lived experience of new fathers'. In this way, dependability of data analysis was enhanced.

Table 4-1 The flowchart of this study process

	G	G	2005 T	T	T	T	T	T	2006 T	T	T	T	T	T	T	T	T	T/G
Study Progress	may	Jun	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	
Design of Zen meditation programme and interview schedule																		
Design of Zen meditation intervention																		
Access to hospital pts from consultant & Ethics approval																		
Recruiting pilot study 1																		
Zen meditation programme*4, focus groups*4, RSTAI*3																		
Individual interviews*5, discuusion with Taiwanese mentor																		
Preliminary data analysis, modify focus group and individual interview prompt schedule, reported to professor																		
Recruiting pilot study 2 (across Lunar new year), discussion with Taiwanese mentor																		
Zen meditation programme*4, focus groups*4, RSTAI*3																		
Individual interviews*3, writing report to professor																		
Feedback group, discussion with Taiwanese mentor																		
Recruiting Group 1																		
Zen meditation programme*6, focus groups*6,RSTAI*2																		
Individual interviews, RSTAI*1																		
Feedback group, preliminary analysis, discussion with Taiwanese mentor, reported to the Professor																		
Recruiting Group 2																		
Zen meditation programme*6, focus groups*6, RSTAI*2																		
Individual interviews, RSTAI*1																		
Feedback group, preliminary analysis, discussion with Taiwanese mentor, reported to the Professor																		
Literature review																		

NB: G: Glasgow; T:Taiwan

4.3 Profile of the study site

This study was carried out in a psychiatric outpatient department in a general hospital. The study hospital is located in northern Taiwan, is the headquarters of the seven branches and is rated as a Medical Centre, the highest appraisal in the hospital accreditation system, by The Ministry of Health in Taiwan.

The psychiatric department at the study hospital includes one acute ward with 40 beds; one day-care centre with 60 beds; out patient services with approximately 120 daily visiting patients. According to the report of this department, approximately 150 patients are diagnosed with anxiety disorders weekly, in which 25 are GAD patients. In addition, there is an outpatient clinic, which is designed especially for patients with insomnia symptoms and it sees approximately 3-5 new patients weekly. This clinic was the main source of recruitment in this study. The catchment population lives mainly in rural counties.

4.4 Access

There were two steps to be taken for gaining permission to access the potential participants. Firstly, the proposal was discussed with the Chairman of the Psychiatric Department by e-mail in April 2005. The Chairman who acted as a mentor (Appendix VII) gave permission to access hospital patients pending Ethics Approval and provided useful information regarding study recruitment. Secondly, contact with the Director of Nursing Department was carried out before the proposal was submitted to the Ethics Committee in the study hospital. It was expected that through these efforts the accessibility of potential participants could be smoothed as the Chairman and the Director could be informed in advance and also could provide advice prior to the proposal being assessed by the related committees. As a result, both of the Chairman and the Director approved the proposal.

4.5 Ethics approval and ethical issues

Ethics approval was sought from three ethical committees: the Medical Faculty in the UK, the Research Committee of the Nursing Department and the Medical Research Ethical Committee at the study hospital in Taiwan.

The University of Glasgow acknowledged this study in May 2005. At the study hospital in Taiwan, the research proposal was approved by the Ethics Committee of the Nursing Department with a certificate (Appendix VIII). After a briefing was presented to the committee on 19 Aug 2005, a certificate was issued by Medical Research Ethics Committee of the study hospital (Appendix IX). Then because of the change of the recruitment criteria made as a result of the pilot study 1, ethics approval was sought again and granted on a second occasion (Appendix X).

According to Beauchamp and Childress (2001, p111) the four key principles of biomedical ethics are respect for autonomy, non-maleficence, beneficence and justice. In addition, there are four rules, veracity, privacy, confidentiality and fidelity that supplement these principles. These ethical principles were addressed in this research as noted next.

4.5.1 Respect for autonomy

This principle of autonomy is a priority as it guides ethical decision-making (Beauchamp & Childress 2001, p120). It refers to respecting the will of each potential participant. In this study, every potential participant was free to make their decision about whether to attend, to reject or to withdraw from the project at any point with no explanations needed.

In this study the information regarding the right of autonomy was printed on the informed consent form (Appendix XI) for each potential participant to read before decision making and was also explained by the researcher orally to ensure the principle of autonomy was enforced. At the same time, a copy of the informed consent was given to each participant for his/her reference. For data analysis purpose, focus groups and individual interviews were audio-taped. Before each audio-tape was administered, the researcher explained the purpose and asked permission for the interview to be taped. All participants were told that they had the right to stop the audio-tape at any point if they felt uncomfortable with it or had any concern about the information they were going to talk about.

4.5.2 Non-maleficence

The principle of non-maleficence means that researchers have an active duty to avoid causing harm to patients (Beauchamp & Childress 2001, p190). According to the literature review, Zen meditation may lead to some adverse effects both physiologically and psychologically (*adverse aspect* 2.2.6). The researcher had an ethical duty to consider carefully any harmful effects that the Zen meditation might involve. In this study, a backup system (4.9) was in place to ensure the non-maleficence principle was fulfilled. In case of occurrence of any distress the primary doctor could be contacted. Furthermore, the Psychiatric Chairman acted as a mentor to support the researcher to manage any problems that might arise related to the Zen meditation intervention. Compared to the benefits, the side effects are, however, relatively minor and differ from one individual to another (Shapiro, 1992). Additionally, it has been argued that the side effects are usually a transient phenomenon (Austin 1999, p376).

Confidentiality is important for non-maleficence because mental disorders have been regarded as a social stigma (Antai-Otong, 2003a). In this study, all participants were adults and capable of acting on their own behalf. All participants were anonymous throughout this study. To maintain confidentiality personal details and interview material were stored securely so that no participant could be identified except the researcher. For example, when potential participants were interested in

this study they wrote down their contact details and only their OPD doctor and the researcher could access these sheets. All referral information was well protected by the researcher and maleficence did not happen by exposure of any personal reference. Additionally, due to there was a huge amount of data to transcribe, the research assistant who helped to do the verbatim transcripts was asked to comply with the confidentiality. The actions adapted in this study met the requirement of the DPA (1998) in which rights of access to personal data are central to the Act.

4.5.3 Beneficence

Beneficence is the duty to do good (Beauchamp & Childress 2001, p260) and is a dynamic process seeking out the most proper treatment for patients. In other words, beneficence has always been central to the role of health care professional. According to the literature review (2.2.6 & 2.2.7), most people are likely to benefit from Zen meditation practice. Therefore, it was assumed that the participants would be advantaged by attending a Zen meditation programme.

In this study, the primary aim was to set up an alternative way to help anxiety patients gain better self-management towards their anxiety symptoms. The notion was that through understanding the process and impact of Zen meditation on participants, the health professional could provide a clearer guide and more specific information to anxiety patients interested in Zen meditation as a way of managing anxiety. However if they were distressed, as noted earlier, a back-up system was in place (4.9).

4.5.4 Justice

The principle of justice means fairness and is to ensure that the health resources are distributed on a justice principle and on an equitable opportunity basis (Beauchamp & Childress 2001, p327).

All patients who met the inclusion criteria were offered equal opportunity to be informed the research information by reading a poster (Appendix XII) posted within a public area of OPD. All potential participants were offered a consent form on which information regarding this study was outlined. It should be noted that in Taiwan the consent form and information sheets are combined and is usual practice (Appendix XI). In addition, patients' right of self-determination was emphasised in that, whether potential participants decided to take part in this study or not, their right to receive health care was not affected. Thereby, the principle of justice was achieved through these procedures.

4.6 Population

Polit and Beck (2006, p259) define a population as the entire set of individuals or objectives having some common characteristics. As noted previously, among all psychiatric diagnoses, anxiety disorders have the highest prevalence rate in many countries (Bandelow, 2003); likewise, in Taiwan

(2.1.1). According to Li (2002, p155), approximately 0.46 million suffer from a variety of anxiety disorders and among the patients visiting OPD, there are 30.4 % with a diagnosis of Generalized anxiety disorder, 3.7% diagnosed as Panic Disorder and 2.3% diagnosed as Phobic Disorder.

4.6.1 Sample

A purposive, convenience sample was used in this study. The sample size in each group might be up to 12 to allow for participants attrition, as 8-10 participants are suggested for a focus group (3.1.3). Two groups of participants were recruited in order to maximize the variety and richness of data. Almost all participants visited their OPD doctor on a regular basis, according to their appointment. Zen meditation was as an adjunct to pharmacotherapy in these participants.

Initial inclusion criteria:

- A psychiatric diagnosis of generalized anxiety disorder within the last six months
- Female
- Aged 18-65 years
- A willingness to attend the 6 week Zen meditation intervention
- A willingness to participate in focus groups and one in-depth interview
- A willingness to maintain a diary related to Zen meditation.

However, due to the results and findings from the pilot study 1 (5.1), the initial inclusion criteria were modified after discussion with the supervisor and the Chairman of the Psychiatric Department. It was agreed that male patients would be invited to take part. Due to this change, the researcher then re-sought ethics approval from Medical Research Ethical Committee of the study hospital (Appendix X). The study was re-piloted (5.2) using the new criteria. As a result, the recruitment process ran smoothly. The new criteria adopted for the main study as follows.

Refined inclusion criteria

- A psychiatric diagnosis of Generalized anxiety disorder
- Aged 18-65 years
- A willingness to attend the 6 week Zen meditation intervention
- A willingness to participate in focus groups and one in-depth interview
- A willingness to maintain a diary related to Zen meditation
- Read and write Chinese.

Exclusion criteria

- GAD in combination with any other severe psychiatric disorders e.g. Schizophrenia, Bipolar Disorder and depression
- With antecedent experience of any kind of meditation practice

- Considered to be a suicidal risk as documented in patient case notes
- Participants who in the researcher's clinical judgement were not suitable for Zen meditation e.g. physical problems prevented warm up exercise pre Zen meditation.

Two participants were excluded: one who had neck surgery 4 weeks prior to the invitation; the other had severe pain caused by degenerative arthritis.

4.7 Recruitment procedures for pilot and main study samples

It was anticipated that the participants could be recruited within a 4 week period for each stage of the study. The following steps were used to improve the recruitment process:

- When the research proposal was submitted to the Ethics Committees of the study hospital, a copy of the proposal was also given to the psychiatric department and related staff, including psychiatric doctors and nurses, so they had the study information for reference in advance of the pilot study starting.
- A letter stating the study's objectives and the study design was sent to each of the seven OPD psychiatric doctors to inform them about the study (Appendix XIII). All seven doctors were asked to refer potential participants to the researcher by writing down their contact details on a referral sheet. The Chairman asked for their co-operation to accelerate the recruiting process. If the potential participants were interested after the brief given by their OPD doctors, they were asked to leave their contact details on the sheet provided. Then, the researcher contacted these doctors and collected the contact sheets weekly.
- Doctors usually were busy and sometimes forgot to refer potential participants to the researcher; therefore a poster (Appendix XII) was put up in the psychiatric OPD with a description of the intervention programme. Thereby, any potential participant with interest could have the study information and could contact the researcher. The researcher would then discuss with the potential participants and referred them to their doctors for further assessment and discussion.
- A handy leaflet was designed and placed in the OPD so that doctors or nurses could hand it over to potential participants who hesitated to leave contact details but interested. Hence, the potential participant could have a reference and be reminded about the study.
- The researcher asked the four nurses who worked in the OPD to remind the doctors to refer potential participants to the researcher.
- The researcher then contacted each potential participant, via phone or by meeting them in the OPD department within one week of referral.
- At this point, study information was provided to the potential participants by the researcher in person and there were the opportunities for them to ask questions related to the consent form (Appendix XI) or any things that concerned them.
- If the participant was willing to participate, then the informed consent form was signed by both the participant and the researcher. In addition, the researcher would ask the participants to fill a

form, the Self-Reporting Form (Appendix XIV) containing questions about their personal data, distressed symptoms of GAD and any expectations.

- After a few days, another contact was made by the researcher to allow the participants who signed the consent form to have a chance to confirm their decision.
- Interview rooms in OPD were accessed when possible as they provided privacy and allowed potential participants to express themselves freely.
- It was efficient and felt more manageable to recruit if the researcher could speak to the potential participants face to face immediately after their clinic visiting rather than making a phone call as the first contact.

4.8 Strategies to minimize study attrition

In order to minimize study attrition, the following strategies were applied:

- A Zen meditation booklet (Appendix II) was designed and provided to each participant at the first session of the Zen meditation programme; including content of the Zen meditation programme, methods of Zen meditation, a structured diary template.
- Good preparation before the focus groups is helpful in decreasing attrition (3.1.3). Several strategies were applied to facilitate a non-threatening environment. For example, comfortable circumstances were provided as much as possible (4.10).
- The time chosen for conducting Zen meditation programme was on Saturday as it suitable for most participants who are employed.
- A competent meditation instructor was invited act as instructor to maximize the learning effect (4.12.3).
- A reminder phone call to each participant was made 1-2 days before the meeting day.

4.9 The referral backup system

During the data collection period, a transfer backup system was in place to support any participant distressed by the Zen meditation programme. The researcher ensured resources from both the medical system and the Zen meditation instructor were accessible. In case of distress, the participant's primary psychiatric doctor was to be the first contact. Furthermore, both the Chairman of Psychiatric Department and the mentor of the researcher in Taiwan acted as support as required.

However, during the pilot and main study period there were no participants that needed to be referred to the backup system. All participants visited their doctors as usual.

4.10 Zen meditation venue

To protect the confidentiality of the psychiatric patients, the psychiatric department of the study hospital provided a special elevator for psychiatric patients so that they did not share the same

elevators with other patients or visitors of medical or surgical divisions. By this design better privacy was provided to both adult and child psychiatric patients.

The space chosen to be used as the Zen meditation venue was the activity room of the adult Psychiatric Day Care Unit. It was spacious about 80-90 square meters. A set of dark colour sofas with tea table were placed on the right hand side that could offer a space for unofficial or relaxing gathering. On the left hand side, a brown table with chairs was positioned so that official meetings or purposeful activity could take place here. The wall behind the high table was a wide window next to a nursing station so nurses could observe patients within the activity room. As the Zen programme and focus group were held on Saturday there was no nurse on duty, allowing the conduct of the Zen programme free from interference. This room was bright as one of the walls was composed of windows. The other side was equipped with entertainment equipment and cabinets as well as toilet facilities.

Mats and meditation cushions were prepared before the programme started. The researcher arrived much earlier to set up the room. However, some participants who arrived earlier at the venue helped the researcher to prepare the mats. In this situation relationships were gradually built up as communication flowed freely between these participants. This happened more often in Group 1 than Group 2.

4.11 Data collection tools

Due to the multiple methods used in this study, the different methods used over time in each main study group are shown in Table 4-2.

Table 4-2 Data collection used over time

Week with Zen sessions	1	2	3	4	5	6	7-8	9-10
Focus groups	x	x	x	x	x	x		
Individual interviews							x	
RSTAI	x					x		x
Feedback group								x
Diary maintenance	x	x	x	x	x	x		
Field notes	x	x	x	x	x	x	x	x

4.11.1 The focus groups

For the purpose of exploring the process of the Zen meditation experience, repeated focus groups were adopted, helping to track the different responses to the Zen meditation practice among

participants over a six week period. It was hoped that because of the advantages of focus groups, data about the Zen meditation experience could be collected as widely as possible (3.1.2).

Based on the literature review (2.2), a semi-structured focus group prompt schedule (Appendix XV) was designed to guide the focus groups, comprising three aspects of Zen meditation experience: cognition, sensation, and emotion and attitude. Firstly, the cognition aspect explored the thoughts or ideas when practising Zen meditation. Secondly, the sensation aspect focused on the perceptions that participants experienced. The last aspect, emotion and attitude, aimed to explore the mood or affective status they experienced when meditating. In order to gain a global view of their experience, three questions were added at the end of the prompt schedule (Appendix XV); these questions were free from the previous framework structured by the cognition-sensation-emotion frame and allowed the participants to express more freely. For instance, they were asked about the most difficult part, the most enjoyable part and any other comments on the Zen meditation programme. As these questions were not bound by any theoretical frame but invited them to articulate their personal experience directly using their own words so various types of data might be gathered. Consequently, a total number of 10 questions were developed in the prompt schedule first version (Appendix XV).

The focus group prompt schedule was handed to each participant before each focus group started so that participants could have ideas in advance about areas of discussion. The researcher then encouraged each participant to express his/her opinions and to clarify ideas where appropriate. The focus groups were held at the end of each Zen session as data collected were reflective information on the previous Zen meditation experience. As planned, the time for each focus group lasted 40 to 60 minutes.

The place used for focus groups was the same as the venue of Zen meditation programme (4.10). The space was designed for a capacity of 30 chronic psychiatric patients. It was managed by psychiatric staff and used during weekdays. According to the scale of this study, the venue was used by a range of 10- 13 participants. Therefore, the activity room was large for the number of people but it was satisfactory. There was an echo interfering with the audiotape record but it was tolerable. In addition, this venue was quiet and without interference as on Saturdays as the patients of the Day Care Ward and staff were off.

For the purpose of data analysis, the researcher sought permission from each participant to audiotape. The purpose of recording and the how the data were managed in association with confidential issues were explained by the researcher. It was also noted that the participants could withdraw their permission at any point, by saying that 'you have the right to stop recording at any point when you feel not comfortable with it, just let me know'

Groups 1 & 2

It is noted by Krueger (1994, p21) that groups can vary considerably and therefore it is useful to include enough groups to balance the idiosyncrasies of individual sessions (3.1.3). For this purpose, two groups were included in the main study.

4.11.2 The individual interviews

Attempting to encompass all aspects of the Zen meditation experience and trying to probe to a deeper level of understanding on an individual basis, an individual prompt schedule was designed (Appendix VI). Eight questions were laid out, starting with a general question inviting the participants to talk about their thoughts, motivation or expectations regarding their decision to take part in the Zen meditation programme and the research. Then, participants were asked to look back and to describe their feelings of the entire Zen meditation process as a whole. Next, participants were asked to give an example in their daily life to compare the most impressive change pre and post Zen meditation practice. Question 4 was intended to trace the progress throughout the Zen practice based on their personal experiences. The purpose of question 5 was to explore the impact of Zen meditation in terms of their GAD symptoms. Question 6 was designed to probe both the negative and positive side of Zen meditation they had experienced. People may not express a negative opinion especially in the beginning of a conversation because of courtesy. This is why questions with negative notions (questions 5 & 6) were arranged in the middle of this schedule. Question 7 aimed to explore any emotional change related to Zen meditation. Question 8 focused on the attitude aspect to Zen meditation experience. The last two questions were arranged at the end of the schedule because they were associated with more personal experiences which would be much more appropriate for them to share after a period of interview had been processed.

Appointments for individual interviews were made mostly at the last session of the Zen programme. However, some participants were not ready to give a suitable time; thus, these appointments were made after further contact.

Three different locations were used for individual interviews: the interview room within the psychiatric OPD which was quiet and private; the Day Care Unit group room on weekends; and the participant's home if this suited them best. There were advantages and disadvantages of using these places. For example, when an interview was carried out in interview rooms there was an 'official' atmosphere due to the hospital environments. In the hospital participants focused much more on the interview prompt schedule but seemed to express less personal feeling. On the other hand, when interviews were conducted at participants' homes the participants felt relaxed and revealed more personal details regarding Zen meditation. Consequently, according to field notes time spent on interviews at participants' home was longer than it was in hospital. Most participants appeared to enjoy the interview process. The interview times varied from 50 minutes to 100 minutes.

In terms of audiotapes, after the permission of each participant was gained, audiotaping was applied to each interview. The researcher explained the purpose of using a tape recorder by saying *“Your opinion and experiences are very important for me, but I cannot remember everything you say. Therefore, I need to tape it when you agree to do so and this data will only be used for research purposes and it is anonymous. However, you can withdraw your permission at any time and I will stop the recording immediately.”* In this study all participants gave their permission and no one was withdrawn.

4.11.3 Revised State-Trait Anxiety Inventory (RSTAI)

To increase the robustness of this study and also to provide an overall perspective the RSTAI was administered. Permission for the administration of RSTAI was acquired in July 2005 from the original authors in Taiwan (Appendix XVI). The RSTAI has a satisfactory validity and reliability, containing 40 items and take about 15 minutes to complete (Appendix XVII) (Jhong-Long 1984).

The RSTAI was used at three points: at the beginning of the Zen meditation programme, at the end of the Zen meditation programme and at the feedback group. The researcher gave a brief induction to the group saying *“This is a short inventory with 2 pages which assesses some situations we may have. Please read each question carefully but do not spend too much time on each item. Answer it by your first thought. If you have any question while you are answering please raise your hand”*. When participants returned the inventory then the researcher skimmed over each response on the RSTAI to ensure no question was missed or double circled. In addition, a research assistant helped to check the answers efficiently as they handed in the RSTAI at the same time (5.2.7).

4.11.4 Diaries

Diaries (Appendix XVIII) were used by participants to profile their daily meditation times and any thoughts or feelings related to mediation on the day. As planned, a short form of a diary was attached to the booklet of Zen meditation and was retrieved each week from the second week onwards and at the individual interview. This information served as one of the triangulation methods to profile participants' Zen meditation experience. It was useful for monitoring the situation of Zen meditation practice at home among participants. In addition, this was found helpful for keeping participants' motivation and for carrying out individual interviews.

4.11.5 The field notes

The field notes were kept throughout the entire study process starting with pilot study 1 till the end of reporting findings. The interaction among participants, the researcher and the Zen instructor was also noted. As noted in 3.5, field notes proved useful when describing and reflecting on this study.

Figures, diagrams were used when appropriate. Consequently two note books were used throughout the whole study process. The form of field notes is shown in Table 4-3.

Table 4-3 The form of field notes

Date	Focus group session or Individual interview	Non-verbal interaction	Events during the session	My understanding

4.11.6 The feedback groups

A feedback group aims to present the primary data analysed to the participants so they can have responses to the data (3.1.2). In this study, the feedback groups were used to repay the participants for their contributions. At the same time, the rigour of findings of the focus groups (3.8.1) was enhanced as participants helped to clarify or add up the primary findings delivered to them. Moreover, the feedback group may have helped the participants to accomplish the relationships. The conduct and discussion of feedback groups were reported in 6.3 and 6.5.2.

4.12 Administration of Zen meditation programme

Several aspects regarding the administration of the Zen meditation programme are presented here, including the design, the arrangement of length and time, the role of the Zen meditation instructor and the researcher.

4.12.1 The design of Zen meditation programme

A 6-week Zen meditation programme was designed by the researcher in June 2005(Appendix II). A discussion regarding the appropriateness of the booklet was held by the researcher and the Zen instructor before commencing pilot studies in September 2005 in Taipei. Therefore, the agreement of the content of the booklet was established. The information contained in the booklet included the preface and handouts for 6 sessions (Appendix II). These handouts included warm-up exercises, meditation practising, and recovery movements. Right after recovery movements, a short discussion was arranged between participants and the Zen instructor. In this way, questions regarding the day's lesson or any problem occurring in their home practice could be solved instantly. The design was refined after pilot 1 (5.1.7) and then ran smoothly afterwards (5.2.7 & 6.2).

4.12.2 The arrangement of length and time of the Zen meditation programme

According to the literature review the length of a Zen meditation programme is usually between 6 weeks to 3 months (2.2.5). Due to the time needed to conduct individual interviews, the time required for recruitment, the time needed for both pilot and main study, a 6 week programme was designed for main study.

As planned, the time chosen for the Zen meditation programme was Saturday from 10 am to noon.

This arrangement suited the participants who worked on weekdays. Furthermore, the meeting time in the morning was better than in the afternoon as participants could arrange their holiday activities in continuous with Sunday without interruption from this programme.

Generally, these arrangements ran well in pilot study 2 and the main study (5.2.7 & 6.2). The attrition rates were satisfactory (Figure 5-3, 6-1, 6-2).

4.12.3 The role of the Zen meditation instructor

The role of the Zen meditation instructor was to provide systematic teaching in order to help participants acquire an appropriate method to practise Zen meditation. The instructor was required to have not only abundant experience of Zen meditation but also to be good at teaching. In addition, most importantly she needed to acknowledge the research objectives, accept the position and the duty of the Zen meditation instructor within the study design.

An experienced female Zen meditation practitioner was invited and engaged as an instructor. She had been teaching different kinds of Chinese alternative preservative methods for 15 years including meditation, acupuncture message and Chi-Gung in Taipei. Many Zen meditation teachers in Taiwan are either a Buddhist nun or monk. The instructor did not appear like a Buddhist nun and this fitted with the purpose of the study. In other words, she did not appear to the participants as a religious person.

4.12.4 The roles of the researcher of the Zen meditation programme

The roles of the researcher in the Zen meditation programme were as an organizer, observer and recorder, described as follows:

Organizer

The objective as organizer was to arrange the class venue, to equip the environment so that the space was suitable for Zen meditation practising as well as data collection. The preparations details were:

- To equip for tape recording with permission of the participants
- To ensure enough meditation mats and all set out for the Zen meditation programme
- To check the attendance sheet
- To hand out the Zen meditation programme booklet at the first session
- To retrieve the diaries of home meditation practice
- To administer the RSTAI on three occasions—at the beginning session of the Zen programme, at the last session of the programme and at the time of individual interview.

Observer and recorder

The role of observer involved three parts: during the Zen meditation session, during the focus groups and during the individual interviews. When the Zen meditation programme was proceeding, the researcher observed the participants at an appropriate distance and took a more passive attitude. The

content of field notes reported the participants' attitude of learning, the interactions between the Zen meditation instructor and participants, the interaction among participants, the atmosphere, and their responses toward the environment. When a focus interview was started, the researcher took an active role to lead the discussion as well as observing (4.11.1). In terms of individual interviews (4.11.2), non verbal behaviours were observed carefully and recorded in field notes. Later, these data were added to transcription as supplement.

It was thought that the expectation of the participants towards the programme and the responses towards the meditation venue might be observed clearly at the first session, while at the last session, the appraisal or the review throughout the past 6 sessions might become an important issue. Moreover, it was also expected that the sequence of focus groups could depict the process of practising Zen meditation chronologically.

4.13 Issues related to the researcher preparation

Reflection on the preparation and background of the researcher was important (Koch 1995b), because pre-understanding strongly influences the viewpoints of phenomena and also the way of understanding (2.3.3). The background of the researcher related to this study was as follows:

- Three years of clinical nursing experience in a general hospital in Taipei of which 20 months were in an acute psychiatric ward.
- 15 years of teaching experience on psychiatric nursing as a lecture and clinical instructor, and thereby, familiar with group processes.
- Previous experience of quantitative research on Zen meditation effects on patients with anxiety disorders (Appendix I).
- Previous qualitative research experience of drinking behaviour among female aboriginal adolescents in 2003 (Appendix XIX).
- Personal experience of Zen meditation practice.

As noted, the researcher had several advantages for conducting this study. Firstly, the researcher was familiar with psychiatry including generalized anxiety disorder nursing. Secondly, the researcher was experienced with individual interviewing and interview situations. Thirdly, as to focus groups, the researcher was not so experienced. However, she had experience of group psychotherapy in psychiatric wards that could benefit the conduct of focus groups. Lastly, previous Zen meditation experience might help the researcher to understand the experience reported by the participants.

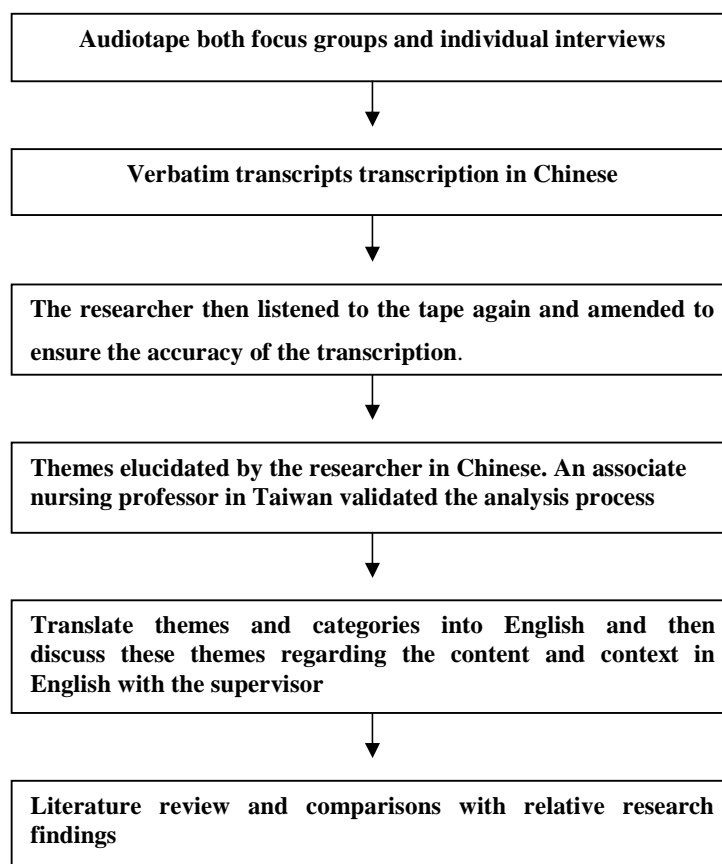
On the other hand, the disadvantage for the researcher was likely to be the difficulty of distinguishing a nurse's role from a researcher's role; that is, the researcher might easily slip into a nurse role instead of staying consistently with a researcher's role. Two reasons might account for this. Firstly, the researcher might act as a nurse unconsciously, because the study field was the

hospital where the researcher had performed a nursing role for 15 years. Secondly, the participants might expect that the researcher act as a nurse after the researcher was introduced as a nursing teacher by the Clinic in-charge doctor.

4.14 Translation procedure

Translation is important for this research. To maintain the richness of meaning in the source language, Chinese, the original data were used as original material for analyzing data. The translation process did not occur until themes emerged. This was beneficial as there was only one step of translation, minimizing the deducting of meaning (3.7). After themes and subcategories were abstracted in Chinese from the text, they were then translated into English. The mentor in Taiwan was mainly involved in the process of data analysis in Chinese as she could read Chinese. After that, the researcher discussed with the research supervisor in the UK about the meanings, concepts and the contextual background of themes and categories in English. In this way, the accuracy of the translation between Chinese and English was secured. Moreover, to maximize the reliability in the analysis and achieving consistency in the translation, the researcher was the only translator during the data translation process (3.7).

In the translation procedure, many factors that influence the quality of translation have been examined such as languages, translator and cultural aspects (3.7). In this study, the advantage is that the researcher could understand the language used by the participants and was able to abstract meanings from the source language in the cultural context as the study site is the researcher's country. The disadvantages, however, were the challenges of translating themes and subcategories into English. The supervisor who is an English native speaker helped to resolve this problem. The translation process shows in the following flowchart pragmatically (Figure 4-1):

Figure 4-1 The flowchart of translation

4.15 Overall summary

In this chapter, materials and methods applied in this study were detailed as much as possible so that the readers might have a general view regarding the context and the whole process of this study. In the following chapter, the conduction of pilot studies (pilot 1 and 2) and main study (Group 1 and 2) are presented.

CHAPTER V THE PILOT STUDIES

5.0 Introduction

The process of the completion of the pilot and studies are incorporated in this chapter. Initially only one pilot study was designed to test the feasibility of the study design. As a consequence of the findings of the first pilot study, some substantial changes were made, e.g. study entry criteria were modified. Therefore, a second pilot study was conducted successively to retest these changes. Accordingly, there are two pilot studies reported in this chapter. The participants and findings of these two pilot studies were excluded from the main study. The time line of all pilot studies and main study shows in Table 5-1.

Table 5-1 Time line of pilot studies

	Pilot study 1 n=6	Pilot study 2 n=9
Recruitment period	07/09/05-07/10/05	15/12/05-10/02/06 (Cross lunar new year)
Conduct period	08/10/05-13/11/05	18/02/06-11/03/06

5.1 Pilot study 1

A pilot study is defined as a small scale version or trial run done in preparation for a major study (Polit & Beck 2006). As planned, a pilot study contained four sessions of Zen meditation programme rather than six sessions because of the limitation of research time. It was expected that the possible problems would be discovered during the stage of preparation, recruiting and four Zen meditation sessions.

5.1.1 Aims of pilot study 1

The aims of this pilot study were:

- to test the feasibility of the study design
- to refine the procedure of the Zen meditation programme
- to test the process of focus groups and assess the focus group prompt schedule
- to test the conduct of individual interviews and assess the individual interview prompt schedule
- to improve the researcher's interviewing skills
- to test the administration of the RSTAI
- to test compliance with diary keeping

5.1.2 Pilot study 1 sample

Six female participants presented at the first session of Zen meditation programme although seven potential participants promised to come. The age of these participants ranged from 27 to 63 (mean=47; SD=14.74). The years of education ranged from 9 to 16 years (mean=11.17; SD=2.79).

Five female participants were married; one was living with her boy-friend. In terms of occupation, four were housewives, one worked in an airplane company, and one was an assistant in a traditional Chinese Knead Clinic. According to their Self-Reporting Form (Appendix XIV), the symptoms they were most concerned with insomnia, poor concentration and they desperately wanted to solve these symptoms.

5.1.3 Study criteria of pilot study 1

The criteria used for pilot study 1 are listed in 4.6.1. However, as a result of recruitment problems (5.1.4, Figure 5-2), it was decided to modify two items of the criteria in order to improve recruitment and attendance in the focus groups: 1) recruit male GAD potential participants; 2) remove the inclusion criteria that specified a diagnosis within the last six months. It was expected that these modifications could boost the speed of recruitment because this allowed more potential participants to be approached. The refinements were based on the information given by these participants as well as the reflections of the researcher. It was disappointing in one way to decrease the homogeneity of the group composition, but it could improve the feasibility of the study design.

5.1.4 Recruitment of pilot study 1

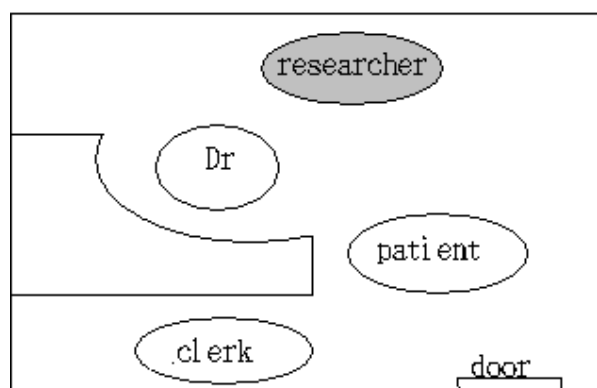
Potential participants came mainly from two sources: one from a clinic that was part of the psychiatric department of the study site; the other from other psychiatric doctors. After presenting the research programme to potential participants, these doctors asked interested potential participants to write down their contact details with permission. Then, the researcher contacted these potential participants to arrange a suitable meeting. It was hoped that OPD nurses would boost the referral procedure by reminding the OPD doctors not to forget to refer potential participants. However, they refused to do so because there were a considerable number of research projects being conducted in the study hospital and many researchers had asked the nurses to help them in order to conduct a part of research work. When this kind of demand kept arising, the Nursing Department considered that these requests might interfere with the nursing services. Hence, the department decided to make a policy; that was, patient services are regarded as the highest priority and no other roles should be taken when nurses are on duty. As a result, during the study period of pilot study 1, only 8 potential participants were listed on contact sheets and this concerned the researcher most because of the high refusal rate. So the researcher had to take the initiative role for recruiting.

Waiting for referral sheets from the psychiatric doctors was rather passive. The researcher discussed this problem with the Chairman of the Psychiatric Department. A decision was then made to manage this problem. That was, the researcher took part in the clinic to recruit participants immediately. After being introduced to the in-charge doctor of the clinic by the Chairman and gaining permission from the in-charge doctor, the researcher attended his clinic twice a week, Tuesday morning and Friday afternoon. Therefore the researcher could be introduced to potential participants immediately

by the doctor they trusted; by saying “you have been suffering this disease. Currently, we have a free Zen meditation programme being offered to anxiety patients to reduce anxiety symptoms. Teacher Lu (the researcher) is an experienced psychiatric nursing teacher as well as a master on this programme. If you do not mind, may I suggest that you talk to teacher Lu so that you can have a complete picture before you make your decision? I do believe this will be beneficial. This is not compulsory and it does not interfere with any right of your own treatment.” The researcher could communicate with the potential participants instantly and discuss the research programme. Most importantly, the potential participants could have a chance to clarify any doubts they might have. In this way the recruitment procedure could run more effectively in comparison with relying on doctors’ referrals sheets only.

Figure 5-1 shows the arrangement when the researcher attended the clinic. The researcher sat behind the in-charge doctor so the expression of the patients and medical information regarding the patients could be observed easily.

Figure 5-1 The arrangement of the researcher attending the clinic



The number of potential participants contacted by the researcher ranged from 1 to 5 in each OPD session; on average two-three participants were recruited weekly. Some potential participants politely refused immediately after the doctor’s introduction saying they were in a hurry or it was just not possible for them to have free time on a Saturday. In pilot study 1, 17 potential participants were invited and 10 refused. The refusal rate was quite high. One explanation about this high refusal rate was that patients felt embarrassed to refuse the doctor as he was regarded as an authority figure, but it was easier to reject the researcher without the doctor’s presence afterwards. This phenomenon indicated that they were free to express their real willingness. A summary of reasons of refusal is shown in Table 5-2.

Table 5-2 The reasons of the refusal of potential participants at OPD in pilot study 1

Reason	Number of potential participants
Family duties	4
Has to work on most of Saturdays	1
Traffic difficulties:	3
Has neck surgery recently	1
Satisfied with medication help only	1
Total	10

As can be seen, taking responsibility for looking after family members impacted significantly on the motivation of female potential participation in this pilot study. This reason involved the role expectations of females which are part of Taiwanese culture; that is, women are expected to be the care-givers of their families (Chao & Roth 2000). For example, elder women are expected to look after their grandchildren, especially when all are living together. Elderly people live with their offspring as a custom and symbolizes good life for Taiwanese (Chao & Roth 2000).

Due to the high refusal rate, the recruitment of female participants was quite difficult. Consequently, 7 participants were willing to attend pilot study 1. Based on the experience of pilot study 1, it was estimated that it might take at least 5 weeks to over-recruit participants to allow for attrition. Additionally, if it took over 5 weeks it might be too long for the participants recruited at first week to wait. On the other hand, the leaflet (4.8) in OPD brought three GAD patients but unfortunately they were all male. They contacted the researcher either by phone or by e-mail. These male patients appeared highly motivated, e.g. they collected the leaflets and made contact actively but entry criteria excluded males. Therefore, a decision of including male GAD patients was taken in order to speed up the recruitment rate.

5.1.5 Data collection of pilot study 1

The tasks completed in pilot study 1 included a four week Zen meditation programme, RSTAI administrated at three points, five in-depth individual interviews, diaries and field notes. The collection of data is shown in Table 5-3.

Table 5-3 Data collection of pilot study 1

Week with Zen session	1	2	3	4	5-6	Note
Focus groups	x	x	x	x		
Individual interviews					x	
RSTAI	x			x	x	
Feedback group						Not administrated as only two participants presented at last session of focus group
Diary maintenance	x	x	x	x		
Field notes	x	x	x	x	x	

5.1.6 The attendance of pilot study 1

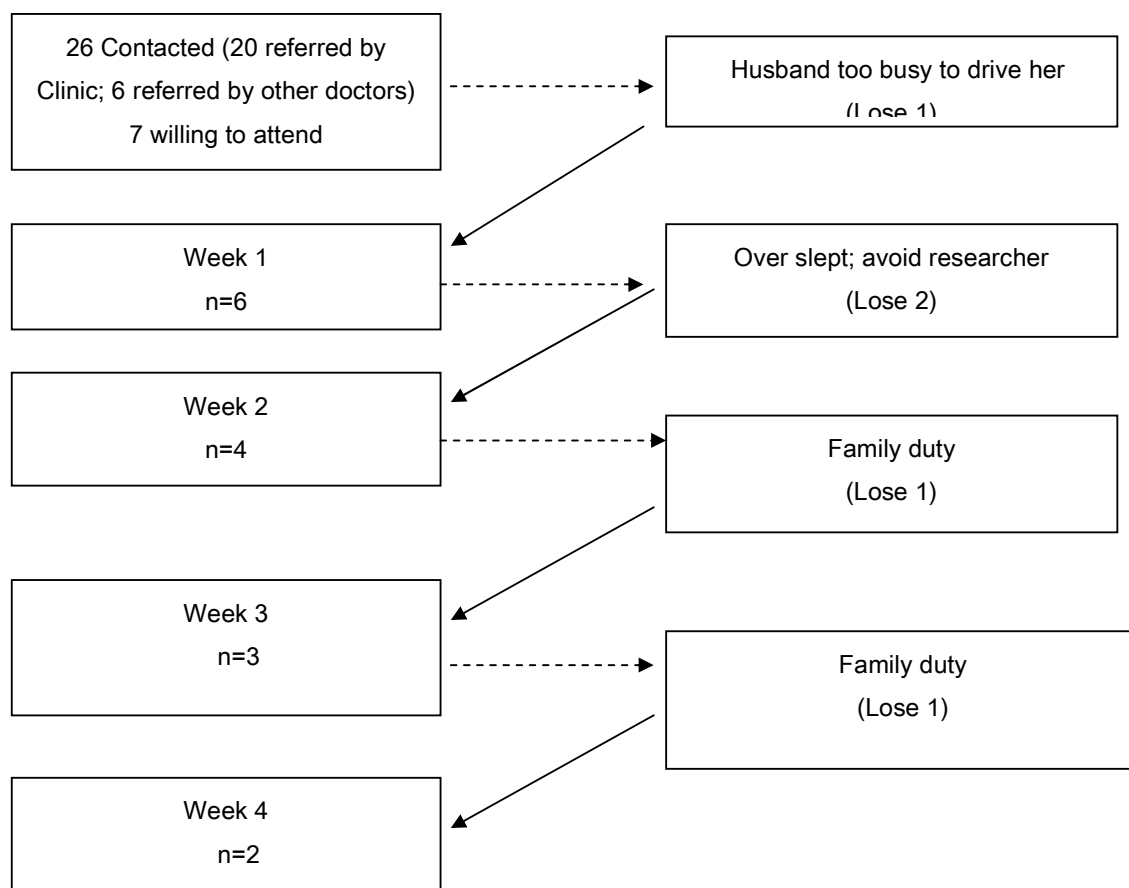
The attendance rate and the reasons for drop out over this 4 week Zen meditation programme period are shown in Figure 5-2 in which a decline in attendance was noticed; the attendance rate of participants at the Zen programme dropped from 6 to 2. Similar to refusals at OPD (Table 5-2), reasons for dropout during Zen programme tended to be a care-giver role for their families and traffic problems. The role of care-giver restrained female participants from taking part of activities outside home. Study attrition was therefore a major issue and needed to be addressed.

To improve the attendance rate, investigation for understanding this poor attendance were made by the researcher when individual interviews were carried out. As a result, three main reasons were mentioned by the participants: symptoms related to GAD had not improved as significantly as expected, the lack of obvious differences between each Zen session, and the expectation of gaining more information regarding GAD. Descriptions and solutions related to these three problems are presented next.

The unnoticeable improvement related to GAD symptoms disappointed participants.

Some participants held certain expectations of improving GAD symptoms and this led them to participate in pilot study 1 in the first instance. However, after 2-3 weeks time they were dissatisfied as their expectations had not been fulfilled. This then decreased their motivation to attend.

Strategies adopted to manage this problem were: 1) further exploring or clarifying their expectations related to Zen meditation programme at the very beginning might be necessary. In other words, building up realistic goals for participants would be a crucial strategy to prevent disappointment and drop out. 2) Giving a brief introduction about Zen meditation to potential participants would be beneficial; saying that according to the literature review, 2-3 months regular practice was required for a sensible change of symptoms (2.2.5). Furthermore, it should be noted that to learn how to practise Zen meditation appropriately needs a certain time and although it is not difficult to learn regular practices, time is required.

Figure 5-2 Study attrition on the Zen meditation programme in pilot study 1***The lack of clear differences between each Zen meditation session***

Three participants felt that the lack of clear differences between each Zen meditation session diminished their motivation to attend. Also it appeared that the amount of teaching material was too much in a single session. Clear lines between warm-up exercises, meditation and recovery movements were needed.

After consideration and discussion with the Zen instructor, a decision regarding refinement of the Zen meditation programme was made in order to solve this problem. This refinement included setting clear lines to distinguish each session. Therefore, the warm up exercises were arranged in six separate sections: simple self massage and movements of head and neck, movements of shoulder and chest, movement of wrist and leg, floor-sitting movement, floor-lying movement and review. These differences were written in the outline. In addition the time for meditation practice in the six sessions was increased by five minutes each session; starting with 5 minutes in session 1 (Appendix II).

Participants expected to obtain more information regarding GAD

Based on field notes, one participant said *“I was spending time on the weekends there and leaving my child and my husband at home. I really hope that there is abundant health knowledge that could benefit me a lot as it is really hard to find someone to talk to and the doctor is always busy...”* From this point of view, adding information regarding GAD could meet their needs and this might improve the attendance rate. However, whether to add disease information or not was a dilemma. Providing GAD information could meet their needs and encourage the attendance rate, but it could possibly interfere with the direction of the focus groups. After all, one of the research goals was to explore the Zen meditation experience.

As a result, a midway solution was adapted to manage this dilemma after discussion with the mentor, the Chairman and the supervisor. Three parts of information regarding GAD would be added into three sessions of the Zen Programme including symptoms, treatment and prognosis. Each part of the GAD information was expected to occupy less than 10 minutes of each focus group.

On the other hand, because a high attrition rate could fail the research, the researcher tried to consider as many factors as possible to boost the attendance. Therefore, in addition to the modification made above, it was also decided to build up rapport with participants before they officially entered the Zen meditation programme.

Building initial rapport with participants before the commencement of the Zen meditation programme

It would be beneficial if the researcher could build up a relationship with the participants before the Zen programme commenced and this might decrease their apprehension and lower the attrition rate. To achieve this goal, the researcher conducted work in advance. The preparation included a brief introduction of the venue used, the clarification of goals of the Zen Programme and what kind of people they might meet in the group. Therefore, as early as recruiting participants at OPD, the researcher invited potential participants to have a short visit to the Day Care Ward. An advantage of this preparation was that they could find the Zen meditation venue by themselves at the first Zen session. At the same time, the potential participants were encouraged by the researcher to express their expectations or even worries towards the Zen meditation programme. In the meantime, the clarification of their goals to the programme was proceeding. In other words, the first contact was not merely recruitment and explaining the consent form but also was a good opportunity to form an initial rapport. It was hoped that through this effort these potential participants would increase their motivation to participate throughout the Zen meditation programme.

To conclude, to solve the problem of study attrition, four major strategies were planned to be applied in pilot study 2. It was expected that these strategies could increase retention.

5.1.7 Refining the procedure of the Zen meditation programme

The main purpose of refining the Zen meditation programme was to help maintain the attendance rate. Two refinements involved were the Zen meditation booklet and assessing the situation of home practice based on their diaries.

Zen meditation booklet refinement

The goal of this refinement was to make the booklet more user-friendly. The level of understanding of the booklet needed to be improved. Although all important elements of meditation practice were encompassed and key concepts were emphasized in the Zen meditation booklet (Appendix II), it was necessary to explain each idea in more detail because participants were novices to learning Zen meditation and had diverse educational backgrounds. It was found that some content was too abstract for some participants such as session 5 and 6. Thus, these chapters were rewritten to reach a more comprehensible level for participants (Appendix II).

In addition, from hindsight, it was decided to divide the booklet into six parts and give each part at each section in pilot study 2, unlike pilot study 1 where the entire booklet was given out at the first session of Zen programme. The main purpose of this modification was to encourage participants' continuity of attending because participants would not have the handouts of Zen programme unless they were at the session. In this way, it also ensured that they could always have the handout they needed for the day's lesson because in pilot study 1 it was also found that often forgot to bring the booklets with them. However, if a participant was absent, the researcher would keep the handout for the absent participant to collect as long as the participant presented at any of the following sessions.

The uncertainty of performance of Zen meditation at home

Three out of six of the participants maintained good practice at home; that is, two practised 10-20 minutes nearly every day; one practised 5-10 minutes every other day. These three participants responded with satisfaction regarding Zen meditation practice when interviewed. They reported that chest tightness and headache were alleviated and felt not so rushed all the time. However, half the participants did not practise regularly at home. The reasons were: forgot, too tired, no time as children just too little and afraid of bringing up unpleasant memories.

It was very difficult to manage factors that influenced home practising especially family duty. However, two strategies were implemented in pilot study 2 to solve these problems. Firstly, a reminder call was made weekly during the period of Zen meditation to remind the participants to join the Zen meditation programme on the Saturday. Secondly, discussions with participants who had irregular practice records in their diaries were held in order to find a suitable time and space for their home practice.

5.1.8 The test of the focus groups

Three problems arose from the test of focus groups: the different concerns between participants and the researcher; the role of the Zen meditation instructor and reflection on management of the focus group process. These are discussed below.

The different concerns between participants and the researcher

The issue participants were interested in most was their illness experience rather than Zen meditation. In focus groups it was obvious that as long as a participant started to talk about his/her disease experiences, this promoted other participants to recall similar experiences, especially GAD symptoms. They seemed relieved after sharing mutual experiences from GAD. When the researcher addressed the purposes of focus groups and tried to direct the discussion, the participants followed but ended quickly. How to balance the needs of participants and to meet the study objectives in a group situation became a great challenge for the researcher.

The explanation for the difficulties of probing their Zen practising experience was probably their inexperience in Zen meditation practice. In other words, they were novices and the time spent for Zen meditation was rather short. Therefore, the data presented by focus groups was rather superficial. However, the group agendas did change slightly overtime; for example participants revealed more experiences related to Zen meditation experience gradually within successive focus groups. This situation was expected to improve in the main study as it was designed with 6 of focus groups rather than 4 sessions. To solve this problem, two decisions were made:

- The researcher would take a rather tolerant attitude to allow participants to about their illness experience to a certain level as this helped to build up relationships. Also, this group dynamic was a vital factor that influenced data gathering and analysis (3.1.3) and was important for a repeated focus groups.
- Improving moderating skills. Direct the discussion of focus groups to agendas related to research questions or using focus group prompt schedule where appropriate. Encourage them to talk about the connection between illness experiences and Zen meditation experiences.

The performance of the Zen meditation instructor in pilot study 1

It was necessary that the instructor know the aims of the research in order to play her role in this study (4.12.3). Therefore, before the Zen programme commenced, the aims of the research were conveyed to her by the researcher and she accepted them. The main expectation of the instructor was that through her teaching, a systematic and effective learning effect could occur among participants. According to the field notes, she performed well in terms of instruction; she used high tones and lows tone with a gentle voice so that all the participants could have attention and feel calm and comfortable. She observed the movement of each participant and then gave either oral correction or gentle body adjustment in time. When some participants followed well, she praised them. Generally,

she demonstrated movements and led the process at an adjusted pace.

However, a problem arose as that the instructor seemed over-enthusiastic to share her own experience with the participants. According to the field notes, she occupied approximately 20 minutes in a focus group. As a result, she interrupted the discussion of the participants very often. Furthermore, due to her Chinese style health concepts she unconsciously conveyed too much of her beliefs to the participants. This led to two unwanted effects: first, it greatly decreased the time for participants to express their ideas which were needed for the researcher. Secondly, it misdirected the discussion and misused time.

To solve this problem, it was decided that the instructor should leave after a Zen session was over. When both the instructor and the researcher stayed in the focus groups, this confused the participants as they did not know to whom they should respond. Hence, the researcher held a meeting with the instructor after pilot study 1 to negotiate this situation. Consequently, the instructor was willing to leave before the focus group commenced so the interference with data collection could be eliminated. In summary, the role of the instructor was restricted to a teacher's role defined as teaching methods of Zen meditation, demonstrating warm-up and recovery exercises and correcting the movements when the participants did not practise properly.

Reflection on management of the focus group process

Tea and snacks were not served in pilot 1 study. Food can help the focus group; eating together tends to promote conversation and communication within the group (Krueger & Casey 2000, p84). It was decided, however, in pilot study 2, that tea and snacks would be provided during the break between the Zen meditation sessions and focus groups so that participants could have a rest and a fresh start for focus groups.

Furthermore, it was found that the tasks during focus groups were beyond a manageable level for the researcher, e.g. welcome the participants, introduce the Zen instructor and each participant to each other, arrange for latecomers, prepare the venue and mats, administer their RSTAI, restore the activity room, set up the audio-tapes and deal with unpredictable events e.g. interruption caused by a cleaning lady and some participants came with their family. Therefore, an assistant would be engaged in pilot study 2, so that administrative matters and unexpected events in focus groups could be handled at a certain level and the researcher could focus on moderating task of focus groups.

5.1.9 The assessment of the focus group prompt schedule

To achieve the best quality of data collection, the applicability of the focus group prompt schedule (Appendix XV, 1st version) was tested. As a result of completion of pilot study 1, the schedule was modified and finalized.

The focus group prompt schedule was applied to guide the discussion in each focus group. All participants behaved cooperatively and expressed their experiences freely. However, some changes needed to be made in order to facilitate the group interaction. For example, as can be seen in the 2nd version (Appendix IV), participants were invited to talk more about themselves and ‘why’ questions were changed to ‘what’ questions.

After discussions with the supervisor and the mentor in Taiwan, the focus prompt schedule was modified (Appendix XV, 2nd version). However, a participant questioned why they needed to answer the same questions four times (everybody was laughing loudly when she inquired). The researcher thanked her for her question and then explained the purpose of longitudinal investigation in this design. They all accepted this. The researcher added that *“It is OK, if you have no different experience of Zen meditation from last week. However, any subtle difference is essential and extremely welcome to share”*.

Starting with the third session of focus groups, the prompt schedule was handed over to each participant at the beginning of each focus group. This strategy worked well as the participants were prepared and advised about what issues were expected to be discussed. Therefore, this strategy would be kept thereafter.

5.1.10 The improvement of the moderating skills

Moderating skill (3.1.5) is essential and the moderator could ask the questions with a level of abstraction and use of cues to maximize the quality of analysis. As experience accumulated, the researcher’s moderating skill improved, as described below:

- Becoming more flexible, that is, the researcher no longer strictly followed the sequence of questions listed on the prompt schedule, but adjusted according to the issues in the focus group or timing.
- Avoiding ‘why’ questions as much as possible; instead, tried to transform ‘why’ by using a question i.e. ‘how do you feel?’ ‘what influenced you in situation...?’
- Directing the discussion related to Zen meditation with more confidence when the participants spent too much time on the illness experience and also managing to connect their illness experience to Zen meditation experiences where possible.

5.1.11 The test of individual interviews and individual interview prompt schedule

Five individual interviews were completed smoothly in pilot study 1. The venues used included interview rooms at OPD, the participants’ homes and a restaurant near a participant’s work place. They appeared to welcome the researcher and were able to express their experiences of Zen

meditation freely.

Based on the experiences of the five interviews, the individual interview prompt schedule evolved. There were three versions of the interview prompt schedule in pilot study 1 (Appendix VI). Of the first version, the structure was relatively high which limited participants' responses and some questions were rather academic or abstract. Hence, the individual interview prompt schedule was simplified to make it more comprehensible for participants.

In the second version (Appendix VI), the arrangement of the questions started with their latest Zen meditation experiences; followed by asking for comparison between different practices; finally, asked for the most impressive one. As predicted, the second version was much easier for participants to respond to compared to the first version. However, there was a disadvantage. The data collected by the second version tended to be too general, suggesting that the schedule was probably too broad for participants to answer and might lead to difficulty in capturing the specific or dynamic process of Zen meditation. Therefore, the third version was designed to trace individual Zen meditation experiences.

In the third version (Appendix VI), the process of Zen meditation was broken into 4 questions (No. 1-4) in order to zoom in on the experience of Zen meditation practice. After testing, the third version worked well as the questions defined an appropriate scope for participants and was neither too broad nor restricted.

In summary, the individual interview schedule evolved over time as the researcher's experience grew. The third version was used in pilot study 2 and the main study as well.

5.1.12 The improvement of individual interview skills

At first, the researcher introduced the purpose of the interview to participants saying *'Thank you for your precious time. As noted before, this interview is expected to last 50 minutes. The major interest is your personal experience of Zen meditation which is essential for me. I am afraid that I may not remember precisely what you said afterwards, so may I have your permission to tape the interview? However, you can withdraw your permission at any time you want'*. Then the researcher would take a moment waiting for the response or further inquiry.

The experiences of the five individual interviews contributed to building up substantial confidence and sensitivity to the participants' narratives. Several methods were used to improve the researcher's interview skills. Firstly, field notes and self-reflection were conducted with each individual interview; at the same time the findings were reported to the supervisor and discussed weekly either by e-mail or by post during the conduct of pilot study 1. Secondly, telephone discussions with the

Taiwanese mentor were also carried out. Thirdly, verbatim transcripts of the individual interviews were used as material for discussion between the researcher and the mentor so the discussion could be conducted on a rigorous basis. Through these efforts, certain improvements were made as listed below:

- Asking for instances was a good strategy for tracing the details and context and it was also helpful in terms of identifying some underlying contributory factors. In this way, participants would bring the researcher into the heart of their stories by describing their understanding and how they perceived their experience.
- The researcher should be sensitive about words and expressions that participants used as the researcher might interpret these expressions automatically but they were not exactly equal to what the participants meant. Therefore, when the participants replied “I just feel not bad”, “I think I am just like the others, nothing special”, “you are a teacher, you know better than me”, it was crucial that the researcher showed interest to encourage them to give a further or concrete explanation.
- The change from a nurse role to a researcher’s role was an important step and was also the most difficult one. There are shared features, i.e. good communication skills existed in these two different roles, but it was quite distinctive between a nurse in a therapeutic communication and a researcher in an interview of data gathering. The fundamental difference is that a researcher is generally concerned about research questions whereas a nurse is patient-centre oriented.

5.1.13 The convergence of data collection between the focus groups and the individual interviews

A multi-methods research design (3.6) was adapted so that the breadth and depth of data collected could be maximized as much as possible. In addition, the application of different data sources could serve as method triangulation validity (3.8).

It was obvious that some issues merged between the focus groups and the individual interviews were convergent especially related to illness experiences. In addition, some aspects of Zen meditation experiences were convergent, e.g. the uncertainty regarding the progress of their personal Zen meditation practices. The convergence of data collected between the focus groups and individual interviews indicated the confirmability and credibility of the study was quite good. In other words, these parallel data seemed to confirm the validity of study findings.

5.1.14 The divergence of data collection between the focus groups and the individual interviews

After scrutinizing the two sets of data based on field notes and transcriptions, it was found that the individual interviews contained more details and personal information while the focus groups provided a wide range of opinions towards a singular phenomenon related to Zen meditation, such as

the spirit aspects of Zen mediation which lies in the background of Taiwanese culture. In other words, in terms of collecting subtle changes regarding the Zen meditation experience, the individual interview method seemed to perform better than the focus groups. For example, according to field notes, participants could talk more about negative aspects or worries about Zen meditation practices.

This discrepancy found in pilot study 1 was valuable for understanding the research questions, as the goal of interpretive phenomenology is increased understanding of the multiple interpretations of the meaning of human experience (2.3.1). Therefore, these two sets of data could serve to complement each other (3.6).

5.1.15 The administration of RSTAI of pilot study 1

The RSTAI was conducted smoothly. The questions within the RSTAI were easy for participants to understand and answer, although some participants asked a few questions when they were answering. It took approximately 15 minutes to complete the inventory. When the RSTAI(s) were retrieved, the researcher checked quickly to ensure that no question had been missed or been double circled. When inventories were missed because of participants' absence from the Zen session(s), the researcher then contacted them either by post or fax to ask for completion of the RSTAI(s) within one week's time. All participants cooperated and the quality of the answering was good.

5.1.16 The diaries

Among the six participants, half of them kept the diaries regarding Zen meditation more regularly than the other half. Some participants forgot to record or to bring the diary with them to the Zen sessions. According to these participants, the major difficulty was that they were not use to keeping diaries.

Accordingly, based on the suggestions from the participants as well as the reflection of the researcher, it was decided that in pilot study 2 the diary would be given to participants on a weekly basis rather than at the first Zen session with the Zen programme booklet. Furthermore, reminder phone calls would be made around Wednesday or Thursday to remind participants to bring the diaries with them on the Saturday.

5.1.17 The field notes

The field notes were kept by the researcher over time to record events, any thoughts and reflections on different situations, such as the recruiting process, conducting the Zen meditation programme, focus groups and individual interviews. As soon as these events finished field notes were noted. The field notes were quite useful in terms of refining the research design and catching fresh ideas when in the research field. For example, it helped to identify that the Zen instructor interfered with the focus groups. Therefore, the field notes were kept continuously throughout the entire research

process to provide data from different sources.

5.1.18 The feedback group

It was planned that a feedback group would run 2 weeks after the closure of focus groups, but only two participants remained at the last session of the focus group. The researcher asked the two participants' willingness about attending the feedback group. One participant showed silence; the other one responded that she worried that perhaps only she would be present. They said that individual interviews were good enough for them to convey their opinions, and no focus group was needed. As a result, no feedback group for pilot study 1 was conducted as the low attendance rate discouraged everyone.

5.1.19 Summary of pilot study 1

Overall, in terms of administration this study was fully supported by the Chairman of the Adult Psychiatric Department, the in-charge doctor of the clinic and a few related doctors. The usage of the locations in the OPD area and the venue for Zen meditation was satisfactory and conducive to conversation. However, modifications resulted from the test of pilot study 1 summarized as the following:

- To improve recruitment: 1) male GAD patients would be recruited; 2) the restriction of the diagnosis period would be removed from the criteria and 3) the researcher would take part in the clinic to invite potential participants personally and immediately.
- To boost attendance and strengthen the research design: 1) divide the Zen meditation booklet into 6 handouts; 2) the Zen instructor should leave when the focus groups commenced.
- The diary was divided into six parts and given to participants corresponding weekly Zen sessions.
- The focus group prompt schedule was refined to improve the quality of data collection
- Moderating skill of focus groups improved.
- The individual interview prompt schedule was amended
- Individual interview skills of the researcher improved progressively over time

However, it was decided to conduct a second pilot study after discussion with the supervisor. It was expected that pilot study 2 could further test the feasibility of the refinements above. Ethics approval was sought again from the Ethics Committee of the study site due to these substantial changes.

5.2 Pilot study 2

The main purpose of pilot 2 was to evaluate the effectiveness of the solutions proposed in pilot study 1. It was expected that through the efforts of re-testing these improvements could pave the way for the main study to be carried out. Thus, the issues discussed in this session are aims, sample and results of pilot study 2.

5.2.1 Aims of pilot study 2

As noted before, pilot study 2 aimed to assess further the feasibility of modifications made by pilot study 1. The aims of pilot study 2 were listed specifically as follows:

- To test the practicability of adjustment of recruiting criteria
- To test the practicability of modifications of the recruitment procedure
- To monitor the attendance at the Zen meditation programme
- To test the practicability of the refined Zen meditation programme
- To assess the revised focus group prompt schedule and retest the focus groups
- To further improve the moderating skills of the researcher in focus groups
- To assess the revised individual interview prompt schedule and retest the individual interviews
- To further improve the interview skills of the researcher
- To improve compliance of participants with diary keeping.

5.2.2 Pilot study 2 sample

Two male and seven female participants were recruited in the pilot study 2 sample. The sex ratio corresponded to the statistics of epidemiological data of GAD (2.1.3). The age of these participants ranged from 21 to 57 years (mean=39.7; SD=10.39). The average years of education were 12.78 years (SD=3.86). Most participants were married (n=8). Five female participants were housewives; one was a chairman of a nursery, and one was employed in a shoe shop. One male participant ran his own business in a traditional market while the other was an employee of a computer company. The average number of children of these participants was 1.4. The symptoms that concerned these participants most were insomnia, poor concentration, memory deterioration and lack of relaxation.

5.2.3 Study criteria of pilot study 2

Please refer to section 4.6.1 '*Refined inclusion criteria*'.

5.2.4 Recruitment of pilot study 2

The tests of the practicability of refined criteria and the feasibility of the modifications of the recruitment procedure are incorporated and elaborated here.

The test of practicability of the refined criteria

According to field notes, during the four week recruiting period, 41 potential participants (28 females & 13 males) were invited (Figure 5-3). Compared to pilot study 1 where only female patients with a limitation of diagnostic length could be recruited, the number of potential participants contacted by the researcher in pilot study 2 was boosted greatly. As a result, fourteen participants were willing to attend. Recruiting male GAD patients and removing the restriction of diagnostic length (less than six months) were effective strategies. The recruitment procedure was speeded up so the time needed for recruiting was shorten to approximately a 4 week period.

Only nine of them presented at the first Zen session. Yet this was a good size for group interactions (3.1.3). Seven out of the nine participants were recruited through OPD while two of them came via e-mail and telephone as they received the leaflets in the OPD. It appeared that the participants who contacted the researcher actively presented higher motivation to attend the Zen sessions; based on field notes, they asked more questions in focus groups than those recruited at OPD.

In terms of refusal, like pilot study 1, 15 potential participants refused immediately in the clinic, indicating potential participants felt free to refuse. In general, these potential participants showed great courtesy when they refused, expressing that they were delighted to be invited and they thought that the Zen intervention could be beneficial but they just could not manage to take part. The refusals shown in Table 5-4 were similar to Table 5-2.

Table 5-4 The reasons of the refusal of potential participants at OPD in pilot study 2

Reason	Number of potential participants
Traffic difficulties	5
Family duty	4
Alternative therapies were adapted, i.e., Yoga, exercise, Chi-Gun	3
Working	2
Did not believe that Zen meditation could work efficiently	1
Total	15

Overall, the recruitment of pilot study 2 ran smoothly with the modified criteria and summarized below:

- Recruitment of male participants speeded up recruitment and increased the attendance rate.
- Removing the restriction of six months diagnosis period allowed more potential participants to be invited.
- Maintaining enough leaflets in the OPD area was a useful strategy as it recruited participants with higher motivation.
- The in-charge doctor of the clinic introduced the researcher more naturally compared to pilot study 1. This benefited the study, as the doctor was trusted by potential participants.

Testing of the feasibility of recruitment

To have better preparation for participants and to build up rapport with participants before Zen sessions started were the major goals. The researcher grasped the chance of personal contact in the OPD to complete the following tasks:

- Clarified any question the potential participants had and explored their expectations.
- Not only was informed consent made explicit to the potential participants, but also the modified handouts used in the Zen meditation programme were shown. Thus, participants had a clearer idea about what was going to happen in the programme.

- Showed the meditation venue to the potential participants if appropriate so that they could have a picture in advance of where they were going to and what it looked like.
- It was advised in advance that it was probably a 4 week wait before the Zen programme started, so this might help them to have a reasonable expectation and manage of their time.

Through these communications, better preparation was offered to potential participants before they entered the Zen meditation programme. By this effort, it was expected that the disappointment about Zen sessions could be prevented or decreased as some participants of pilot study 1 held unrealistic expectations of the Zen programme (5.1.6). The initial rapport built between the participants and the researcher went as planned. The results indicated that this solution facilitated the participants' involvement (Figure 5-3).

5.2.5 Data collection of pilot study 2

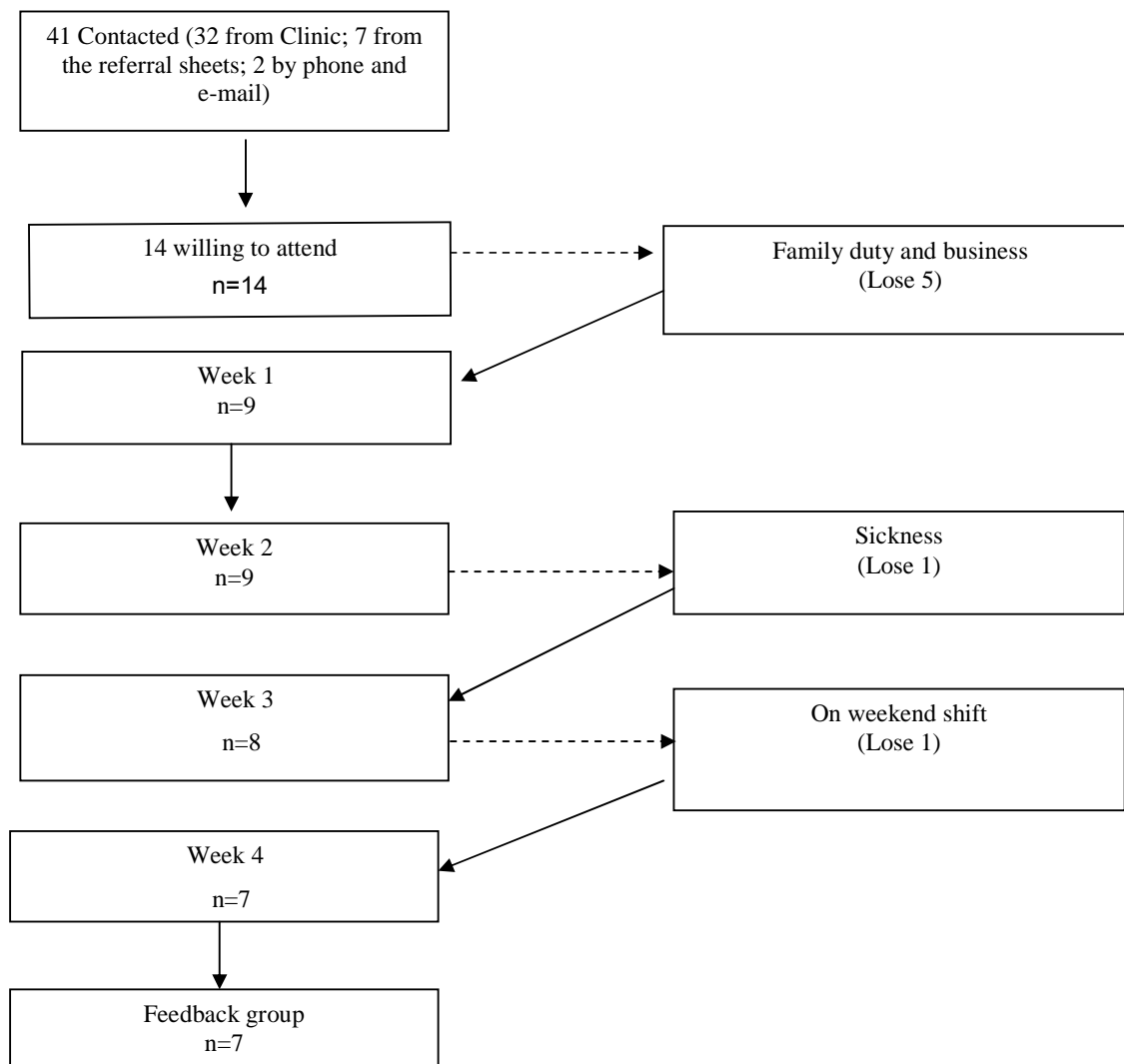
The collection of data for pilot study 2 is shown in Table 5-5.

Table 5-5 Data collection of pilot study 2

Week with Zen session	1	2	3	4	5-6
Focus groups	x	x	x	x	
Individual interviews					x
RSTAI	x			x	x
Feedback group					x
Diary maintenance	x	x	x	x	
Field notes	x	x	x	x	x

5.2.6 The attendance of pilot study 2

The attendance rate and the reasons for drop out over this 4 week Zen meditation programme are shown in Figure 5-3. Compared to pilot study 1, an improved attendance rate was noticed. Two reasons might account for this apparent improvement: the modification of the Zen programme (5.1.7) and preparation and building up of initial rapport when recruiting (5.1.6).

Figure 5-3 Study attrition on the Zen meditation programme in pilot study 2

5.2.7 Testing of the practicability of the refined Zen meditation programme

The good attendance rate (Figure 5-3) suggested that the refined Zen meditation programme worked well. According to field notes, some participants expressed that 4 weeks was too short for them. The six refinements made for the programme are discussed next.

The refinement of content of the Zen meditation programme handouts

The majority of participants reported that they were contented with the level of understanding, although for some participants with lower education levels, the handouts were still a little bit hard. However, in general, the participants were satisfied because they could discuss the handout with other participants. According to field notes, an elder female participant said that because she could not understand the handouts very well, she asked her family about them and they had a pleasant discussion.

The change in giving out handouts

The strategy of giving out handouts for the day's Zen session on the day worked well. The handouts were fresh for the participants, and they always had the handouts of the day. In contrast, in pilot study 1, after the first session, some participants forgot to bring the whole booklet with them, causing inconveniences. The participants in pilot study 2 had to attend in order to receive the handout of the day. In this way, the attendance was boosted.

The adjustment of the Zen meditation instructor's role

The Zen meditation instructor was very interested in these participants and wanted to stay with the focus groups. However, this was not appropriate for the purpose of this study and it interfered with focus groups as noted in 5.1.8. For instance, some participants relied on the Zen expert to provide answers instead of expressing their own experience. In pilot study 2, the instructor left right after the Zen meditation session was finished. As a result, the focus groups ran considerably better than in pilot study 1. The data collected in the focus groups of pilot study 2 were free from the influence of the Zen instructor, matching the purposes of this research.

An assistant was engaged to assist the process of the Zen meditation programme

A nurse was engaged to help manage the Zen sessions and focus groups. She was a student of the researcher and had worked in the study hospital for 5 years. Her duty was to help to set up mats, to give handouts of the day, to give, retrieve and check the RSTAI, to prepare tea and snacks, to provide child care when necessary, to deal with any unexpected interruptions e.g. quite often visitors knocked on the door of the Day Care Ward because they were lost. Her help benefited the focus groups greatly as the researcher could welcome participants and discuss with them about inquiries that arose during their home practice. Most importantly, the researcher could then concentrate on moderating the focus groups which required high attentiveness. In brief, this strategy was helpful

because the researcher could be more attentive to the participants and thus benefited data collecting and maintaining the attendance rate.

Assessment of venue and time arrangement

Like pilot study 1, the environment and the timing selected for the Zen programme ran smoothly. In pilot study 2, a tea break was arranged between a Zen session and a focus group. During the tea time, participants could enjoy a break and prepare themselves for the following focus group to start. As expected, eating together helped to promote communication within the group situation (5.1.8). In brief, the strategy of tea break and providing food worked well as expected.

Assessment the strategy of reminder calls

Reminder calls served two major purposes: to boost the attendance rate and to improve diary keeping. In the second pilot, the reminder calls were helpful to minimize the attrition, to encourage Zen practice at home and could help the researcher to predict the attendance at the next session. Furthermore, reminder calls promoted the quality of diary records as they were reminded to bring the diaries with them to attend the Zen session. Another gain was that these contacts helped to build up relationships with the participants and this benefited the focus groups as well as individual interviews. As a result of pilot study 2, the problem of attrition and the completion of diaries were solved to a satisfactory level.

5.2.8 The retest of the refined focus group prompt schedule and the focus groups

The assessment of the refined focus group prompt schedule and retest of focus groups in pilot study 2 are reported here.

The assessment of the refined focus group prompt schedule

The finalized focus group prompt schedule (Appendix XV) was tested and it guided the focus groups appropriately. In the second focus group in pilot study 2, the researcher explained to participants why the questions were repeated and this was accepted. According to field notes, a participant who worked at a computer company responded that *“This is not a problem because I can assess my progress over time and meanwhile compare it with my classmates. It is just like my job as I need to test and retest several times for achieving the stability of computer programmes ...”* To sum up, the finalized focus group prompt schedule could be used as a good tool for data collection. With the guidance of this schedule, the researcher not only encouraged the participants to compare the difference of Zen practising experiences during different stages with themselves but also to compare differences between each other.

The retest of focus groups

There were two phenomena discovered in pilot study 2. Firstly, similar to the pilot study 1, in the

initial focus groups the portion of data collected regarding illness was more than the data on Zen meditation experiences. Secondly, time used for focus groups exceeded the expected time.

Firstly, it was found that the agenda of the first focus group was mainly illness experiences as found in pilot study 1. This seemed reasonable because Zen meditation was completely new for all participants so that they did not have enough experiences to share. However, discussions related to Zen meditation experience gradually increased at each session as their Zen meditation experiences accumulated. It was expected that in the main study where six sessions of focus groups were included, the data collected regarding Zen meditation could steadily augment with the progress of participants' Zen meditation practice over time.

Secondly, it was noticed in pilot study 2 that the time used for focus groups was excessive by about 20 to 30 minutes. The main reason was that participants were enthusiastic to share their illness experience. It was found that by sharing illness experiences the participants formed a supportive relationship. As recorded in field notes: *"the atmosphere was intense and yet so quiet when the male participant revealed his struggle at work related to GAD. All in the group were captivated"*. Consequently, time over ran, despite that the researcher reminded all about the time limitation. However, from another perspective, that fact that time was exceeded appeared to be an important contributing factor which helped maintain the attendance rate over time.

Group dynamics

Unlike pilot study 1, pilot study 2 had a mixed sex as a composition in focus groups. Generally, although the males were minority, they were able to express their ideas. A male participant was rather quiet, but two females were restrained too. However, they could give their opinions when they were invited. Overall, the majority of participants reported that they felt contented about the group interaction in terms of both sexes. This appeared to benefit the group dynamics as mixed-sex could provide different perspectives.

5.2.9 The improvement of moderating skills of the focus groups

Benefiting from pilot study 1, the researcher became more capable to moderate focus groups appropriately (5.1.10). In pilot study 2, the researcher felt less anxious so could trace and explore the research questions better. As a result, the focus group process became more fluent and was able to cover the study issues. At the end the high attendance rate (Figure 5-3) encouraged the researcher considerably. To summarize, the moderating skills improved from pilot study 2 were:

- More accustomed to use proper questions to collect data, such as 'what influenced you in that situation?' or 'what do you feel?' instead of 'why' questions. It was found that these questions brought a better quality of data as participants tended to respond with a broader picture rather than justifying themselves.

- The balance between data collecting based on research aims and satisfying participants' needs could be better handled as the researcher was prepared to face this situation. In other words, the researcher was able to make a better transition from one issue to another.
- The interaction between male versus female and regular practitioners versus irregular practitioners were promoted.

5.2.10 The retest of the refined individual interview prompt schedule and individual interviews

In pilot study 2, three out of nine participants were invited and interviewed after the closure of the 4-week Zen meditation programme. These participants agreed to be audio taped and none of them withdrew permission during the process. The reason for choosing these participants was based on the records of their diaries; three levels of frequency of Zen practice at home were chosen: the regular, the rare, and the moderate practitioner. The interview time ranged from 60 to 100 minutes. The interview with the longest interview time resulted from the eagerness of sharing illness experience. This was an ethical dilemma for the researcher, because participants devoted their time to this study and it seemed fair that the researcher repay their contribution with 'patient listening'. In brief, the relationships between the researcher and the participants were built over the period of Zen sessions and focus groups, providing a solid foundation for the individual interviews to take place.

The final version of the individual interview prompt schedule (Appendix VI) was used in pilot study 2. The data collected regarding Zen meditation shown better quality compared to pilot 1(5.1.11). For example, the participants were freer to talk about any aspects regarding Zen meditation experiences. Yet, the prompt schedule guided the researcher to narrow down or to further probe when appropriate. In this way, all aspects of Zen meditation experiences of the individual level could be encompassed.

Overall, the retest of the individual interviews and the refined individual interview prompt schedule went smoothly.

5.2.11 The improvement of individual interview skills of the researcher

The interview skills of the researcher improved with conducting pilot study 2. The researcher learnt more about how to transfer from topics of rather irrelevant narratives to the relevant ones. The balance between sticking fast to the prompt schedule, the freedom of participants' talking and caring for the needs of participants was a great challenge and also an art of interviewing. The researcher became familiar with ideas or clues likely to emerge in the interview context. Hence, the quality of data collected from individual interviews was better.

5.2.12 The improvement of diary keeping and field notes

The completion of most diaries in pilot study 2 was good; only one participant had a poor record and often forgot to bring it back to the researcher. A few diaries were recorded in a very earnest way and

produced a positive impact on other participants. This happened when the researcher asked for their diaries and they had a chance to talk with others about their diaries. They were interested to compare the differences among their records, although the researcher reminded them that for their confidentiality, their diaries should be handed in directly to the researcher or research assistant. The strategy of a weekly reminder call to each participant before the session started contributed to this improvement.

Field notes were kept as planned (4.11.5). Important information throughout this study including recruiting, Zen sessions, focus groups, individual interviews and the feedback group could be recorded as soon as possible. It was expected this information could inform reflection and boost study rigour.

5.2.13 The feedback group of pilot study 2

The feedback group ran smoothly. Seven participants were present and three of them brought fruit and local food to share with all “classmates”. Every participant was very excited to see each other three weeks after the last Zen session. Compared to a one-off focus group, a closure session is important for repeated focus groups as the relationships between participants are usually more solid. This suggested that in the main study the closure session could possibly present more issues regarding group dynamics as it lasted for 6 sessions.

A three page long tentative findings was handed to all participants. Generally, some content was somewhat abstract but all participants were interested as these were closely related to their experiences. However, after listening to the report given by the researcher they could then give feedback in the group discussion. Overall, the debriefing was a good approach to kindle dialogue between participants and the researcher, so that the understanding of the researcher regarding their Zen meditation experience was deepened.

5.2.14 Summary of pilot study 2

The summaries of findings of pilot study 2 are:

- The new criteria were feasible as recruitment was improved.
- The refined Zen meditation programme tested well so that attendance at the Zen meditation programme and focus groups was satisfactory.
- The focus group prompt schedule guide went well.
- The moderating skill of focus groups and the individual interview skills of the researcher improved over time.
- The individual interview prompt schedule retested successfully.
- The feedback group ran smoothly and was useful for closure.
- The compliance of diary keeping went smoothly.

5.2.15 Overall summary of the pilot studies

To summarize, the contributions of the pilot studies were to test and retest the feasibility of the study design. The problems that arose in pilot study 1 were recruitment difficulties, study attrition, Zen meditation programme modifications, maintenance of attendance and the refinement of prompt schedules for the focus groups and the individual interviews. The strategies proposed to solve these problems were tested in pilot study 2 and the results were presented (5.1.19 & 2.2.14). Consequently, the modifications went well. Several issues related to data collection and analysis because of the application of multiple methods were outlined (5.1.13; 5.1.14). Overall, it was expected that with this improved study design that the main study could run smoothly.

CHAPTER VI MAIN STUDY

6.0 Introduction

The main study commenced soon after pilot study 2 was completed (Table 6-1). To increase the richness and variety of research data, the main study consisted of two groups, Groups 1 and 2, with a total of 21 participants (Table 6-1). In this chapter, the recruitment, conduct of the Zen meditation programme, attendance at the Zen meditation programme, data collection, conduct of feedback groups, data analysis and summary of the main study are presented.

Table 6-1 Time line of the main study

	Main study	
	Group 1 n=9 (A1-A9)	Group 2 n=12 (B1-B12)
Recruitment period	20/04/06-19/05/06	17/06/06-14/07/06
Main study period	20/05/06-24/06/06	15/07/06-19/08/06

6.1 The recruitment

Following the modifications made after the two pilot studies, the recruitment procedure went smoothly in both Group 1 and 2. Similar to the pilot studies, approximately 1 out of 3 to 4 potential participants were recruited into this study after invitations were given to them. On average, roughly 3-4 participants were recruited per week. Therefore, as expected it took approximately 4 weeks to recruit enough participants for each main study group. Based on the records of field notes, the reasons for refusal of potential participants are shown in Table 6-2 and 6-3.

Table 6-2 The reasons for refusal of potential participants at OPD in Group 1

Reason	Number of potential participants
Traffic difficulty	3
Unable to find someone to look after their children or grandchildren; His duty to take care toddler children, so his wife can have a rest	3
Working on Saturday	3
Alternative therapies, Fa-lun Gun, physical exercise,	3
On business travel quite often	1
A Faithful Christian (True Jesus school), prayer is the only way he trusted in addition to western medicine	1
Worry about evil spirit	2
Total	16

Table 6-3 The reasons for refusal of potential participants at OPD in Group 2

Reason	Number of potential participants
Unable to find some one to look after their children or grandchildren	2
traffic problems	2
Alternative therapies, physical exercise, Chinese medicine	2
Working on Saturday	2
If no response on western medical treatment then he might consider to take part	1
Travel abroad with family during summer vacation	1
Combined with social phobia so he avoids social occasion as much as he can	1
Still not convinced that she is a patient with anxiety disorder, she believes that she will improve when her affairs are sorted out	1
Concerned about losing his mental balance	2
Total	14

6.2 Conduct of the Zen meditation programme

The Zen meditation programme ran smoothly in the main study. The Zen meditation instructor became more experienced in teaching these participants who were different from the students she used to teach. In addition, time management was good. Each session finished in about 50 minutes. Most participants managed to arrive at the venue on time so the Zen session could start as scheduled. The tea break ran very well for preparing the following focus group to take place.

Generally, in the main study the responses of participants regarding the Zen meditation programme were positive. They appeared to enjoy the Zen sessions including warm-up exercises, meditation practice and the following recovery massage. They knew what to expect from the Zen meditation programme as they were prepared by the researcher when recruiting. Overall, the conduct of the programme went as planned.

6.3 Attendance at the Zen meditation programme and the feedback groups

There was no attrition in these two groups, despite absences occurred during the Zen meditation programme and feedback group. All participants agreed to individual interviews and some welcomed the opportunity to be interviewed.

A total of 13 and 14 potential participants were willing to attend the Zen programme separately in Groups 1 and 2. Parallel to the pilot studies, the number of participants at the first session was less than the number that promised to come. However, it was good enough in terms of forming group interaction. The attendance and the reasons of absence from the main study are shown in Figures 6-1 and 6-2. As can be seen the attendance rates went well over the periods of the Zen meditation programme and feedback groups.

Figure 6-1 Study attrition of the Zen meditation programme and feedback group in Group 1

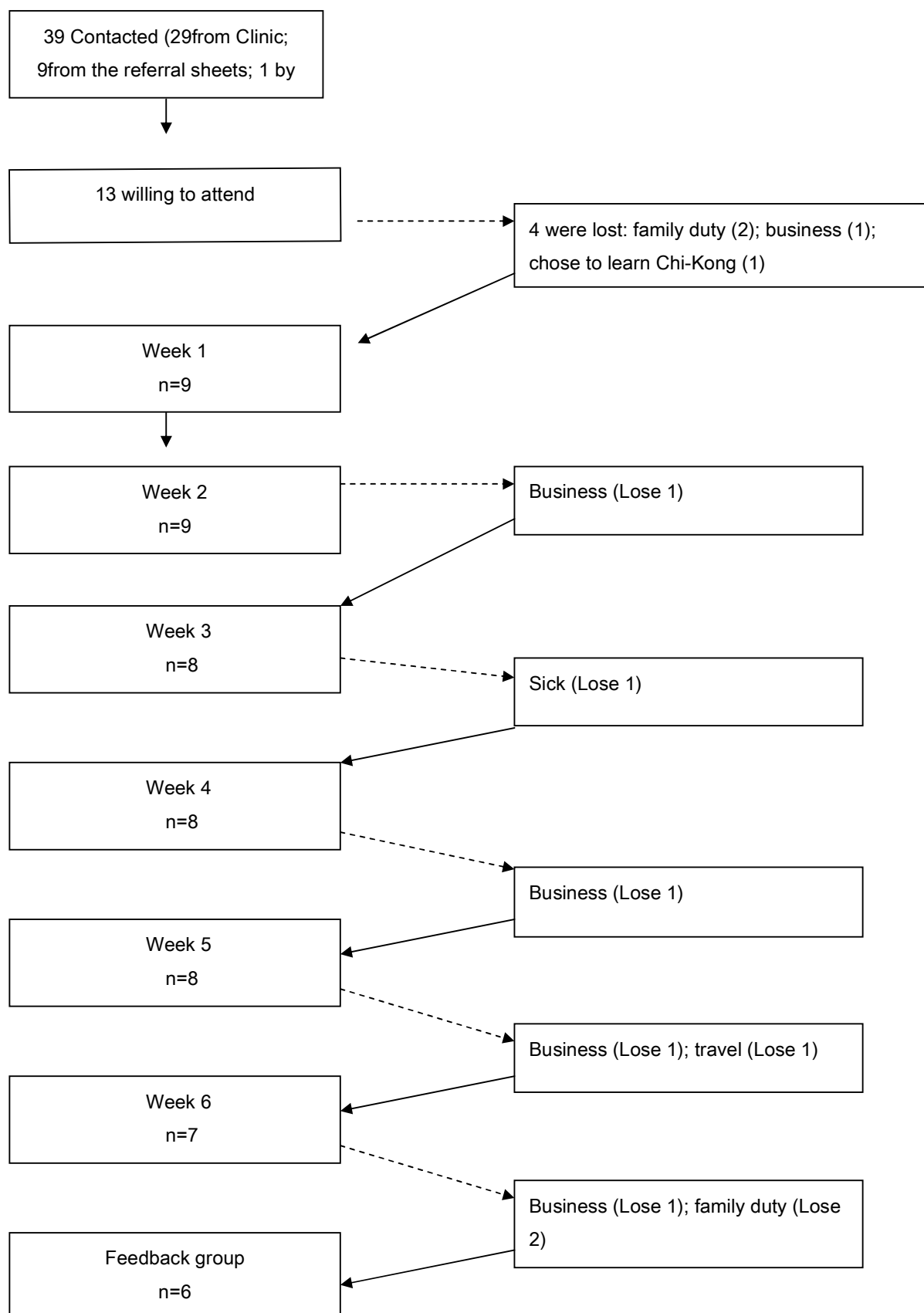
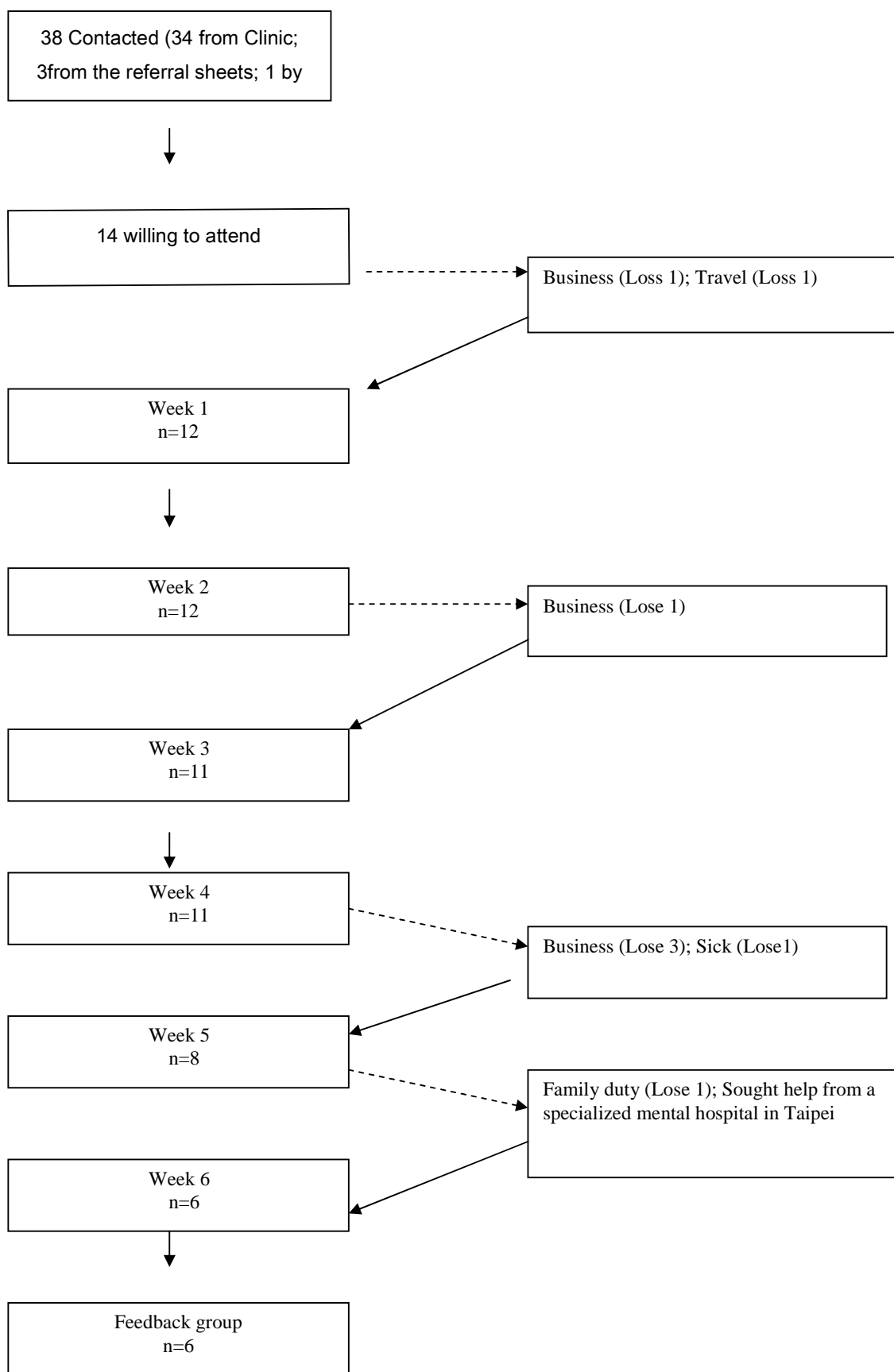


Figure 6-2 Study attrition of the Zen meditation programme and feedback group in Group 2



6.4 Data collection of main study

There were five data collecting tools: focus groups, in-depth individual interviews, RSTAI(s), diaries and field notes. Prompt schedules for both focus groups and individual interviews were developed in pilot studies and ran well. The RSTAI helped to profile the general changes in anxiety levels of all participants. Diaries were used to record their Zen meditation practice at home. Field notes recorded the entire study process and were for the purpose of reflection. By using mixed methods, divergent data were collected and compared so that study robustness was strengthened (3.6). The times and how the data collection tools were used in the main study are shown in Table 4-2. The application of the multiple tools in the main study is described next.

6.4.1 The focus groups

In the main study, 12 focus groups (6 sessions in each main study group) were audio taped with participants' permission and transcribed verbatim for further analysis. The clearness of tapes was satisfactory although there was some echo interference from the space in the activity room. The moderating skills were advanced compared to pilot studies. Research field notes were recorded soon after the last participant left when the memory of the researcher was still fresh. The content of field notes included the atmosphere, major events, main issues and any reflections on the focus group on the day. In addition, when focus groups were running, the research assistant took notes especially on non-verbal behaviour such as lying back, gazing around, chatting to another participant as these were not able to be taped. These notes were then integrated with the researcher's field notes so that a more complete picture of the focus group could be captured.

The time for each focus group was varied and ranged from 1 hour to 1.5 hours. Similar to pilot studies, in the first session the participants spent longer sharing about their illness experience and they appeared very content with this sharing. However, their discussions regarding Zen practice became longer as the experience of Zen meditation increased.

The atmosphere between Group 1 and 2 was different. Generally, Group 1 was very talkative and most participants were enthusiastic towards each participant including the researcher whereas Group 2 was rather quiet and more reticent.

6.4.2 The individual interviews

As planned, the in-depth individual interviews were carried out following the completion of the 6 week Zen meditation programme. As a result, a total of 21 individual interviews were completed. All study participants (n=21) gave permission for audio taping and the verbatim transcripts went well afterwards. The venues used for these interviews were varied including participants' homes and interview rooms in the study hospital's headquarters and in another hospital site.

6.4.3 Audiotapes and transcriptions

All participants were given an explanation in line with Ethics Approval. None of them refused to be recorded or withdrew their permission during the process of data collecting. Due to the huge amount of data, these tapes were transcribed verbatim either by the researcher or by the research assistant. The principle and procedure of tape transcriptions were given by the researcher such as every word in the tapes was typed out, bold words when participants stressed them, putting a question mark when the research assistant was not sure about what she was listening to. The researcher double checked the typed verbatim transcripts and made corrections if not matching precisely. Additionally, the research assistant was required by the researcher to obey ethics principles (Beauchamp & Childress 2001) to protect the participants.

6.4.4 Administration of the RSTAI

In the main study, the conduct of the RSTAI ran as planned. Some RSTAI were not retrieved because some participants were absent from the feedback groups, but these absent participants were contacted by the researcher by phone to seek their willingness to complete the RSTAI at home. Consequently, they all agreed to fill in the RSTAI after they received the inventories by post or by fax and they were all returned on time. The quality of data was good and the retrieval rate was 100%.

6.4.5 The diaries

The diary modified from the pilot studies, was given to each participant each week with the Zen meditation handout (5.2.12). In the main study, the retrieval rate was greatly improved. When participants did not return their diaries to the researcher, the researcher then asked about their practice at home during the past week and recorded it in a spare diary. It was found that usually those who did not return their diary did not practise regularly at home. Generally, the quality of the diary record was fairly good. Some participants wrote the diary conscientiously and in great detail or even had exemplars (Appendix XVIII).

6.4.6 The field notes

The field notes were kept throughout the main study, especially after the reminder calls, focus groups and individual interviews were finished. By reading the notes, the researcher reflected on the study process. This was a good practice in terms of applying the hermeneutic circle (Figure 2-1) towards study phenomena as preunderstanding-understanding could emerge in line with the perspective provided by field notes.

6.5 Conduct of the feedback groups

In this section, the feedback groups in the main study are described and member checking is also discussed.

6.5.1 The process of the feedback groups

As planned, the two feedback groups for Group 1 and 2 were carried out after individual interviews were completed (4.11.6). Both feedback groups took place at the same time (10am) on Saturdays (08-July-2006; 01-Sep-2006). Both feedback groups lasted about one and a half hours. The attendance rates were satisfactory (6 out of 9 in Group 1; 6 out of 12 in group 2). The participants who were not able to attend expressed their regret when they were invited to attend the feedback group. At the same time, they asked the researcher to convey their regards to other participants. Most participants came alone to the feedback groups, but some participants in both groups came with their family; for example, a participant (the mother) came with her husband and two toddlers in Group 2. Consequently, they left earlier as the mother could not concentrate on discussion; the rest of the participants accepted their leaving. Furthermore, some participants in both groups brought food to share creating a delightful atmosphere.

One of the important goals of feedback groups was to close the relationships that had lasted about two months among participants and between the researcher and the participants (4.11.6). Generally, it was found that the feedback groups were helpful in terms of closure. According to field notes for Group 1, some participants stayed for quite awhile to continue their dialogues after the formal ending. This was beneficial to all participants because they had enough time to say good-bye to each other. As a result, they were ready for ending these relationships.

6.5.2 The feedback groups as member checking

Another purpose of feedback groups was to gain feedback from participants as member checking (3.8.1). Thereby, the study rigour could be enhanced. A summarized report of the preliminary data analysis with debriefing was given to all participants and they were encouraged to respond during the debriefing.

The responses of participants included echo, clarification and providing further information. In terms of echo most participants felt that the researcher understood what they meant, such as their struggling to reach a state of calm when meditating. In terms of clarification, the most common issue was the process of Zen meditation; they liked to compare their own experiences with others and wondered about the stages of Zen meditation. In terms of further information, most participants were enthusiastic to add more information related to the preliminary report. For example, *“Since no more weekly Zen meditation, I practise less and want to test whether meditation really helped or not. I stopped meditation and found my sleeping quality got worse. So, I practise meditation obediently”* (RA4). It was noticed that although new information was added into the report no new issue emerged. Additionally, participants felt valuable and content as they were able to contribute to the study; as some said *“I am surprised that my words were so important that they could be quoted in the report”* (RB10, RB11) and *“we had 6 weeks of Zen lessons for free and I am glad that we have something to*

repay you” (RA1, RA2).

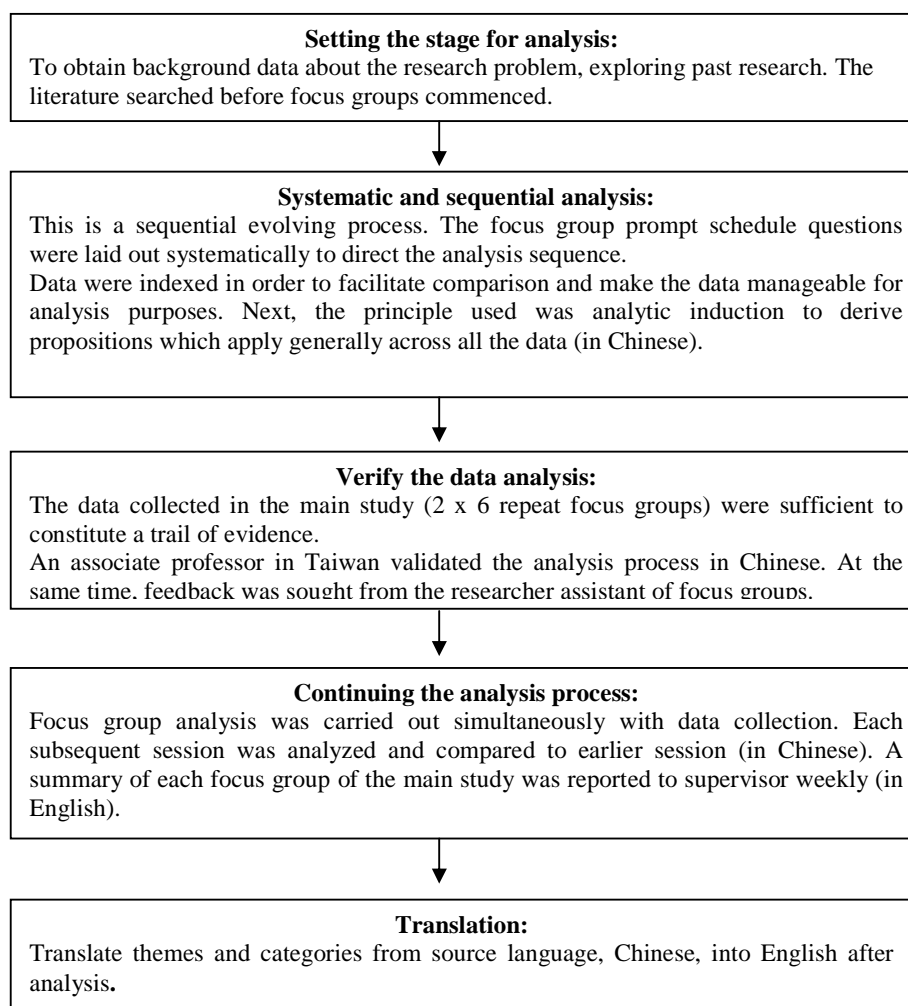
To summarize, the participants felt that their experiences of Zen meditation had been interpreted correctly by the researcher. Their responses supported the research findings so the trustworthiness of this study was enhanced. The aim of feedback groups as member checking was achieved.

6.6 Data analysis

For the purpose of this research, multiple methods were applied and so the characteristics of the data were different. Hence, different analysis strategies such as examining, categorizing, tabulating, or recombining the evidence were used. Data analysis schemes corresponding to various data collection tools are discussed below.

6.6.1 The focus groups

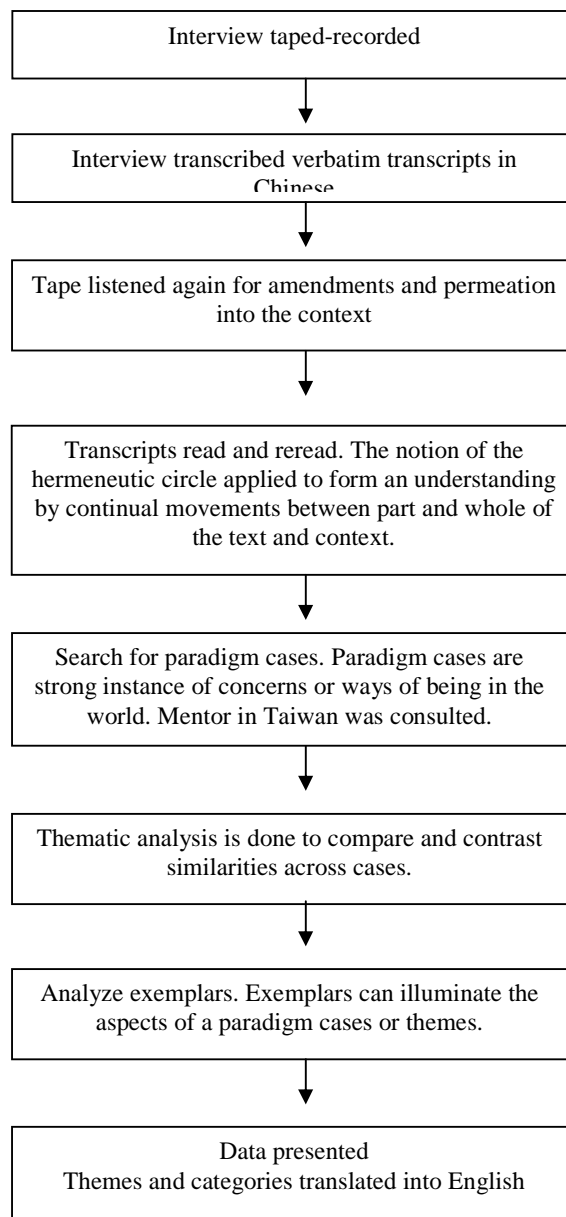
The focus group data consisted of verbatim transcripts of group discussions and the field notes kept by the researcher and the research assistant. The procedure of data analysis was based on the principles stated by Frankland and Bloor (1999) (3.1.6). The flowchart of data analysis of focus group is shown in Figure 6-3 in which the systematic approach and audit trail was stressed to ensure the robustness of the study.

Figure 6-3 Data analysis procedure of focus groups in Chinese

6.6.2 The individual interviews

To analyse the individual interview data, Heidegger's hermeneutic circle guided the analysis procedure (3.2.6). Interpretive phenomenology involves a scholarly reading of texts—questioning, comparing, and imaginatively dwelling on their situations. At the same time, Benner's analytic methods were adapted for data analysis so that different levels of analysis and voices of participants could be obtained (2.3.4). It was expected that through these approaches the researcher would gain an understanding of deeper structure rather than an understanding of surface structure (Benner, 1994, p105).

Figure 6-4 shows the details of how individual interview data were analyzed and interpreted using Heidegger's theory and Benner's interpretative approach. In this way, a robust description of the process of interpretative research was provided so that a common critique that many nursing researchers fail to provide the analysis process was avoided (2.3.5; 3.8.2).

Figure 6-4 The data analysis process of individual interviews

6.6.3 The RSTAI

SPSS software version 10 was used to produce the RSTAI results. As the RSTAI consists of two subcategories, 'State Anxiety Score' and 'Trait Anxiety Score' (4.11.3), the results were presented in these two parts to show different aspects of anxiety characteristics and to profile the changes of anxiety levels over time. The detailed statistics applied to the RSTAI were:

- Using descriptive statistics to profile the State Anxiety Score and Trait Anxiety Score of both Group 1 and Group 2 over time.
- Using the Sheffield student t-test to compare the difference between Group 1 and Group 2 at the pre-test.

- Using marginal 95% confidence interval for comparing differences (Pre test minus post test; Pre test minus follow-up test) of State Anxiety Score of Group 1 and Group 2.
- Using marginal 95% confidence interval for comparing differences (Pre test minus post test; Pre test minus follow-up test) of Trait Anxiety Score of Group 1 and Group 2.

6.6.4 The diary

For the purpose of analysis, each participant was given a diary weekly and asked to fill in the frequency and duration of Zen practice at home (4.11.4) (Appendix XVIII). Additionally, any notes regarding Zen meditation practice at home were most welcome. The detailed statistics applied on diaries were:

- Using descriptive statistics to profile the frequency and during Zen meditation practice at home over time in both Group 1 and Group 2.
- The change of frequency in Zen meditation performance at home during the six-week period in both Group 1 and Group 2.
- The Sheffield student *t*-test was used to compare the differences of the Zen meditation practice at home between Group 1 and Group 2.

6.6.5 The field notes

In the main study the field notes were used to record on every occasion throughout the whole process of this study (4.11.5). The field notes were kept over time consistently and worked as good aides memories for the researcher. For example, when listening to the tape and reading the verbatim transcripts combined with field notes, the scenes became vivid. These records provided evidence for examining data and aided the analysis process. Simultaneously, parts of recorded data were used for completing the research report.

6.7 Summary of the main study

The problems which had arisen in the pilot studies were resolved and the main study was carried out as planned. Data collection was completed and data analysis was started successively. A rigorous, systematic approach was used in the process of data analysis. The criteria of truthfulness that consisted of credibility, dependability, conformability, transferability and balanced integration were stressed in the study. In the following chapters, the results and finding of main study are reported as follows: VII (demographics and the RSTAI results), VIII (findings of the focus groups) and IX (findings of the individual interviews).

CHAPTER VII DEMOGRAPHICS AND RSTAI RESULTS

7.0 Introduction

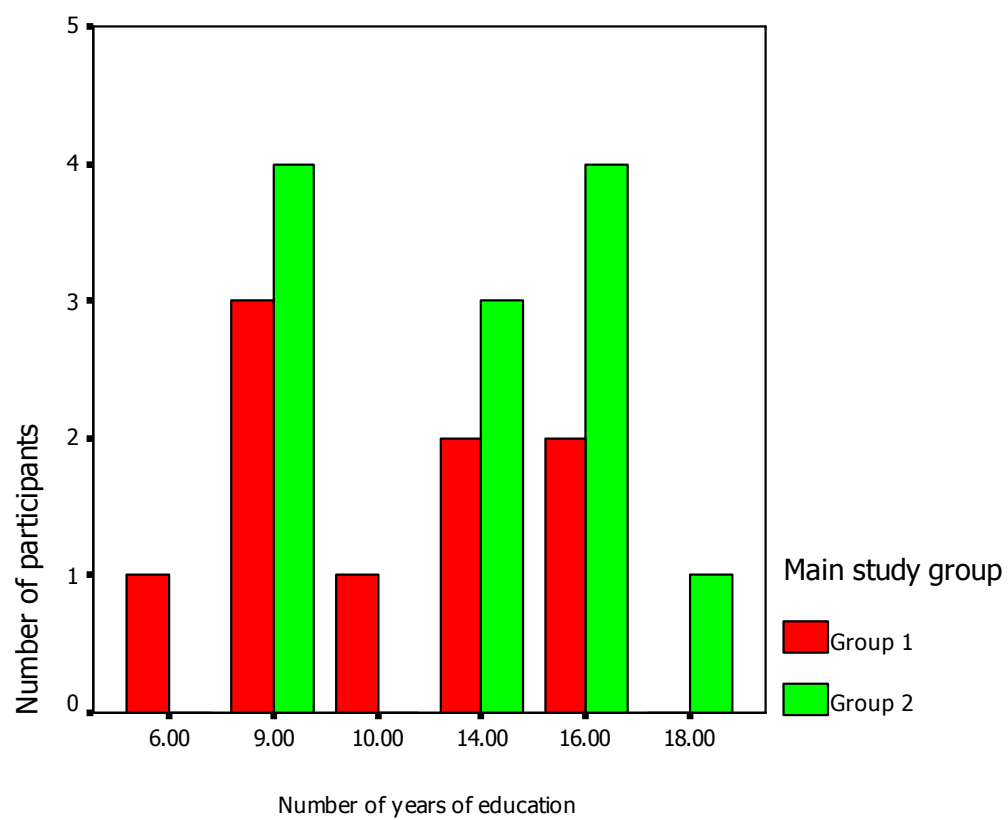
To strengthen the study rigour a mixed methods approach was incorporated in this study (3.6). The anxiety scale RSTAI (3.3) was applied in this study to answer the third research question (2.6) by tracing changes in anxiety levels over time. It was expected that by using the RSTAI, an insight into the phenomena under study could be reached. Although the level of generalization was limited due to the lack of a randomized control trial design, the results of the RSTAI were used merely to supplement the findings of the qualitative approaches. In this chapter, the results presented include the demographic data, Zen meditation practice at home and results of the RSTAI.

7.1 The demographic data

The demographics of main study groups are outlined in Table 7-1. These 2 groups had many similarities in terms of demographic data including more females than males as expected (2.1.3), similar education qualifications, mainly small family structures and there were no top professional groups (e.g. lawyer, doctors) or manual factory workers. There were no significant age ($t=0.18$) and education ($t=1.23$) differences between these two groups. The dominant profile was female, married, almost 40 years of age, with a high school education and lived with two others at home. The comparison of education levels between these 2 groups is shown in Figure 7-1.

Table 7-1: Demographics of Groups 1 and 2

Variable	Group 1 (n=9)	Group 2 (n=12)	<i>t</i> -test (two-tailed) $p \leq 0.05$
Sex			
Male	2	4	
Female	7	8	
Age			
Range	26-55	28-67	0.18
Mean (SD)	38.3 (8.96)	39.2 (11.86)	
Education (years)			
Range	6-16	9-18	1.23
Mean (SD)	11.4 (3.61)	13.33 (3.59)	
Marital status			
married	8	7	
single	1	2	
divorce	0	2	
widow	0	1	
Occupation			
housewife	4	4	
manager	2	3	
white collar staff	2	5	
primary teacher	1	0	
Family members at home			
Range	0-3	0-3	
Mean	2	1.9	
Age of youngest child at home			
Range	7-31	2-25	0.85
Mean (SD)	10.33 (10.81)	6.58 (9.38)	

Figure 7-1 Comparison of education level between Group 1 and Group 2

7.2 Meditation practice at home

The data of meditation practice at home were based on diaries and were described in terms of frequency and duration.

7.2.1 Frequency

The frequency of Zen meditation practice at home for the 2 groups per week is listed in Table 7-2 for the six week Zen intervention programme. As can be seen in Table 7-2, some participants were very enthusiastic and practised twice per day, whereas some others did not practise at all during an entire week. Overall, the range of practice of Zen meditation was similar between groups. However, usually meditation practice at home in both groups occurred once per day with Group 2 practising more than Group 1.

Table 7-2: Frequency of meditation practice of Groups 1 and 2 weekly

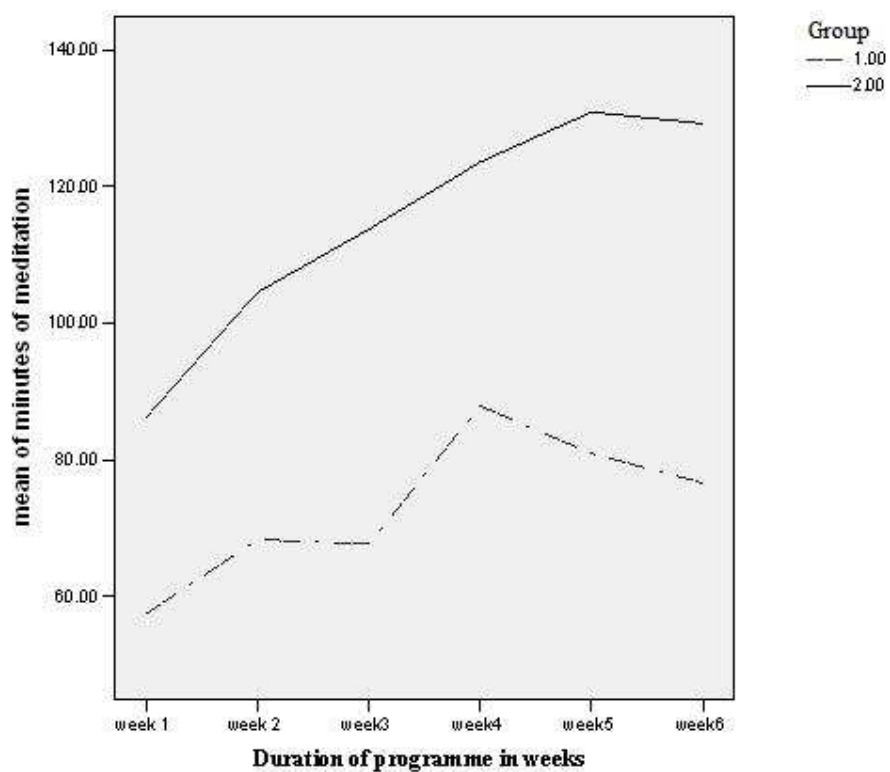
Intervention week	Group 1 (n=9)	Group 2 (n=12)
Week 1		
Range	1-13	3-13*
Mean (SD)	6.56 (4.33)	7.55 (3.21)
Week 2		
Range	1-14	1-14
Mean (SD)	6.67 (4.27)	7.83 (4.24)
Week 3		
Range	1-14	1-14
Mean (SD)	5.89 (3.95)	7.67 (4.21)
Week 4		
Range	1-14	1-14
Mean (SD)	6.33 (4.00)	7.42 (3.53)
Week 5		
Range	0-14	1-14
Mean (SD)	5.44 (3.94)	7.33 (3.63)
Week 6		
Range	0-14	0-14
Mean (SD)	5.33 (4.03)	7.58 (3.68)

* n= only 11 participants at week 1 of group 2; thereafter 12.

7.2.2 Duration

When the time spent meditating in minutes was compared over the Zen meditation programme (Figure 7-2) it can be seen that Group 2 practised 20 to 30 minutes longer than Group 1 per week throughout the entire intervention programme. In addition, time spent on Zen meditation practice in both groups increased over time. Nevertheless both groups then gradually dropped the frequency of their practice at the end of the programme.

Figure 7-2 Comparison of average meditation time in minutes per week between Groups 1 and 2 over the Zen Programme



When the two groups were compared in terms of frequency and duration of Zen meditation at home, no significant differences were found as shown in Table 7-3.

Table 7-3: Summary of Zen Meditation Practice of Groups 1 and 2

	Group 1	Group 2	<i>t</i> -test (two-tailed) $p \leq 0.05$
Frequency of Zen meditation practice per week			
Range	0-14	0-14	0.91
Mean (SD)	6.04 (3.98)	7.46 (3.16)	
Minutes of each practising time			
Range	0 - 27	0- 38	1.22
Mean (SD)	12.28 (3.74)	15.04 (5.95)	

7.3 Results of the RSTAI

Several aspects of the RSTAI are presented here including the response rate, State Anxiety Score, Trait Anxiety Score, individual changes over time, mean difference of State and Trait Anxiety Score throughout the programme and simultaneous 95% confidence intervals.

7.3.1 Response rate of the RSTAI

The response rate of RSTAI was 100%. Some participants missed the measurement points due to their absences as previously reported. The researcher contacted them either by fax or by post afterwards. These participants then completed and returned the RSTAI to the researcher.

7.3.2 State Anxiety Score

The results of the RSTAI are divided into two subcategories: State Anxiety Score and Trait Anxiety Score (4.11.3). In terms of the State Anxiety Score, Table 7-4 shows three measurement points. There were no significant differences at the very beginning of Zen meditation. Furthermore, there was no obvious improvement in Group 1, while Group 2 showed a decline over time.

Table 7-4: State Anxiety Score in Groups 1 and 2

Time Intervals	State Anxiety Score* Mean (SD)		<i>t</i> -test (two-tailed) $p \leq 0.05$
	Group 1	Group 2	
Pre Zen Intervention Week 1	36.00 (6.85)	40.33 (11.22)	1.02
Post-test Zen Intervention Week 6	36.02 (7.51)	33.28 (7.46)	
Follow-up Zen Intervention Week 8	36.39 (8.00)	34.83 (9.17)	

*Lowest State Anxiety Score=20; Highest State Anxiety Score=80

7.3.3 Trait Anxiety Score

Similar to the State Anxiety Score, there was no significant difference between Group 1 and Group 2 at the pre-test. Both groups showed a constant fall in the Trait Anxiety Score (Table 7-5). Again, Group 2 showed more improvement than Group 1.

Table 7-5: Trait Anxiety Score in Groups 1 and 2

Time Intervals	Trait Anxiety Score*		<i>t</i> -test (two-tailed) p≤0.05
	Mean (SD)		
	Group 1	Group 2	
Pre Zen Intervention Week 1	48.92 (10.74)	48.64 (8.78)	0.66
Post-test Zen Intervention Week 6	45.12 (8.32)	41.90 (5.77)	
Follow-up Zen Intervention Week 8	42.57 (8.58)	37.79 (10.39)	

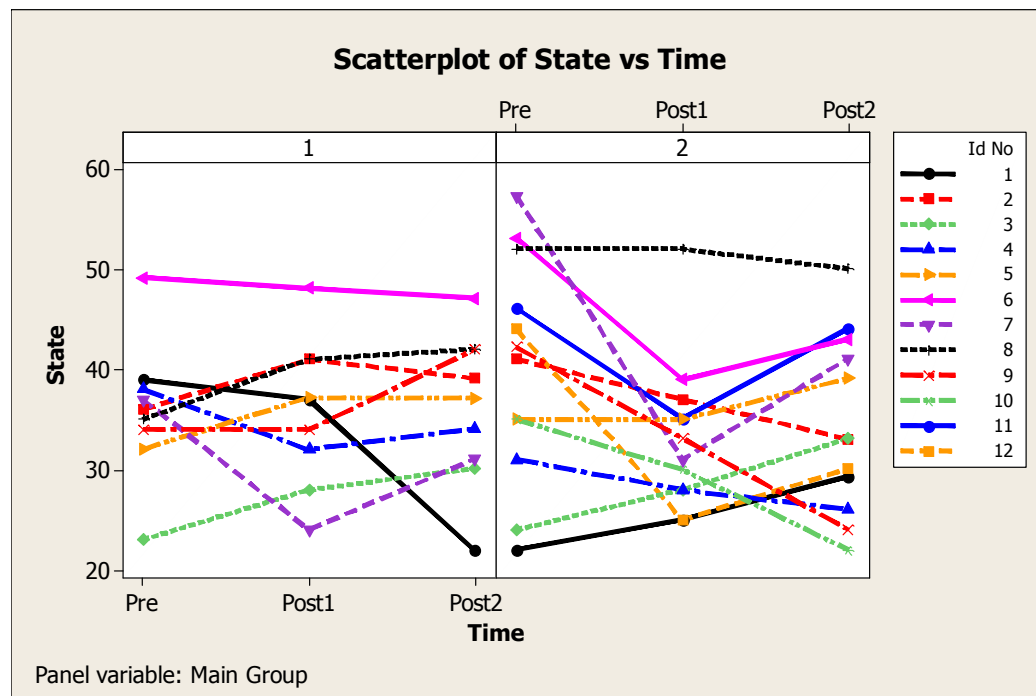
* Lowest Trait Anxiety Score=20; Highest Trait Anxiety Score=80

7.3.4 Individual changes in the RSTAI over time

State Anxiety Score

Further investigation of the change of State Anxiety Score over time suggests no obvious change in Group 1 while in Group 2 some individuals showed great improvement from pre-test to post 1 (Figure 7-3).

Figure 7-3 Comparison of State Anxiety Score at three measuring times connected by each participant



Note:

Pre: measurement administrated at the beginning of first session of Zen meditation programme

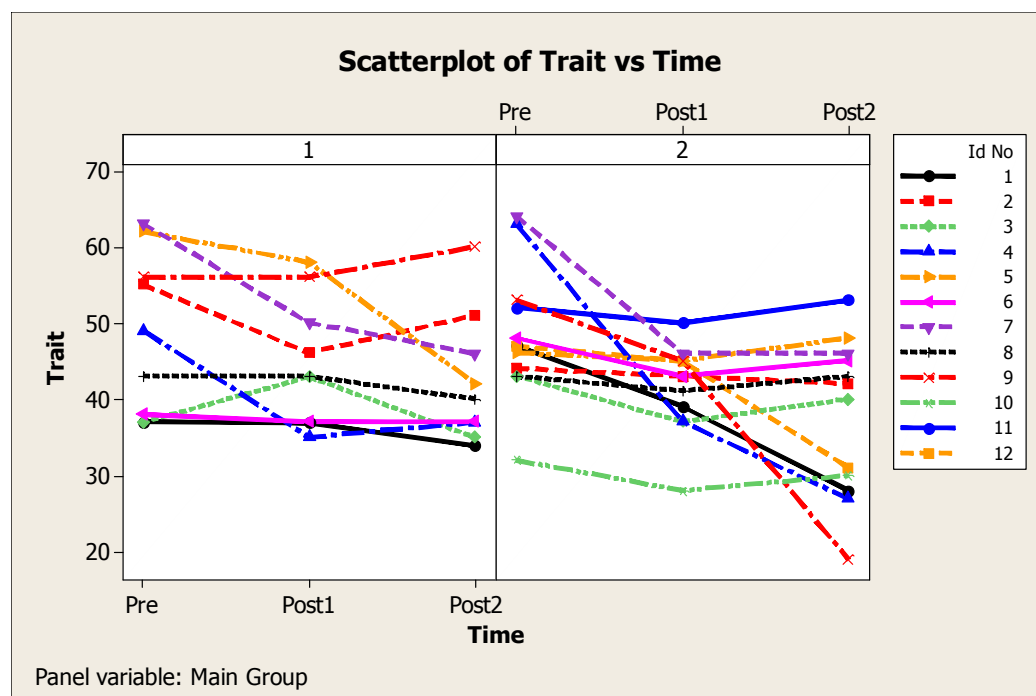
Post1: measurement administrated at the last session of Zen meditation programme

Post2: measurement administrated at the feedback group

Trait Anxiety Score

On the other hand, the individual changes in the Trait Anxiety Score shows in Figure 7-4 which suggests that Group 2 differed from Group 1 with more variability and more reduction from pre-test to Post 1 and Post 2. Generally, Group 2 showed a downward trend. Nevertheless, Group 1 showed rather few changes over time.

Figure 7-4 Comparison of Trait Anxiety Score at three measuring times connected by each participant



Note:

Pre: measurement administrated at the beginning of first session of Zen meditation programme

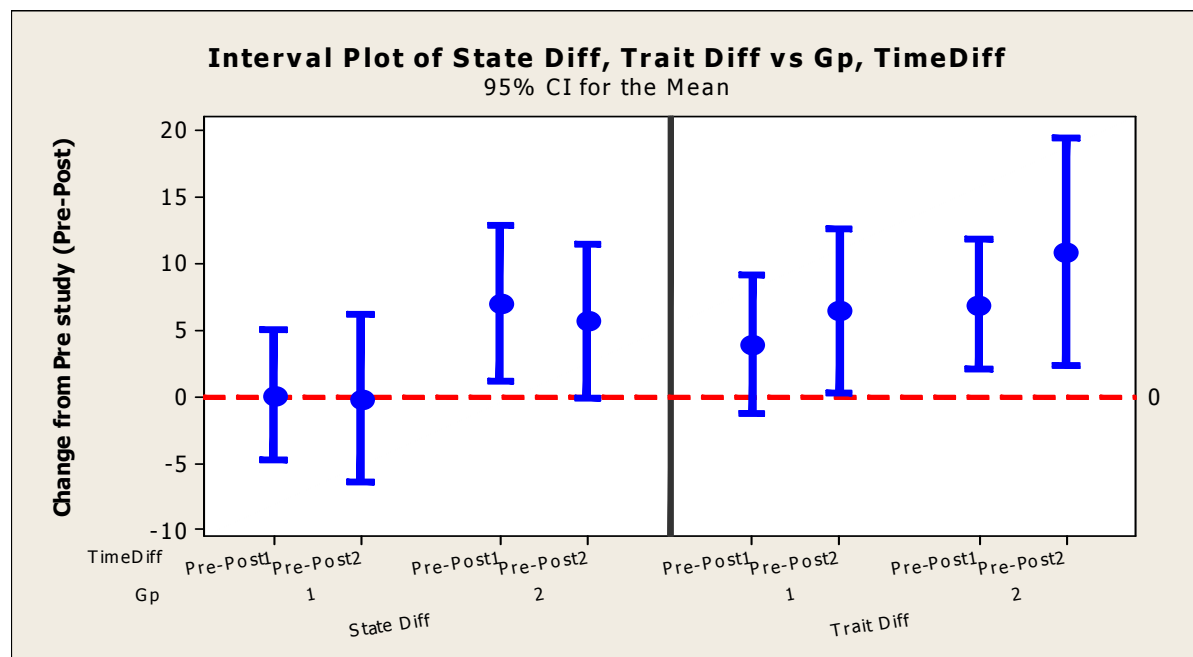
Post1: measurement administrated at the last session of Zen meditation programme

Post2: measurement administrated at the feedback group

7.3.5 Differences on Revised State and Trait Anxiety Score of the two Groups

Figure 7-5 shows the marginal 95% confidence interval for differences (pre test minus post test) for both study groups and both State and Trait Anxiety Score. Figure 7-5 suggests that the main study Group 2 falls on the State variable but not Group 1. However, general and constant falls from Trait Anxiety Score across both groups were shown along with post the 1 and the post 2 (follow-up) tests.

Figure 7-5 Marginal 95% CI for differences (Pre test minus Post tests) of both Groups and of both Revised State and Trait Anxiety Score



Note: (1= Pre-Post1, 2 =Pre-Post2)

Given that there were no significant differences between these 2 study Groups (Table 7-1; Table 7-4; Table 7-5), the RSTAI data from the two groups were pooled (Table 7-6), confirming that State Anxiety Score fell on average by between -1.14 and 9.26 points between the pre and post 1, and between -2.26 and 8.58 points between the pre and post 2. On the other hand, Trait Anxiety Score fell on average by between 1.28 and 9.97 points between the pre and post 1, and fell on average by between 2.09 and 15.85 points between the pre and post 2. The negative figures indicated that the level of State Anxiety Score improved slightly, whereas Trait Anxiety Score improved significantly as there was no negative figure. The statistic results suggested that Zen meditation reduced significantly more on the Trait Anxiety score compared to the State Anxiety Score.

Table 7-6: Simultaneous 95% CI for differences (Pre test minus post tests) of both study groups and of both State and Trait Anxiety Score

Time differences	Variable	N	Mean	SD	SE Mean	98.75% CI of RSTAI score
Pre test minus Post 1	State difference	21	4.06	8.68	1.89	(-1.14, 9.26) ¹
	Trait difference	21	5.63	7.26	1.58	(1.28, 9.97) ²
Pre test minus Post 2	State difference	21	3.16	9.06	1.98	(-2.26, 8.58) ³
	Trait difference	21	8.97	11.49	2.51	(2.09, 15.85) ⁴

7.3.6 Overall summary

To summarize, there were similarities between the main study groups in terms of demographic features such as sex ratio, marital status and family size. Moreover, there were no significant differences between Groups 1 and 2 in terms of several variables i.e. age, education years and age of youngest child at home. Although generally Group 2 practised more than Group 1 over the 6 week period, there were no significant differences between these 2 groups in terms of frequency or time of Zen meditation practice at home. In terms of subscales of the RSTAI, again, neither Trait Anxiety Score nor State Anxiety Score showed significant differences between Group 1 and 2 before the Zen meditation programme was commenced. This allowed the RSTAI data from the 2 groups to be merged. As a result, the statistical results of 95% confidence interval indicated that Trait Anxiety Score, rather than State Anxiety Score, improved significantly over time.

CHAPTER VIII FOCUS GROUPS FINDINGS

8.0 Introduction

In this chapter the findings of the focus groups are presented. The researcher after immersing herself in the transcriptions of the 12 session focus groups, essential concepts which were used as index codes to label the transcriptions (Appendix IV). The focus group data of Group 1 were analyzed followed by Group 2 analysis. Two sets of findings derived from the two groups are presented separately in Tables 8-1 and 8-2.

Table 8-1 Themes and categories of focus group 1

Themes	Categories
The interweave between GAD symptoms and Zen meditation	Trying to stop thinking Do not want dependency on medication Crave a good sleep
The process of Zen meditation	Searching for the standard pathway of Zen meditation Individual experience of Zen meditation Struggling to reach a state of calm A fluctuating process
Pre-understanding and imagination related to Zen meditation	The soul will fly out of body Practitioners may be possessed by an evil spirit Involving an investment of time and effort

Table 8-2 Themes and categories of focus group 2

Themes	Categories
The way that Zen mediation was viewed by the participants	Expectations of meditation Trying to stop thinking Do not want dependency on medication
The process of Zen meditation	Searching for the standard pathway of Zen meditation Zen meditation and life Swinging between state of calm and disorganized thoughts Fluctuating process/unstable process
The cultural aspect of Zen meditation in Taiwan	The soul will fly out of body Practitioners may be possessed by an evil spirit Involving an investment of time and effort

As can be seen above, Table 8-1 contained three themes associated with ten categories yet the concepts in themes and categories in Table 8-2 were quite alike. After carefully examining both tables for linkages and similarities and discussing with the supervisor and Chinese mentor in Taiwan, it was agreed that the themes and the associated clusters were similar enough to allow a merger to happen. Therefore, it was decided to integrate the data of these two focus groups so that a simpler and deeper interpretation could be reached and presented. Consequently, three key themes and associated categories emerged as shown in Table 8-3. The order of the themes is presented in terms of priority; that is, the arrangement of categories is based on the amount of data presented by participants. This meant that the data of a top category was more than the data of categories below.

Table 8-3 Themes and categories from focus group data

Themes	Categories
Expectation of Zen meditation regarding GAD	Ambivalence towards medication Crave a good sleep Stop thinking Regaining memory and concentration
The process of Zen meditation	Struggling to reach a state of calm Signs of improvement <ul style="list-style-type: none"> • Finding a personal way • A changing sense of time • Adjusting the goal of Zen meditation practising An individual process
Cultural beliefs regarding Zen meditation in Taiwan	Spiritual influence

Each theme and the associated categories are elucidated in the following sections corresponding to Table 8-3. Thus the first theme, ‘Expectation of Zen meditation regarding GAD symptoms’ is presented in 8.1 and so forth. In addition, debriefing and reflection on focus groups are presented in 8.4 and a summary of the findings of the focus groups is in 8.5. Each quote from each participant is identified by the individual group and an assigned number. For example, RA1 indicates the respondent belonged to Group 1 with the assigned number 1; RB9 indicates that the respondent belonged to Group 2 with the assigned number 9. Quotes are presented in italics. Additionally, the quotes adapted to support the categories were translated from Chinese into English by the researcher and were advised on by the research supervisor (4.14).

8.1 Expectation of Zen meditation regarding GAD symptoms

It is strongly emphasized in interpretative phenomenology that the way people interact towards the world is through their own understanding and views (2.3.1). From these participants’ perspective, Zen meditation was regarded as a way to get rid of symptoms of GAD. In other words, all the participants held expectations related to health. For example, Zen meditation might support the medication weaning-off process. This gradually formed a key theme--expectation of Zen meditation regarding GAD symptoms, meaning that Zen meditation was regarded as a way to fight against GAD. Four categories associated with this theme are: ambivalence towards medication, crave a good sleep, stop thinking and regain the concentration and memory.

For all participants, the meaning associated with the experience of practising Zen meditation had its own unique features. Their perspective on Zen meditation was derived from their suffering experience of GAD. As one said, *“All the medicine you mentioned I have already had and I feel that my medicines are different combinations from the menu of medicines. I think I am the worst one (with GAD) in this group as pills do not work on me as efficiently as they do for you. If Zen meditation can benefit me then it would be great bliss”* (RA2). In other words, their lived

experiences of illness provided the basis and determined the ways of how they understood Zen meditation practices. Participants shared great concern about their symptoms: *“Health is still the most important thing for me, so I decided to leave my job...I want to give myself an entire rest. I reflect that I have put too much pressure on myself so I get GAD” (RB1)*. RB5 responded *“Me too. I worked in a bank which is highly stressful... I have made 3 requests in order to quit my job. Everyone feels shame for me as it is not easy to hunt for a job today, but what can I do? I had been losing my appetite; I had tachycardia and worsening of insomnia. No one knows my suffering and it was impossible to explain to normal people regarding GAD. What people perceived is that I squandered a steady job. I however feel it is pointless that I work hard, earn money and then money goes to pay a medical bill”*. In the previous focus groups sessions, the majority of participants expressed connection between Zen meditation and GAD symptoms as RA1 said: *“The reason I come here is no different from you; that is, to wean myself off medicine by practising Zen meditation. I am not convinced that I have a GAD diagnosis (giggle) despite that the medicines prove for good me”*.

8.1.1 Ambivalence towards medication

The category ‘Ambivalence towards medication’ was a key expectation among all participants, too. Many discussions in focus groups revealed this concept and it was emphasized equally by both groups. One of the general beliefs held by all participants was that anti-anxiety drugs are addictive and not good for their bodies. Therefore, to avoid dependency on medication was a foremost concern and drew intense discussion.

A participant said: *“I was very worried about being addicted. Therefore I asked Dr S. He tried to reassure me, saying ‘there are methods to abstain from medication and there are always new sleeping pills developed with a lower risk of addiction...’ Anyway, medication is not ‘good stuff’ no matter how advanced it is.... That’s why I am here” (RA4)*. Another responded: *“A friend saw me when I was taking medication. She was surprised and said ‘Are you going to kill yourself?’ (RA2)*. RA8 echoed their view with a sense of humour: *“Well, we will die quicker if we do not take pills. Tell your friend (All laughed)”*. On top of this, RA8 added more personal feeling as a chronic GAD patient about his expectation towards Zen meditation. *“I have taken pills for ages and the disease (GAD) has drained away my energy ...If meditation can increase my vitality it is worth a try...”* RA1 recalled her experience of weaning off medication showing the difficulty of reducing medication: *“Once I felt I was healthy again; I stopped medicine. Yet a couple of days later, I felt strange... no security. So I started again...I just wonder is this a psychological dependency? Or do I really need it physically?”* Her statement regarding medication dependence spoke to the profound doubt in the minds of all participants. Thus, she earned all round agreement. RA1 further stated her expectation of Zen meditation after her unsuccessful experience of weaning off *“So, I think meditation might help me out...”*

RB10, a devoted housewife, said: *“My husband shows his disapproval on his face every time when he sees me taking pills. I know what he is concerned about but what can I do? Medication helps me to manage my daily life and he cannot look after our children for me anyway...not to mention how long it took to find the right Dr and the right pills”* In other words, people around the study participants showed their attitude to their medication-taking behaviour. Participants shared their concerns but they were caught in a dilemma. RB11 echoed a common apprehension: *“I am afraid of addiction, too. I asked my doctor every time I visited him. He is always smiling and says “do not worry”. Actually, now your situation is worse than addiction. The priority currently is to treat your symptoms”* RB4 added her opinion in a determined tone: *“Medications are bad... I took pills which I cannot help and there were no options... I want to control myself by meditation... It should be useful as I am a Buddhist”*

For other younger participants, searching for more information related to anti-anxiety medication seemed to be a strategy to help them cope with their worry. As the dialogue below reflects:

RB9: *“As to me, I like to go to websites to learn about my medication...and chatting about experiences of taking pills online ... “it is hard to cut (pills)” everyone said that.”*

RB5: *“Same as you, I am attracted by any report regarding medication. Actually, this kind of medication cannot be stopped immediately. They are not like anti-fever drugs or antibiotics.”*

As presented above, almost all participants admitted that their GAD symptoms had been relieved by medication and they could function better when the right anti-anxiety medicine was prescribed. They were afraid of becoming addicted to anti-anxiety medicine, and wondered about medication for the rest of their life. Thus, a strong expectation of Zen meditation was that it could help them to avoid medication and possible addiction.

Side effects, for almost all participants, were another important reason that enhanced the motivation to avoid medicine and do Zen meditation instead. RA2 said: *“I asked Dr S “do the pills affect my mentality such as memory?” “Yes,” he replied, “but it usually occurs many years later (emphasized). That is, it is actually a long term side effect but if you do not take pills you will feel uneasy now (emphasized).”* For RA7, this concern associated with side effects, was so severe and even became one of the reasons to give up becoming pregnant. RA7 *“Honestly I do not dare to get pregnant. Dr S said he can watch out for me if I want baby but I would rather give up it. Side effects concern me. As a primary teacher I had enough from kids”.*

A dialogue revealed the anxiety regarding medication plainly in Group 2, as follows:

RB11: *“I am afraid I am going to have haemodialysis in the future as long as I keep taking the pills. My kidney may no longer tolerate the burden of metabolic task ...”*

RB3: *“Yes, Yes, and our livers, too (followed by many voices with strong agreement).”*

RB9: *“The first ever question I asked the Dr is “Tell me is this a kind of narcotic?” He smiled and*

explained...Later on I quit smoking because I think my body cannot bear any more toxic substances. I am young (smile). I want to deal with it actively. So, I want to learn Zen meditation. This is my health..."

A wide range of issues related to side effects concerned participants very much such as the burden on organs. The level of worry was so strong that it helped one participant to quit his smoking habit. As side effects were an aversion to all participants, most of them wanted to learn Zen meditation. A young lady felt sensitive towards side effects too and said: *"You know all the side effects are printed on the medicine boxes clearly. Every time I glance at them makes me feel terrible. I asked the doctor 'can you remove them from the boxes?' As I would rather not (emphasised) know about them. He laughed and said side effects are individual" (RB6).*

Participants in both groups wanted to minimize medication side effects, especially Group 2. Some participants described how their lives were influenced by the side effects: *"Medicines make me feel calm...too calm actually, neither high nor low...and I feel I become dull with no motivation at all... I do not even want to walk out from my door...you may say it is emotional (emphasised) control, but it is not. It is medicine (emphasised) control..." (RB8).* RB9: *"I felt severe dizziness ...So; I kept phoning the pharmacy department of the hospital...Later on I adapted to the medicine...I felt less anxious...but sleepy and found myself having difficulty to focus on my work...I was very sluggish..."* Due to experiencing unpleasant medication reactions, avoiding side effects became imperative. Thus, the majority of study participants anticipated that Zen meditation could help them to reduce medicine thereby evading the unwanted influence.

Building up confidence in order to face the process of reducing medication was another essential expectation in terms of avoiding medicine. In other words, Zen meditation was perceived as a way to construct assurance. The dialogue below showed their hesitation regarding the medication reduction process:

RA7: *"Now I take Rivotril, just about one quarter of a pill. I know I should try to stop it as the dose is so tiny. It may work as a placebo for me but it works. I feel insecure when I stop medicine. I am just afraid (smile) my symptoms will come back."*

RA4: *"In fact, my doctor tried to cut down my dosage but this caused me more anxiety...I need to work, to take care of my children..., I can not bear to lose control of my life. I argued with him and finally he said "OK", reluctantly "we shall try next time"...It was ironic, wasn't it? I should welcome the progress, shouldn't I? I hope by practising Zen meditation it may help me grow in confidence to overcome my fear."* All participants were apprehensive about the recurrence of GAD symptoms and losing social function.

Likewise, in Group 2 the ambivalence regarding medication was described. An interesting dialogue

was triggered when some participants had an insight into this situation:

RB2: “Actually my doctor has encouraged me several times. He said based on his judgments my condition has been very stable so he asked me to take pills every other day instead of every day. I said no, no.... when I stop the pill I was haunted by the thought –I am going to have insomnia tonight. I just do not dare (emphasized) to do it...I think if I do meditation I may able to do that; at least I do something that is promoting health rather than doing nothing.”

RB3: “I guess that you lack of confidence...like me. I worry every time when the doctor renews my medicine especially when he proposes to reduce the dosage. I think perhaps we just have the disease too long...and are used to taking pills regularly...”

B12: “There might be a word that can describe our situation precisely, that is ‘ambivalence’ (emphasized), both love and hate (all laugh).”

B 7: “and fear (all laugh even louder).”

As illustrated above, despite that all participants wanted to cut their anti-anxiety medication, wanted the weaning process to begin, they hesitated and so became ambivalent. Zen meditation was expected to act as a spiritual supporter by the participants to support them during the process of weaning off medication.

Due to its chronic tendency and recurrent features of GAD, long term medication treatment and the weaning strategies were part of psychiatric treatment (2.1.4). It was striking as shown above that the doctor was mentioned repeatedly by these participants indicating that the doctor held great influence on their opinions of medication. This indicated a trust and long term relationship between the doctor and the participants and also reflected the characteristic of this category, ‘Ambivalence towards medication’.

To summarize, when participants gathered in a group situation undertaking the Zen meditation programme and sharing their lived experiences, a strong connection between Zen meditation and their deep concern about medication was revealed rapidly. Evidence showed that participants admitted medication was an effective treatment. However, at the same time they wanted to keep away from worries about addiction and side effects. Getting stuck in this ambivalence situation, Zen meditation was then regarded as a resolution to resolve this dilemma. In other words, participants wanted a successful weaning off process without apprehension associated the medication. Zen meditation was found to uphold these expectations in those participants who experienced living with GAD.

8.1.2 Crave a good sleep

Like ‘ambivalence towards medication’, ‘crave a good sleep’ was also one of the most common categories discussed in the two groups. When examined, the portion of text regarding the issue of

sleep was relatively large compared to other agendas such as memory deterioration. Many aspects of sleep arose from the group discussions covering the distressing experience of lacking sleep, the relationship between sleep quality and sleeping pills, learning to accept poor sleep quality, the influence of insomnia on the quality of life and fighting against insomnia. Due to these experiences, Zen meditation was expected to be a way that relieves sleeping problems naturally.

The experience of sleep problems was so distressing that having a good sleep became an earnest craving for the majority of participants. RA2: *"What I am yearning for is just a minimal request which ordinary people take for granted-having a good sleep. People warn me that sleeping pills will damage my memory. I know it. So what (emphasized)... I have been craving a good sleep for ages. I almost forgot the fresh feeling in the morning. If I could fall asleep I would thank Buddha for his infinite mercy"*. RA7 responded: *"As long as I can get a good sleep I do not want to care whether I end up with hemodialysis or not"* (participants believed that the long term use of an anti-anxiety drug causes liver or renal dysfunction). Sleep was a predominant issue that drew everyone's attention as almost all had suffered from insomnia for a period of time. RB5 described his experience of lacking sleep, *"It was irritating when I started the difficulty of falling asleep last year. I woke up about 4-5 o'clock in the mornings and tossed about on the bed which was extremely awful."* RB9 echoed: *"I wake up around 1-2 am...as a result I have no energy for the day."* RB4 had a vivid report too: *"When my sleep turned awful, I was in a panic as I worried that I had become crazy."* To most participants, the condition of sleep was imperative and was even regarded as an indicator of improvement of GAD. *"Insomnia was the first symptom of my illness. When my sleep got better, I felt I was restored"* (RA1). Thus, to pursue a good sleep was a priority for participants. Zen meditation was expected to fulfil this craving as a participant said: *"I want to learn Zen meditation as this may help me now and benefit me in future."* (RB12).

Another aspect was the relationship between sleep quality and sleeping pills. *"Medicine can help you fall asleep, but you lose the deep phases of sleep. It means your sleep is shallow"* (RA2). RA8 echoed: *"Yes, besides, in the morning you cannot get a feeling of freshness like normal sleep has."* RB9 shared the same view: *"Sleeping by pills, you feel your brain is a little dizzy in the morning or sort of heavy, yet it is OK, despite that your mind cannot be as clear as natural sleep."* It was noticed by participants that the quality of sleep by pills fell behinds greatly compared to the quality of normal sleep.

Participants were so in need of sleep that even sleep with poor quality was welcomed. This showed how they craved a good sleep; learning to compromise sleeping quality became a shared experience. The attitude of accepting poor quality sleep was revealed in group interaction. R4: *"I miss the feeling of vigour after a sound sleep. Although I can sleep, I dream too much..."* Many voices responded: *"Oh! Oh! Oh! Do not ask for quality...it is a luxury. Do not be greedy....Do not make us*

jealous, please". After the atmosphere settled, RA7 added: *"The doctor said to me the goal above all is to put you to sleep; quality is another thing in the future... He showed no interest at all when I wanted to discuss sleep quality."* The information provided by RA7 implied that the quality of sleep was something that the medical profession was not much concerned with but that the patients must simply concede. In short, participants gradually learned to accept the lower quality of sleep. As RB2 said, *"Sleeping a few times is better than sleeping no time."* Overall a sound sleep was a coveted goal for almost all participants yet a minimal level of sleep could meet the basic need at least. It was a hope that Zen meditation might help them to gain a better quality of sleep in a natural way as RA7 said: *"I think Zen meditation may help me to have a deeper sleep rather than just shallow one."*

Participants discussed how lack of sleep influenced the quality of life intensely. This influence was pervasive and addressed by many participants. They were keen to share similar experiences to those who could appreciate. RA2: *"I am an alarm clock in my home. I can wake up my family at the time they request as I am aware of every movement of the second hand on the clock.... poor me. I argued with my husband as he cannot understand me... You see, the panda eye shadows are obvious on my face and getting darker"*. Another participant echoed: *"I take my pills obediently during weekdays as I know if I lack sleep in one weekday I cannot handle the daily teaching work."* (RA7). RA6 said: *"Me, too. If I do not sleep well, the following day will be a mess; all of my employees can feel it although I try to cover it..."* RB11 reported: *"You lose your interest in doing things that you like...just with no energy at all and sometimes you even feel you seem become another person."*

Most participants attempted to fight against the symptom of insomnia: *"I would do anything that can help me fight against insomnia including Zen meditation..."* (RB4). RB10 echoed and expressed her rationale of adopting Zen meditation: *"Yes, only natural ways that put us to sleep have the good quality."* Eager to relieve the problem, participants who lacked sleep tried to figure out why the problem happened. RB7 detailed her understanding in which connection between Zen meditation and insomnia was revealed: *"People who have a disease like us are likely to have difficulty in falling asleep. Any sort of trivial thing as long as it is a change can cause you to be on edge and can interfere in your sleep. For instance, when you have any activity in the next day... I expect that Zen meditation will help me to become steadier. I believe my sleep will get better if I am not so sensitive or over concerned..."* In brief, Zen meditation was regarded as a way to enable them to become stable and to improve the quality sleep as well.

To conclude, in the focus groups participants shared and echoed many experiences related to lack of sleep. Zen meditation became a possible way that could help them meet the basic need. As RA8 one said: *"In short, what we want most is to cure insomnia (smile)."* (RA7); *"If we can sleep in a natural way, for example by practising Zen meditation, then it should be an ideal way of living meaning great improvement"*.

8.1.3 Stop thinking

To stop thinking was the third category under the theme ‘expectations of Zen meditation regarding GAD’. Participants shared their unpleasant experiences of trying hard to stop thinking vividly. They also discussed various strategies that they had developed gradually to cope with this problem. In addition, they described their views regarding how Zen meditation might help. To stop thinking then became one of the noticeable aspects of expectations regarding Zen meditation.

The unpleasant experiences of cutting off their endless thinking, planning or worrying were shared and echoed in both groups. Many participants described their experiences vividly: *“When I lie down on the bed I just cannot shut down my brain which is running and running.... planning the coming work, ruminating on the annoying things my children did...Actually, I was extremely exhausted but just could not fall asleep. How strange it is. I was absolutely shattered but I was alert just like a neon light shining in the dark harshly...”* (RA2). RA9: *“Me too. So many things hover in my brain one after another, never stopping”*. RA8 expressed his viewpoint of thinking too much: *“That means that our brains have no break at all... I think that is why we are always fatigued. Here (pointed to his head) is not lucid.”* RB1 shared a similar experience: *“I feel like I am putting myself in an endless circle, turning and turning. It is so unpleasant, many things are tangled...”* RB4 echoed: *“It seems that we are prone to ponder our thoughts again and again...”* RB10 used a metaphor: *“I feel unstoppable ideas moving around in my brain are just like a broken water tap. No matter how hard you try to turn it off you just cannot stop. It drips and drips...”* As presented, most participants judged that they needed to stop pointless thinking so they might have a true rest and a clear mind.

Strategies to cope with thinking too much were gradually developed ; one participant persuaded herself that she must learn to ‘let go’ in order to have a rudimentary level of rest: *“Sometimes I feel angry with myself and ask myself to try not to think too much, do not be obsessed, learn to let go...”* (RB11). Another male participant took alcohol: *“After drinking your brain becomes empty... no longer thinking.”* (RB12). RB4 responded *“...Walking can stop my thoughts effectively, but if weather does not permit, I do stretching exercises or cleaning. If you keep your body busy then your mind will be freed up.”* Seeking a calm mind was a shared goal by almost all participants. The expectations towards Zen meditation regarding ‘stopping thinking’ were detailed in the group discussions. RA2 asked a question that every participant had, *“As my brain is being over used, I never have a real rest. Is Zen meditation able to help me to shut down my endless thoughts?”* RA8 replied: *“Zen meditation should be effective to help us to stop thinking because one of my friends who has practised meditation for years said Zen (meditation) is a way of training the human’s mind to stay still rather than be restless like a monkey.”* RB1 shared his idea about how Zen meditation might help to stop thinking: *“I think to learn meditation might be good. At least it will pull you back when your mind is trapped or occupied on negative or endless thoughts.”* Through these interactions,

their understanding about how Zen meditation might help to stop thinking unfolded.

In summary, discussions regarding stop thinking were intensive and almost all participants were involved. As noted above, participants' experiences of thinking too much, how to cope with repetitive thinking and their understanding regarding how Zen meditation could be helpful were disclosed.

8.1.4 Regain memory and concentration

Regaining memory and concentration is the last category under the theme, 'Expectations of Zen meditation regarding GAD'. The decline of these faculties was noticed and lamented by the majority of the participants. Compared to the previous categories, this category was discussed in a gentle way. However, the concern about mental ability was still evident as shown below.

The decline of memory became obvious when participants compared their previous ability with present ability. For many, the memory decline affected their daily life, job performance and learning ability. One participant forgot to bring his diary when attending the focus group. Later, other participants noticed this and teased him. He explained *"This is just evidence to show how bad my memory is (all laughed)... I have found my memory getting worse and worse. I even forget how to write some (Chinese) characters; I keep trying to remember but it is just useless..." (RB8)*. RA2 echoed with a similar loss: *"I was very proud of my memory indeed. Years ago, I made calls relying on my memory and telephone books were unnecessary. Likewise you could ask me the price of any item a couple of days later after shopping. Now, I cannot find my keys I just left minutes ago..."* Likewise, the deterioration of memory was noticed in Group 2: *"I am afraid that I am going to have dementia soon and will not need to wait until I am old."* (RB11). RB10 echoed: *"Me too, my memory was good even boring stuff such as regulations or decrees could not beat me. That's why I passed the Higher Level National Examinations and got my job.... Some friends wonder about how I could pass the exam then when they learn how bad my memory is now."* RB6 shared: *"I take Japanese lessons...My brain goes blank as soon as I walk out of the classroom..."* RB12 tried to propose a solution to minimize the impacts of memory decline: *"Try to use a note book..."* However, his advice did not earn any appreciation. Many responded: *"You will lose it soon (all laughed)."*

Although participants were concerned about their memory decline in various aspects of their life, the degree of expectation of Zen meditation was not as urgent as the degree of other expectations such as craving a good sleep. When the focus groups' data were compared, participants did not express the experience of memory loss as emotionally as other experiences in 8.1.1-8.1.3. A possible explanation is that the inconvenience caused by memory deterioration was not as difficult as the lack of sleep. In addition, the decline of memory was considered to be caused by multiple reasons and rather a lengthy process. As RA2 said *"I feel that my poor memory cannot simply be blamed on pills*

itself; never having a sound sleep in a natural way is also accountable... additionally, over use of our brains like unstoppable thinking. Most importantly, GAD itself causes intellectual weakening."

Apart from worsening memory, the ability to concentrate was another important concern reported by the majority of participants. One participant reported the difficulty of concentrating that influenced his academic performance: *"To me, the major bother is that it is hard to concentrate on reading leading to extremely poor scores. I always feel that I am going to fail every exam."* (RA5). RA7 showed her sympathy to RA5: *"Actually not only students need full attention to meet academic requirements but so do teachers. Thus, I never miss taking pills during weekdays as I am responsible to every pupil. Consequently, the only time left for me to wean off medication are summer vacations when I do not need good concentration."* RB5 shared his experience of poor concentration affecting his work as a bank staff: *"When you need to concentrate but you cannot, this then intensifies anxiety as you are so worried that any mistake you make could cause terrible consequence. You need to pay a fortune for your fault. Thereby a vicious circle starts..."* The influence of poor concentration was particularly emphasized by employed participants.

'Regaining memory and concentration' were not discussed to be as important by participants, compared to other categories, such as 'crave a good sleep' or 'stop thinking'. However, the lived experiences of how mental deterioration influenced their life were described vividly. Participants shared the loss of their mental faculties. For all, Zen meditation was regarded as a hope to improve their memory and concentration.

8.1.5 Summary

Through the lens of their illness experience, participants in Group 1 and Group 2 depicted a rich text regarding expectations towards Zen meditation. Several aspects of expectations were revealed, including decreasing the usage of medication, improving the quality of sleep, trying to stop thinking and regaining memory and concentration. Apart from these categories, there were other expectations in association with GAD symptoms, i.e. a hope to improve the physical symptoms such as shortness of breathing, chest tightness and headache. However, because these issues were not shared by the majority of participants, these expectations did not form a category in their own right.

8.2 Progress of Zen meditation

Based on the rich experience described by participants the theme 'The process of Zen meditation' emerged and referred to the development of Zen meditation practice. Three sub-categories incorporated are: struggling to reach a state of calm; signs of improvement; and an individual process.

8.2.1 Struggling to reach a state of calm

Most participants attempted to reach a state of calm during the six weeks of the Zen meditation programme. Many discussions occurred in both groups that showed the process of struggling to reach a state of calm clearly. Their struggles included a wide range of concerns such as worrying about remembering the warm-up exercises exactly, whether they were following the right procedures of Zen meditation practice and the struggle to form a habit of Zen meditation practice that fitted into their daily lives. In brief, participants anticipated that a state of calm could be accessed if they put their efforts into performing warm-up exercises accurately and practising Zen meditation regularly.

Warm-up exercises were incorporated within Zen meditation practice as a unity (4.12.1 & Appendix II). Participants' experienced a range of difficulties including body stiffness, noises and difficulties in performing the warm-up exercises at home. The dialogue below shows how they were concerned about doing the warm-up exercises. RA9: *"During the lesson, the (Zen) teacher said "Relax...relax your forehead...shoulders... exhale... slowly" but I still feel my whole body, my muscles are very tight..."* RA5 made a comparison of doing warm-up exercises between the hospital and his home; *"I feel I can relax well here ...but I cannot relax well at home."* RA8 shared his explanation: *"I feel the same. The teacher is good at guiding us by using her voice and demonstrating every moment."* RA2 thought poor memory accounted for the difficulty: *"I forget many movements after class. It is annoying as my memory is deteriorating..."* RA7 proposed a solution: *"Are we allowed to record her teaching so it might be easier for us to do the exercises properly at home?"* A discussion regarding performing warm-up exercises occurred in Group 2 as well. RB3 said: *"My wrist is so stiff that I cannot bend as much as others can. How can I bend down as much as RB7 or RB8?"* RB7 replied: *"It takes a long time to increase flexibility indeed. I have learned Yoga..."* RB11 echoed RB3: *"I also failed to reach the same level that was demonstrated, though I have tried at home."* RB12 stated his viewpoint that drew a consensus: *"I think that as long as we spend at least 10 minutes doing warm-ups that is good enough. The point should not be how flexible your body is but rather to prepare for the following meditation practice. You see most of us cannot extend our body like those two."* His statement ended the discussion regarding the warm-up exercises as everybody agreed that the warm-ups basically prepare body for the coming meditation.

Despite that the participants were concerned much about how warm-up exercises should be practised correctly, their aim was to reach a state of calm. Thus, participants put much effort into practising Zen meditation. Also, they tried to monitor, assess and compare the procedure of practising Zen meditation in great detail to ensure that they followed the right procedures. One participant talked about her struggle to practise Zen meditation: *"I repeat to myself... calm, calm, calm...but just cannot" (RA9).* Another participant shared a similar struggle: *"I keep trying; count my breaths 1, 2, 3...10; 1, 2, 3...10, again and again. My goal now is that I can sit up to 15 minutes."* (RA2). RA3 shared embarrassedly that she still struggled to achieve 2 minutes, *"To be honest with you, I feel*

shame as 2 minutes seems long enough to me. I cannot count from 1 to 10 continuously." RB11 noted: *"When meditating I was planning things, i.e. what I should do after meditation and the next...I just could not stop my thoughts."* RB2 pointed out another aspect of the difficulties, noise, and how she overcame the problem: *"I find that even small sounds can cause disruption, so I close the windows and turn on the air conditioner."* RB3: *"As to me, I chose to do meditation in the morning when my grandchildren are out. Traffic sounds do not bother me as much as humans chatting."* Accordingly, participants struggled in various ways during meditation practice in order to reach a state of calm. As a participant said: *"Will; we will certainly improve if keep trying..."* (RB4).

The data regarding assessing and comparing their Zen meditation experiences were interwoven in the group discussions frequently. RA2 said: *"When the (Zen) teacher asked whether there was any improvement in meditation today, I hesitated to answer as I did not judge myself to have advanced."* RA1 noted: *"When I practise at home, it takes at least 5 to 6 minutes before I start to sense that my mind is gradually calming down."* RA5 found: *"The effect of meditation here is much better than at home... I suppose it is because there is less distraction here."* As presented above, participants reflected on different aspects of Zen meditation practice such as time, places. Through these comparisons participants could examine whether improvements or difference had occurred between them.

To form a routine of practising Zen meditation was the last characteristic of the category 'Struggling to reach a state of calm'. Participants found that to find a suitable way to practise Zen meditation was not easy as it was new to them. Participants devoted much effort in order to fit the meditation practice into their daily schedule. This required adjustment of their life style such as daily schedule and family role. A participant reported her difficulty in building up a routine within her ordinary life: *"When practising meditation, my 4-year old boy was curious and drove his toy car up to my head. Sometimes he imitated me...so funny. Thus, the only time left for me to do meditation is after they fall asleep, but I am exhausted..."* (RA3). Likewise for RB10: *"The warm-up exercises can be carried out at home as I do it together with my children, 2 and 4 years old and have fun. Yet they do not allow me to sit still. Progressively, I learned that the best time to meditate is in the early morning when they have not woken."* Being a mother with toddlers restricted the time for building up a habit. An older participant set a higher goal as she was freed from motherhood: *"I try to practise meditation 3 times per day, morning, evening and before I go to bed if I can..."* (RA1) A participant attempted to find the best environment to do meditation *"It is hot and humid. I finally found morning time on the balcony is an ideal setting after I tried different places in the house"* (RB1). RA8 shared his experience of establishing a routine: *"At the beginning it was hard yet I gradually learned to sit every morning; as I usually wake very early anyway and I cannot fall asleep again."* RB4 commented after participants shared the experiences of developing a habit of Zen meditation: *"You will never find a right time and a right place to do Zen meditation unless you have dogged*

determination. Everyone is busy. Who isn't? Since I was diagnosed with this illness I set my heart on it." In order to form a habit of practising Zen meditation, participants either changed their daily schedule or adopted it as a family activity. Above all, determination to practise meditation was emphasized as a crucial factor as struggles occurred during the process of Zen meditation practice.

To summarize, pursuing a calm state of mind was a shared goal for all participants. It was believed that the state of calm is a peaceful state which these participants with GAD longed for. Keen to approach a state of calm, most participants managed to do Zen meditation properly, including performing warm-up exercises precisely, carrying out Zen meditation as much as they could, comparing their Zen meditation experiences with other participants.

8.2.2 Signs of improvement

While the Zen meditation programme was progressing, issues related to improving their Zen meditation experience were brought up into the discussion. The time spent on discussion on this issue increased over time. Three signs were extracted from discussions of Group 1 and Group 2.

- Finding a personal way to enter a state of calm
- Changing the sense of time
- Adjusting the goal of Zen meditation practising.

Finding a personal way to enter a state of calm

As accumulation of Zen meditation practice went on, participants gradually found their personal ways to enter a state of calm. There are several ways designed to train Zen meditation practitioners to focus their mind (Appendix II). Among those various ways, the breath counting method is the one that most adopted and the one that is suggested for beginners if they have no preferences. The focus group data revealed that their ways to enter a state of calm were individual.

Some participants tried very hard and gradually discovered ways that suited them. As one reported: *"I have tried to count breaths during the previous weeks. At the same time, I tried various ways i.e. just either simply counting exhalation or inhalation. I learned that the best way is just to feel (emphasized) exhalation which is the simplest way for me. I do not even bother to count. I just sense the air flow out."* (RA4). RB8 told of her experiences: *"I use imagination to help calm me. I imagine bright light like sunlight surrounding me. Counting is useless and boring to me. When I was a university student, I tried counting to solve my sleeping problem but the longer I counted the more irritable I became. I have not like to count since then."* Moreover, some participants sought other methods in order to make improvements such as music: *"It is hard to calm down when I meditate ... listening to music makes me feel peaceful. One afternoon, when I was meditating, I played a CD with the sound of rain...Oh, it was a wonderful experience. I completely forgot time till a smell from my neighbours' kitchen interrupted me."* (RB7). RB9 echoed with surprise: *"Me too. I prefer crystal*

music. When I am in a state of agitation, my mind is full of troubled thoughts. This draws me away from concentration when meditating. Hence, I play crystal music when meditating ...” Religion also was a good aid for a believer: *“I am a devout Buddhist; the sutra chanting soothes me a lot. Therefore, I play the sutra CD right at the beginning of my warm-up exercises. It is good as the rhythm is slow so you do not rush yourself. It works well as my mind relaxes quicker.”* (RB4).

Based on these experiences participants sought and tried to find their own ways to enter a state of calm. After building up their Zen meditation experiences, participants could distinguish the different quality among different practices and then applied various methods to improve the quality.

A changing sense of time

‘A changing sense of time’ refers to the feeling of time passing in Zen meditation practice. This kind of experience was shared by all participants and it emerged around the middle week of the focus groups. RA1 said: *“Recently, I feel that there is no time pressure in my mind when meditating as it was at the beginning. I guess this kind of change regarding sense of time passing is probably a sign of mastering meditation.”* In the 5th week, RA4 reported: *“It is intriguing how 15 minutes pass now just like it is 3 minutes. Time passes like a torrent now; yet it was like a snail then.”* RA7 shared her viewpoint: *“I think this is because we start to have a taste of relaxation and therefore we don’t feel the passing of time is slow.”* In the last week RA8 noted: *“Now, I can meditate for 20 minutes and feel that time passes smoothly. When I look back, every minute was a torture at the beginning (laugh)...how strange it is with passing of time...”* The awareness of a different sense of time passing about Zen meditation was common. For example: *“In the early weeks, every time I first opened my eyes when meditating it was always after 5 minutes, extremely punctual. In fact, it felt like ages and I thought it must be at least 15 minutes so I would open my eyes but shockingly it was only 5 minutes. The meditating time, however, has gradually lengthened. Now, I feel it has been ages so I open my eyes but it is already 20-25 minutes passed (appeared content).”* (RB2). In the last week of the Zen meditation programme RB3 reviewed her process: *“I felt my body was just like a clock because as I opened my eyes only 2-3 minutes had passed despite it seeming endless. Then the time of meditating slowly... slowly (emphasized) extended to 10 minutes (smile). I stopped calculating how many minutes I have left before I do meditation.”* Almost all participants described in a lively about how their awareness of time passing had been changed. For most participants, the sense of time passing in the later weeks of the Zen Programme differed from the previous weeks greatly and was much quicker.

Adjusting the goals of Zen meditation

The third sign of improvement in Zen meditation was ‘Adjusting the goals of Zen meditation’ referring to the majority of participants adjusting their goals of Zen meditation practice over time. As data showed in ‘Expectation of Zen meditation regarding GAD’ (8.1), all participants held their

own expectations towards Zen meditation when they decided to participate in this study. However, participants adjusted their initial goals bit by bit as their experiences of Zen meditation accumulated. RA3 reported her adjustment of goals in the 4th week of the programme: *“Originally I wanted to reach a higher level of Zen meditation and hoped that I could get rid of medication. However, what I want now is just a moment of relaxation as I’ve learned how difficult it is to focus on breath counting.”* RA7 noted: *“Actually, a moment of peace is good enough... At the beginning I wanted to do meditation 20 minutes every day. Then this became a stress for me so I said to myself that even 5-6 minutes is OK and not doing it every day is fine...I feel good after changing my goal; I am quite happy as long as I enjoy a few minutes of quiet meditating.”* RA1 adjusted her goals too, but in a different way. She expected more in terms of progress because she had experienced emptiness when meditating (2.2.4); in the 5th week she said: *“I experienced a moment of emptiness which is amazing...I am expecting another one to happen ...but not yet (laugh).”* Despite their goals being adjusted over time, most participants felt contented as RA4 noted: *“Once we have a taste of what it is like to be quiet or relaxed in our mind, then we have more confidence to make improvements in the future. We should not rush; it is not a job.”* Many participants nodded.

Similarly in Group 2, RB4 described her modification of her goals in the 4th week: *“...I cannot have an empty or quiet experience every time, but only sometimes. However, on second thoughts I had better give up my expectation because according to Buddhist Scripture, it is taught that a practitioner should purely focus on one thing, i.e. breath counting. Setting a goal or desiring to obtain something is regarded as interference in your mind. What you are required to do while meditating is nothing but focusing...no goal setting, no worry, and even no happiness.”* RB12 said: *“Actually, I did not know what kind of goals I should set initially. I wanted to see the outcome quickly, such as weaning off medication although recurrence concerned me...the outcome of reducing the dosage did not happen and I found I was struggling in extending my time of meditating in just for a minute’s time (smiling). Then I thought maybe it is like mountain climbing; some are quicker and some are slower; if I am slower then so be it. Ironically I felt relieved...”* In brief, most participants adjusted their goals of Zen meditation practice downwards while only one participant upgraded her goals. They came to realize the gaps that existed between their initial goals and realistic situations. At the same time, most participants accepted that the initial goals could not be achieved as they were expected. Their goals modifying over time showed their understanding of how mastering Zen meditation had advanced.

To sum up, a personal way to enter a state of calm, a change in the sense of time and adjusting goals regarding Zen meditation practice were identified by most of the participants as signs of improvement, although the process was not exactly the same for all.

8.2.3 An individual process

The theme, 'An individual process' indicates that Zen meditation practices among participants were individualized; that is, no fixed route of progress of Zen meditation could be traced. On reflection, for the purpose of description of the phenomena of progress of Zen meditation, types of Zen meditation progress are grouped together in this study, despite that it is difficult to find a hard and fast rule. Some participants were hard to group; for example, for some participants their times of meditation lengthened but no other benefits appeared. This is because, unlike quantitative study that uses numbers to present findings, in this study the qualitative data show diverse aspects of Zen meditation progress that make it difficult to group participants by using a single criterion. However, three types of experience of Zen meditation practice emerged: participants with improvement over time, those with fluctuation and no noticeable improvement.

One third of participants (n=7) improved over time in terms of Zen progress and they were the easiest type to identify. A wide range of evidence for this type of progress included decrease of dreams, greater ease in calming their minds and being able to enjoy the meditation. RA4 described her progress clearly: *"I feel that progress is there, although it is slow. The first week was not so special; the second week was a bit different. I would say by the third week the improvement became obvious, especially as it helped to reduce my dreams a lot. So my morning dizziness was improved."* RA1 echoed: *"I feel my dreams have decreased too. Moreover, I can keep my mind on meditation better so I feel I am improving. I assumed that this is because of getting to know what the feeling of calm is like. Then, you can catch the key points quicker..."* RA7 noted the changes between different weeks: *"For me, I feel the depths of calm are different. During the first two weeks the feeling of calm was nice, but further on I feel that the calm seems deeper; you can be much freer from daily worries rather than just feeling a period of peace after meditation."* As presented above, these participants were able to sense their progress from week to week. Likewise in Group 2, RB2 said: *"My personal feeling is that the time of anxiety has diminished gradually..."* RB9 wanted to have more time to do meditation as he enjoyed it much: *"I feel when meditating the time to feel light and relax my body is quicker during the last couple weeks. I may become addicted to meditation as I slip away to do it when I am not so busy at work."* For this type of participant, progress seemed to go smoothly, although slowly, and they were happy with it.

Varying from the foregoing type of meditation progress, the second type of meditation was fluctuating and seven participants (n=7) were in this group. RB10 gave a vivid description: *"Ironically in the previous weeks, around the first and second week, I felt quite comfortable like my brain had rested. Nevertheless, it became stagnant afterwards. I think this is because my concentration was not as good as at the beginning. Anyway, it is OK; everything has its lows and highs and nothing always go smoothly."* She considered this to be an acceptable process. RB7 shared a similar experience: *"I do not know whether it is called the ceiling effect? The first two*

weeks were good for me, but not the third and the fourth week. Is this common?" In addition to the fluctuating process, some participants described different aspects regarding progress. For example, the time of practising Zen meditation increased or their body was more comfortable, but there was no obvious improvement in terms of their state of mind. RA8 noted: *"I do not know whether my progress is smooth or not, because while I can do meditation much longer... yet I do not feel that I am being enlightened like some Buddhist books said."* Similarly RB12 said: *"I gradually became acquainted with the meditating e.g. feel less numbness... not wriggling as before; but my thoughts still run away and I need to lead them back repeatedly..."* or as RB3 said: *"I can practise for 10 minutes now when I could only sit for 2 minutes 5 weeks ago. However, I heard that people feel blissful after meditation but honestly I did not feel that way..."* As above, participants not only talked but also were keen to learn about the progress of other participants' experiences. RA8 commented: *"It is true. Some people can easily reach a calm state by practising meditation a short period while others possibly need much effort just to experience a bit of calm. Everyone has a different nature and different perceptions. I think."* His viewpoint drew much agreement and comforted some participants who felt themselves to be slow.

The third type of progress is a type where participants (n=7) did not feel they had made obvious improvement during the six week Zen meditation practice. As RA9 expressed with gloom: *"I feel I am the student with the last place in our class (smile embarrassingly). I tried breath counting but it soon became a mess. I kept starting from one...quite frustrating. After RB4 shared her experience of focusing attention on exhalation, I tried that too but it was no different."* Likewise, RA2 said: *"Me too...I did not sense any improvement as I am very tired everyday so I go straight to bed rather than doing meditating."* RA3 preferred do warm-up exercises instead of meditation: *"I did not really feel relaxed while breath counting. Therefore, I prefer to do abdominal breathing exercises that were taught in the first lesson."* Additionally, RB6 compared her own experience with other participants' experiences: *"I envy you as I didn't have a good experience like RB7 who experienced a moment of emptiness, nor feeling of sleepiness like RB12. My brain is always busy, worrying about many things related to my kids..."* RB5 echoed: *"You are not alone. I am the same; this is because I am very lazy to practise (giggle)."* Corresponding to the diaries, the time RA2, RB5 and RB6 spent on meditation was infrequent or irregular.

To sum up, the progress of Zen meditation practice varied from one participant to another. While some participants were able to make progress steadily, some fluctuated and some lacked apparent progress. According to their perceptions, participants made their judgement of improvement over time. However, it should be noted that the time and frequency of Zen meditation practising among participants were different (7.2).

8.2.4 Summary

This theme ‘The process of Zen meditation’ is a key element that pervades the focus group data. Three categories incorporated in the theme featured both homogeneity and diversity. In terms of homogeneity, there were three signs of improvement (8.2.2) shared by participants. In terms of diversity, for example, participants showed individualized progress of Zen meditation (8.2.3) rather than a fixed way. Overall, the process of Zen meditation was rather lengthy with various aspects and the researcher attempted to interpret it as completely as possible.

8.3 The cultural beliefs regarding Zen meditation in Taiwan

In focus groups, concepts associated with the cultural aspects of Zen meditation in Taiwan are presented here. The general beliefs held by all participants are that meditation is good to both health and spirit. However, the belief that their souls would be affected unhealthily by Zen meditation practice was reported and shared broadly by almost all participants.

8.3.1 Spiritual influence

Under this category, two main concepts regarding the unwanted influence on the souls were discovered: the souls of Zen practitioners will fly out from bodies and Zen practitioners would be possessed by evil spirits.

‘A soul flying out from a body’ refers to the view that the soul of a Zen meditation practitioner can become unstable and escape away from the body. *“When I decided to join this programme, many friends advised me saying that my soul may fly away if I did not practise properly. Actually I’ve heard this but I don’t think it can easily happen (RA1)”*. RA8 echoed: *“Yes, everybody says that. However, if we have a righteous mind then it should not be problem.”* RA9 noted: *“I chose the Buddha hall in my home to do meditating as the place set my mind at rest. I feel I can be protected”*. A similar discussion occurred in Group 2: *“My father and his friends who do meditation together talk about the issue of the souls flying away and suggested that people should choose a right time to meditate... (RB9)”*. RB12: *“We should not be superstitious yet there are some things that science cannot explain in the world. Follow the Zen instructor, set a good environment before meditation and do not let our minds wander...”* *“Cautious is good strategy anyway (RB2)”*. These interactions disclosed the idea that the soul flying away is believed generally. Due to this belief, strategies were adapted by participants, such as choosing places, time and hold righteous thoughts, to protect the soul from flying away.

Zen practitioners might be possessed by an evil spirit was another cultural belief held by almost all participants. RA1 shared her experience of a moment of emptiness; the first idea that came into her mind was that of being possessed. *“I was in a panic at that moment because I felt I became empty totally. I even lost the sense of existence of my body. I was afraid that I was going to be possessed so*

I hastened to open my eyes. After the Zen teacher told me that this is a part of process which indicates improvement, I was then relieved." RA2 noted: *"I believe there are bad spirits in our world because my sister-in-law had experienced something unbelievable...Therefore I cannot deny that something beyond our knowledge exists."* RA7: *"According to Buddhist Scripture, in the process of self-cultivating, devils came to obstruct Buddha too ...However, I feel secure as I feel this (Zen) teacher is experienced."* RA8 shared his viewpoint: *"I think the devil only hinders people who reach a high level of meditation; I am not good enough..."* The concept of being possessed seemed to be shared by almost all participants. Likewise in Group 2, RB10 said: *"My husband worried about me. He said that my character for eight (birth date characters used for fortune-telling) is too light so I am vulnerable evil spirits."* RB4 noted: *"Zen meditation pursues a state of calm or in other words, trying to empty our mind which is different from our ordinary state. You can chant or play a CD of chanting so that Buddha can protect us from something bad. You will surely feel secure and not alone."* RB11 worried: *"I am also concerned about being possessed at the beginning...an aunt reassured me saying that I do not need to worry now as I am a beginner. However, if I keep practising regularly for 3-5 years and reach certain levels then maybe evil spirits will be interested in me."* RB9 noted his unique opinion: *"Indeed, I want to be possessed. If something comes to me it means that I am advanced (smile)."* (All laugh). This cultural belief was so common that every participant could join the discussion directly without asking questions.

Discussions regarding the influence of evil spirits caused by Zen meditation are frequent in Taiwanese culture. Although participants were concerned about the effects on their spirit they still decided to take part in the study. The majority of participants believed that unwanted influence could be avoided by applying a number of strategies including that it was just unlikely to occur especially at this stage.

8.4. Debriefing and reflection on focus groups

Group 1 and Group 2 were debriefed here, including a brief participants' responses toward the hospital environments, interaction between the participants and Zen meditation teacher, the way participants participated in the group and group atmosphere. All this information is important when focus groups are used as an approach (3.1.3). Apart from the verbatim transcripts of focus groups, field notes are main resources for the work of debriefing and reflection on focus group. As noted in 4.11.5, field notes were made right after each focus group was finished including non verbal behaviours and the group dynamic. Generally, the interaction and atmosphere between Group 1 and Group 2 were dissimilar. Different characteristics (3.1.3) among participants likely account for these differences.

In Group 1, participants rushed into sharing especially about their illness experiences in the earlier sessions. They were very excited to meet people who had similar suffering experiences. The

majority of participants in Group 1 were passionate and most of them arrived much earlier than when the Zen programme started. These participants helped the researcher to assemble the mats willingly. A succession of participants joined the preparing work and chatted to each other, creating a cheerful atmosphere. A participant proposed bringing their medicine to compare; most of them did and this facilitated a closer relationship between them. Some families of participants came into the venue and greeted the participants; their relationship strengthened over time. Some participants stayed after the focus groups chatting or wanted to share some things with the researcher privately. In terms of response to the environments, at first, because the participants were keen to know each other, the venue did not become an issue till the third week. After knowing each other better their attention shifted to the Day Care Centre, such as the activity schedule posted on the wall and what the Day Care patients were like. Interestingly, some participants said that someday they might become a member of Day Care, triggering laughter. RA6 voluntarily made a directory of all participants so they could remain in contact after the group was finished. In general, the group dynamic of Group 1 was cohesive and supportive.

Compared to the enthusiastic atmosphere in Group 1, Group 2 was rather conservative. Therefore, focus groups usually finished on time while Group 1 was often delayed. Similarly, the experience of GAD was shared but not as intense as in Group 1. The warm up of group atmosphere was slower compared to Group 1. The interaction between participants was moderate and chances for everyone to talk were more equal while in Group 1 participants needed to respond quicker or more loudly to grab the chance to speak. Some participants in Group 2 were rather reticent but with time they expressed more and more. Additionally, during the programme, the researcher received unsolicited e-mails from two participants talking about how they felt about Zen meditation in detail. Generally, although the group dynamic in Group 2 was moderate, they had their ways to convey their ideas.

8.5 Overall summary

The focus group data revealed three themes: the participants' expectation of Zen meditation regarding GAD, the process of Zen meditation practice and cultural aspects of Zen meditation in Taiwan. Multifaceted viewpoints and various reactions to Zen meditation were revealed through group interactions, including similarities and dissimilarities. For participants, the experience of suffering from GAD shaped their understanding of Zen meditation experiences greatly. Through illuminating these key themes and associated categories, the researcher attempted to interpret the experience of Zen meditation. Additionally, it should be noticed that there are links between these themes. For example, participants' expectations of Zen meditation influenced their judgement of their improvement regarding meditation practice greatly. In the next chapter the findings of individual interviews are presented.

CHAPTER IX: FINDINGS OF INDIVIDUAL INTERVIEWS

9.0 Introduction

The findings of individual interviews are presented here. In this study, one-off individual interviews were held (4.11.2). However, a longitudinal relationship had been built up between all participants and the researcher because the researcher contacted participants weekly to remind them to come to the Zen programme (4.8). This benefited the conduct of the individual interviews.

The data analyzed were from a total of 21 individual interviews. The length of interviews lasted between 60-90 minutes. Interview tapes were transcribed verbatim and analysed in Chinese before themes and categories emerged (3.2.6, 4.14). After related themes and categories were formed translation then proceeded (4.14). In addition, the researcher's field notes and participants' diaries were used to support the process as aide memoires (4.11.4, 4.11.5). It was found that diaries facilitated individual interviews greatly. Reading the records of dairies with participants when interviewing helped to recall feelings and events that happened at that time.

The in-depth interviews were analysed separately from the focus groups. Unlike the focus group data of which were analysed separately by group before merging them together, the data of individual interviews were merged at the beginning. This is because compared to the differences found in the focus group data (8.0), there were even less differences found between the individual interviews in the two groups; that is, focus groups were influenced by group dynamics in some way, but this was not the case in individual interviews. Furthermore, the factors that may have influenced individual interviews were similar in both groups such as the relationship between the researcher and the participants.

In light of interpretative phenomenology, the researcher was immersed in the text and attempted to interpret participants' understanding regarding Zen meditation experiences comprehensively. Benner's (1994, pp99-127) analysis procedure was applied to the analysis process (3.2.6). Consequently, themes and related categories emerged from the data as shown in Table 9-1 and are illuminated next. The way that participants are identified is the same as for the focus groups.

Table 9-1 Themes and categories from individual interviews

Themes	Categories
Separation	Concern about other participants and the researcher Examining the relationship between Zen meditation and self
Body experience of Zen meditation practice	Body awareness preparation for Zen meditation practice
States of mind while meditating	The state of engagement with real life The state of detachment from real life The state of calm
Benefits of Zen meditation practice	Less pressure with daily life More acceptance of being a GAD patient

9.1 Separation

The theme ‘separation’ refers to the process that participants used to deal with the issues related to the termination of the Zen meditation programme that had lasted for 6 weeks. By attending the programme, each participant built up unique relationships with other participants as well as the researcher. As the interviews were carried out at after completion of the Zen programme, the atmosphere of the interviews was pervaded with a separation sentiment. For example the majority of participants said to the researcher: *“Is this the last time to see you?”* and several participants insisted on having a meal with the researcher. Almost all participants talked about the issue of separation spontaneously right after the individual interviews began and spent about 10 percent of the interview time on this issue. Consequently, two main subcategories emerged under the theme ‘Separation’: ‘concern about other participants and the researcher’ and ‘examining the relationship between Zen meditation and self’.

9.1.1 Concern about other participants and the researcher

The subcategory ‘concern about other participants and the researcher’ was evident throughout almost all individual interviews. Some of the participants mentioned the Zen meditation instructor but not often as the instructor did not stay for group discussions.

After the Zen meditation programme was completed, participants thought about other participants quite often. As soon as participants met with the researcher, the most common questions were: *“I have not seen you for a long time. We use to meet every week...”* *“Have you seen the other people? How are they?”* Some participants asked for further information regarding particular participants. For example, RA2 was concerned about RA8 as she said: *“We are similar in many ways especially our illness history.”* Compared to Group 1, Group 2 generally showed a much moderate attitude to other participants when they were interviewed, but still they wanted to know about other participants’ recent life. For example, RB5 told the researcher right at the beginning of the individual interview: *“I went to OPD last week and bumped into RB9. I was so happy and we talked a lot...How are other participants getting on?”* Additionally, they talked about practising Zen

meditation, as some participants were influenced by other participants' performance of Zen meditation. For example, RB11 said, *"Have both RB10 and RB4 made further progress recently? As I felt they were making quite good progress. I will keep practising as I want to be like them..."* The phenomenon of concern for other participants not only showed the emotional connection between each other, but also influenced the way they adapted to Zen meditation.

The researcher was another object of concern as to whether their experiences were useful to the study or not. Some typical questions that almost participants asked were, *"I wonder whether my experience was helpful to your study?"* (RA8, RA6, RB2, RB10); *"I have talked lots about my (Zen) mediation experience in the focus groups. I am just afraid that I do not have different things to tell you today."* (RA1, RB4). As the interview was the last appointment to meet the researcher, many participants hoped to see the researcher in the future. Several participants asked, *"Will you come back to the hospital and hold the Zen meditation programme again after you finish your study?"* (RA1, RA2, RB6, RB10, RB12).

Preparation for separation was made by the researcher as soon as the programme commenced when participants were given the information about the length of the Zen programme. The individual interviews, however, also seem to have worked to help participants deal with the issue of separation but in a much personal way. As can be seen above, participants were able to talk in more detail regarding separation and this seemed to be of benefit.

9.1.2 Examining the relationship between Zen meditation and self

The second category, 'examining the relationship between Zen meditation and self', refers to how the majority of participants connected Zen meditation with their lived experiences in the past, present and the future.

It was found that participants who experienced a state of calm or were able to enjoy a moment of peace while meditating were likely to keep practising in the future. As RB2 said: *"Definitely, I will do meditation in the future because I enjoyed it."* RB9: *"I will do Zen meditation continuously, as I like the sense of peace or tranquillity."* Participants who perceived benefits from the Zen programme also showed higher motivation to carry on meditation in the future. *"I know doing Zen meditation cannot help me to get rid of GAD, but I know I will get worse if I do not do it."* (RB4). Accordingly, the relationships between Zen meditation and these participants were rather closer. However, some participants reported less motivation to practise in the future. For example, RB8 assessed that Zen meditation was not pragmatic: *"I will not do Zen meditation as it did not really relieve my muscle pain...I prefer to do something practical, like physical exercise in the gym...How can sitting still (meditation) relieve the symptoms of GAD effectively?"* Likewise, RA3 found that the relationship between Zen meditation and her life was quite remote: *"I might do Zen meditation*

when my kids enter primary school as I will have my own time then.”

Furthermore, it was also found that each participant had his/her own way to examine the relationship between Zen meditation and his/her own life. In other words, each individual participant had a unique narrative style of constructing his/her lived experience with Zen meditation. For instance, based on the field notes, it was found that how RA8 expressed his experience, started with his disease experience and then incorporated Zen meditation as a part of his narrative. To him, as a chronic GAD patient, living with GAD had become the main issue of his life, and Zen meditation acted as an auxiliary method that helped him to cope better with GAD. Although compared to other participants he did not have a profound experience or make obvious progress in Zen meditation (8.2.3), he still decided to practise Zen meditation on a daily basis: *“I believe by keeping practising, I will reach a certain stage of calm eventually.”* In contrast RB1, a newly diagnosed patient, showed a more conservative attitude to Zen meditation. He reported that he was not very sure whether he would practise much Zen meditation in the future or not: *“I think there are some places out there that I can seek help. Zen meditation is not bad but might be too mild for me; there should be something else to try.”* Overall, when participants looked back to their Zen meditation experiences, they tried to make sense of them and examined the meaning and relationship between Zen meditation and themselves.

9.1.3 Summary

To sum up, individual interviews provided an opportunity for the participants to reflect on their relationship with other participants as well as the researcher. For almost all participants, the issue of ‘Separation’ was the first issue in these interviews. This showed the concern participants had for each other, as well as reflecting the good quality of connections between them. Via their expression, their relationships with other participants and the researcher ended well. At the same time, relationship between themselves and Zen meditation were also considered and reflected upon. The time arranged for individual interviews was at a point when participants could examine their experiences of the past weeks and also look ahead to the future. Participants expressed different attitudes regarding continuing to practise Zen meditation in the future; these ranged from enthusiastic to non continuation with Zen meditation practice.

9.2 Body experience of Zen meditation practice

The theme, ‘Body experience of Zen meditation practice’ refers to what participants experienced regarding their bodies, when doing warm-up exercises, meditating and body massage. This theme emerged mainly from the questions: ‘What is your experience of the warm-up exercises?’ And ‘What is your experience of body massage after Zen meditation practice?’ (Appendix VI). Two categories emerged; body awareness and preparation for Zen meditation practice.

9.2.1 Body awareness

Body awareness refers to the physical experiences that were described by most participants especially those who practised frequently. Most participants were able to become aware of their body more subtly i.e. became more sensitive to their muscle tension or senses.

RA7, a regular practitioner, described his different body experiences of Zen meditation at various times: *“You know I do not really have good sleep so I feel no energy. Therefore when I meditate in the morning, my back is bent over. I become aware of my position gradually when I concentrate on breath counting. It is strange, isn’t it? You don’t realize your body position but when you focus on breathing, you can. Then my back and my shoulders adjust bit by bit and my back becomes straighter. Then it is about the time to go to work. The night-time meditation, however, is the other way around. At first I sit straight...then gradually I bend over. I know it is time to go to bed as my muscles have relaxed (smile).”* Despite that RA7 perceived his muscles to relax differently, it was common that he developed a better sense about muscle tension. Developing awareness regarding muscle tension was the most common experience. RA4 said: *“I noticed that the first part of my body that begins to feel uncomfortable is my neck, especially the right hand side. Every time it is precisely at the same spot. Practising Zen meditation seems to teach me to sense different degrees of my muscle tension. This only happens when my mind is quiet enough. However, I now have a better sense of tension in my shoulders...I can remind myself to relax as soon as I am aware that my shoulders are rising...”* RB7 reported her experiences of muscle tension associated with her breathing pattern: *“I feel my back become straighter and straighter during meditation; my back pain improved steadily. I think this is because I can gradually shift the focus of breathing from chest to abdomen leading to more air entering my body. I have gradually learned to sense every movement of my tummy, one by one...up and down. It is really pleasant.”* RB4 talked about different levels of muscle relaxation she felt: *“I have learned to distinguish relaxation from tension of muscles by the warm-up exercises...Moreover, learning to tell various degrees of relaxation apart is in my meditation practice. You feel you are already relaxed but actually you can relax further when your mind is even quieter.”* Accordingly, the data revealed that awareness of muscle tension was subtle and was a shared experience.

The problems of muscle pain and numbness were noticed by some participants. RB3 said: *“The first week I only meditated 3 minutes each time exactly as my body alarmed me. I mean, when my back and my legs started feeling pain and numb then it was 3 minutes exactly.”* A few participants tried to manage back pain: *“I bought a higher and harder cushion to provide better support for my back. I also did more stretching as the Zen teacher taught me individually...it helps.” (RA1).* RB11: *“I finish meditation mostly because my leg numbness which is sore. Sometimes I only cross one leg and sometimes I sit against the sofa to help me maintain a straight position.”* Although the experience of body discomfort was a common issue between participants, the degrees of discomfort varied from

one participant to another. Some participants experienced was more severe than others. RA8: *“The problem of body soreness has developed in recent years just because I am getting old....What I can do is move or swing my body gently when I feel discomfort while meditating. It works well.”*

The awareness regarding breathing was another common physical experience reported by the majority of participants. RA4 asked a question indicating her awareness of breathing in detail: *“Is exhalation much longer than inhalation? I have never noticed this. I sensed this when I had better concentration on breath counting.”* RB2 talked about her sense of the change in breathing frequency: *“I feel that when I have a better quality of meditation, my breathing slows down gradually. It becomes slower, although I do not count the frequency. I can feel the gaps between each breath lengthened.”* RB9 described his breathing counting experience: *“When your attention runs away from breath counting, you are prone to use here (pointed his chest) to breathe which is quicker, shorter and shallower. If you focus on breath counting properly, then the breaths are extended and slow down...It may be only 8-9 times per minute, I guess.”* Furthermore, RB7 noted the change in her breathing pattern clearly: *“This is quite obvious to me. I mean that the locus of breathing moves downwards bit by bit and the muscle contraction of the abdomen becomes deeper. Although this feeling does not always happen...I wonder if this kind of feeling means I am improving.”* The awareness of changes regarding breathing was illustrated mainly by the participants who improved smoothly and fluctuated as reported in 8.2.3. They described the experience in great detail with a delighted tone.

Other participants talked about their awareness of senses. RB2 talked about his sense of hearing: *“I prefer meditation in the venue of the hospital because it is quiet. When meditating in my home, I am often annoyed by many small sounds. For example, the most common one is the sound of cars being unlocked by remote controllers, beep! Almost makes me jump up.”* RB1 recalled his experience regarding his sense of touch: *“When meditating on the balcony in the morning, I can feel the wind blowing onto my face plainly. This is unusual...The whole world seems to slow down...very enjoyable.”* RA7 noted another aspect of sensation regarding his body awareness: *“Sometimes, I can sense each swallow of saliva. I feel good because I am so in tune with my body. Usually, you do not notice it at all. I think this is because I reach a certain level of calm.”* Accordingly, some senses for some participants became sharpened on some occasions.

To summarize, data regarding body awareness could be exemplified in detail by most participants. They could notice the differences and gradually adjusted their body to practise Zen meditation. Furthermore, these participants were delighted as they were getting close to their bodies such as muscle tension and senses.

9.2.2 Preparation for Zen meditation practice

The category, 'Preparation for Zen meditation practice' refers to warm-up exercises that might act as preparatory work for most participants before Zen meditation practising began. The warm-up exercises could symbolize a break that separated a busy daily life from the upcoming quiet meditation practice. Through the warm-up exercises, the body was prepared for meditation to take place. A participant reported her experiences of 'with and without' warm-up exercises before meditation: *"A couple of times I did not do warm-up exercises before meditating as I was just too busy then. I went to meditate straight away; later I found that the effect was not as good as I was neither relaxed nor calm... I guess my body was still tense or...my mind occupied by things of the day. After that, I always tried to do some warm-up exercises, even if only just a few movements. (RB2)"* RA7 described her reflection of body experience suggesting that warm-up exercises involved physical aspects and also mental aspects. Warm-up exercises helped to break the chain of ordinary thoughts and to prepare for meditation: *"When practising warm-up exercises or stretching, you need to pay attention to the movements that you are doing and think about what the next movements are....I mean you are forced to shift your mind from original thoughts onto a particular part of your body. Besides, when exercising you naturally focus on the responses your body has, such as tightness. I think warm-up exercises are just like a transition..."*

Another participant emphasized the necessity of warm-up exercises. She believed that first of all, bodies should be relaxed and then the relaxation of mind could be achieved: *"To do warm-up exercise before meditation is somewhat like a gate which helps you to embark for meditation. People with a diagnosis like us definitely have the problem of body tenseness.... Indeed, we always put ourselves on edge whether things are really serious or not...Consequently, we feel exhausted and our whole body aches. When bodies are stiff, meditation is not comfortable at all. Thus, meditation won't last long. Only when muscles are relaxed, then we are able to concentrate on meditation. (RB4)"* RB9 usually did warm-up exercises 3-5 minutes before meditation; he considered this an inevitable part of meditation: *"I think it is too early to meditate if you do not do some light exercises. In temples, meditation practitioners need to do an 'incense-run' in which practitioners walk fast in a circle while incense is burning. This practice of the ritual is rational, so are warm up exercises."*

The previous extracts exemplify the viewpoint of most participants that warm-up exercises and Zen meditation were connected and functioned together in order to reach a better quality of Zen meditation practice.

9.2.3 Summary

Overall, the theme 'Body experience of Zen meditation practice' highlighted the physical experiences regarding Zen meditating. The categories 'Body awareness' and 'Preparation for Zen meditation practice' were perceived as essential components for interpreting their body experiences.

Although not all participants experienced the same thing, these descriptions from these exemplars suggested that if Zen meditation was practised appropriately it could bring the practitioner closer to their body in terms of body positions, muscle tone and to become much more aware of their senses than they were normally unaware of.

9.3 States of mind while meditating

The theme ‘States of mind while meditating’ refers to the different mind states described by all participants. The data for this theme mainly arose from the questions listed on the prompt schedule asking about the ‘very beginning’, ‘during’ and ‘right before’ Zen meditation finished and a question regarding their most impressive Zen meditation experiences (Appendix VI). Three different states of mind during Zen meditation practising emerged after data analysis: ‘The state of engagement with real life’, ‘The state of detachment from real life’ and ‘The state of calm’. The levels of calmness between the three states varied and it deepened from the first one towards the last one. It should be noted that not all participants moved from the first state to the last one sequentially.

9.3.1 The state of engagement with real life

The main feature of ‘The state of engagement with real life’ was that the Zen practitioners were occupied with daily worries while meditating. Almost all participants described this state especially in the beginning weeks. Some participants stayed in this state for a couple weeks or even throughout the whole programme. Features described about this state included a busy mind, easily distracted and boredom while meditating. RA9 said: *“It is really hard to tell you what I am thinking of exactly while meditating as there were just too many trivial things tangled together...My thoughts seemed disorganized or fluttered from one to another...un...such as hunting for a new job, the relationship with my husband, mother in law or do I really have a mental problem (giggling)?...”* Another participant explained the reason she preferred not to do Zen meditation was because she did not gain any peace or tranquillity during meditation: *“You know I am running a nursing home. I used to be overwhelmed by loads of work, despite that I know this is not healthy (low tone)... When meditating I always plan things in my mind such as my budget, schedule of my staff... my brain is full. Believe it or not? The faces of my old residents appear in front of me when I am meditating; I do think meditation suits me. (RA6)”* RA3 recalled her experiences regarding a busy mind: *“When I was practising warm-up exercises at home, I glanced at the floor and found toys scattered. I stopped exercise and started to sort them out ...next I noticed there was dust around the corner then I began to clean up. I was interrupted by things like that...I finally managed to sit, meditating and breath counting for just a second. Then I started to think things that needed to be done before my husband and kids returned. Finally I gave up meditation and went to do something. I deem that that giving my family a tidy home and decent dinners is a housewife’s duty.”* According to these three exemplars, their experiences were bound closely with real lives. It seemed very hard to contain their wondering thoughts.

Distraction is another feature of this mind state in addition to being busy-minded as presented above. RB5 reported: *"I just cannot do meditation long... many things bother me. I left my job after handing in my resignation three times. I need to start from the beginning now. I am anxious to find a way out. I am easily distracted. For example, when I hear steps in the stairway, I am alerted; or when I hear sounds of the TV from the living room, my mind go with them."* RA5 said to the researcher: *"Sorry, I have not practised a lot since I took a place in the Zen programme. Focusing on breathing is so hard. This can only be realized after I tried. For example, sounds of my mobile and computer distract me. I guess this is because my attention is poor. I judge that I am far away from the gate that leads to good meditation."* According to these two exemplars, they were connected strongly to events that surrounded them in real life.

Meditating was boring as reported by some participants. A few participants became clock watchers. RA3 was an interesting exemplar: *"I usually count up to 150 (giggle) rather than repeating from 1 to 10. This is because we are asked to sit for 5 minutes at the first week. I found if I count my breaths up to 150, then it is about 5 minutes so I can finish my daily duty."* RB8 was another exemplar of a clock watcher: *"I feel kind of bored meditating. Maybe I just do not like to meditate ...alone in silence...I feel Yoga is more bustling which I prefer...to be honest, I only meditated about 10 to 12 times in total roughly. I just sat and waited for five minutes to pass. This is simply because I think this was the duty of being a participant of the study."* RB12 told the researcher his feeling about meditation and finding a way to deal with his boredom: *"I feel sometimes I get bored while meditating. Later, I decided to go for a jog. Therefore this week I do meditation and jog alternatively every other day (pointed to his diary). I find this is quite a good balance. Sitting quietly (meditation) is not bad but doing it for two or three days...seems a bit...too much (smile embarrassingly)."* Participants who experienced 'the state of engagement of real life' showed that there was no distance between their real lives and meditating mind state. They were concerned greatly with their daily business, distracted and sometimes got bored.

9.3.2 The state of detachment from real life

'A state of detachment from real life' refers to a mind state of meditation in which the practitioner experienced a period free from daily worries. As presented before, most participants reported that they were annoyed by thinking too much and wanted to stop thinking (8.1.3). When some participants experienced this state of detachment from real life, they were contented as their expectations of Zen meditation were fulfilled.

RA8 reported that he finally had a real rest especially mentally: *"People who have a disease like us are to be pitied indeed. When ordinary people tire they are rewarded with a sound sleep, but not us. Even if I am tired to death my thoughts fly all over... I feel better now when I meditate before I go to bed. My disorganized thoughts are lessened a lot. There is a difference. I feel lighter. When I can*

concentrate on meditation, the feeling of tightness in my chest is lessened...It seems that there is another space which is quieter...I feel my mind has unwound." The feeling of being able to separate things from themselves was reported by another participant: *"Some moments in meditation... you feel...like you do not need to chase after all sorts of things nor be chased by something or someone who puts pressure on you. You have the feeling of being really free. This is hard to describe...You still know that there are things waiting for you and what your duties are. However, you seem not to get involved too much with the stuff especially emotionally. Like, there is something that separates you from daily worries. (RA7)"* RB4 talked about how she managed her thoughts in order to stay away from daily worries as an important skill of meditation: *"I cannot stop my thoughts every time I meditate. I started to learn to watch thoughts come and go. To imagine a cloud is in my mind and then carried away by wind. The key point is to 'watch' your thoughts rather than to think so that your heart will not be pulled along by every single thought..."* RB10 stated that she liked meditation as this was the only time that belonged to her: *"When meditating in the morning before my kids wake up, I find that I am no longer a busy mother but a free individual, even a few minutes is good enough. My life has been too full, too tight..."*

From various backgrounds, these exemplars shared a sense of being released from the pressure of real lives. It appears that by Zen mediation practice, these participants could create a unique time and space for themselves. This mind state of detachment from real life was perceived as apace of peace and quiet.

9.3.3 The state of calm

The category, 'the state of calm', refers to a mind state of meditation featuring a combination of emptiness, calm and delight. RA1 reported: *"I was meditating...Suddenly, I felt as if I was dropped into emptiness, my body disappeared, time became meaningless and even my breathing stopped. I never had had this kind of experience before so I was scared and opened my eyes immediately...it lasted just a moment...then I discussed this with the Zen teacher. She said this was very good. Just keep meditating and do not be afraid... this experience occurred again afterwards but was shorter. Although I want to have this kind of experience, it seems impossible to predict."* RB11 talked about her 'best experience' in the 5th week of the Zen meditation programme: *"The most wonderful meditation experience I had was once when all my attention was on my nose. Only these tiny spaces of my nose left for me to breathe; nothing was left inside me. Everything had been forgotten and even my surroundings were empty. You see, usually you can sense your surroundings like you know where the table or television is even you are meditating... my body was like an empty shell...it was really wonderful."* As described above, absorption in breathing and emptiness were the two main notions that related to the state of calm. RB9 described a similar experience: *"I seemed able to feel the air flowing through each joint at an extremely slow speed; the air even got down to my toes and gently returned to my nose and was exhaled. Each breath was very long. My brain stopped totally at*

that moment. Nothing in my mind...” Likewise, RB10 talked about her experience of peace: *“...disorganized thoughts had stopped and my brain was calm. I may say...breath counting is like an anchor that keeps you stable and still. When I am able to keep staying with my breaths for a period of time, following the wave of breathing, in---out, in---out...it is simple, peaceful and gradually a rhythm develops. This is your own rhythm...”*

In addition to notions of emptiness or calmness, an element of delightful or joyful experience was also highlighted by the majority of participants. RA7 reported: *“Near my home there is a mountain. I used to sit facing the mountain when meditating. The best one I had was once when I opened my eyes I found the world was extremely beautiful. The colours and the lights of the mountain were very bright but soft... I have never seen any scenery like this before...I assumed my perception must be restored by good quality of meditation...”* RB4 developed a habit of daily meditation and she reached 20-25 minutes daily. *“I train myself to stay in a state of stillness as long as I can as it is blissful. I seem to understand why some people said meditation can be addictive...”* Likewise RB7 reported her perception of calmness while meditating: *“The weather is extremely hot these days. I feel meditation makes me feel less irritable. I used to check our air conditioning often to ensure the machine was working...The temperature has become tolerable...I feel my body was much lighter after the practice. This is wonderful and lasted for whole evening.”*

Some of these experiences were unique. However, ideas that were used to express this mind state were similar, such as empty, peace, sense of timeless, and forgetting the existence of self. As RB4 said *“It differs from quiet; like we may say that it is quiet in the remote countryside. It is more like a kind of deep peace or calm inside instead of outside ...”* This state of calm was distinguished from other states by its unique features.

9.3.4 Summary

Overall, these three mind states were divided by the characteristics illuminated by participants. It should be noted that these three mind states are not clear cut but rather overlapped. Generally, the three states of mind moved from ‘The state of engagement with real world’ towards ‘The state of calm’, although it was not a certainty.

9.4 Benefits of Zen meditation practice

Most of the data that support this theme ‘Benefits of Zen meditation practice’ were mainly derived from the question about any changes in life between the very beginning of the Zen programme and now (Appendix VI). The participants reflected on this question and revealed a wide range of understanding. Two categories emerged: less pressure with daily life and more acceptance of being a GAD patient.

9.4.1 Less pressure with daily life

'Less pressure of daily life' were words adopted directly from the words of participants and it also was an element within the descriptions of the majority of participants. RB10, for example, reflected on her daily life and reported that she felt she managed daily stress better: *"When I was an employee life was stressful, but I felt worse when I became a full time housewife. I was always exhausted; running out of patience with my kids. Yet I feel less pressure now. It seems not so difficult to look after my kids. I feel more relaxed recently; maybe my disease is getting better and meditation just brings me a peaceful moment nearly every morning. When my kids want company I can be with them. Things become simpler to me...we used to eat hot pot for dinner as I had no energy to prepare an ordinary dinner. Now, I can have 3 dishes for my family...less hurry in heart, clearer in brain."*

Similarly, RB2 talked about her experience: *"There are some differences. As an accountant, I used to feel anxious around the middle of each month as this is the due day. Now, when the due day is approaching I still feel a bit of tension, but the pressure is not as great as it was."* RB4 described the change of her attitude towards Zen meditation as a result of feeling less rushed: *"I questioned myself ... 24 hours a day was not long enough for me to do my work. How can I find a time to practise meditation? Yet, now I think the other way around (smile). Anyway, there is definitely a list of unfinished business waiting for you as long as you are alive. Why not allow myself to have a 10 minute break..."*

Some other participants provided details regarding less pressure as well. For example, RA4 found herself able to manage things in a different way and felt life became easier: *"I used to yell at them (children) or beat them, especially at meal time because they were disruptive and had bad table manners. Now, I tell them "you have 5 minutes to finish your dish" before I take any action. This was good for them and especially good for me too. I feel more patient."* RA7 mentioned about her benefits since practising meditation: *"I think my mind is calmer and my concentration is improving. For example some books I was not able to read as I ran out of patience but I can read them now. I feel my thoughts are clearer. When watching a Buddhist master explain Scriptures on the TV, it seems easier to follow... even watching the channel about the stock market is more lucid. It likes there is a light in my brain; things appear brighter rather than messed together."* RB9 reflected on some changes since practising Zen meditation: *"I am less afraid to attend meetings. I used to be very nervous even if it was just a routine meeting. I would run to the toilet continually. I still go to the toilet now but the frequency is reduced which is far better..."* He also talked about his habit of making appointments: *"I used to ride (motorbike) quite fast. This is a habit actually. It is impossible to be late but I just want to be quick, quick, quick. Now I think if I am late by 5 minutes, my friends will still be there. Similarly, if my friend is late I'll wait."* Through Zen meditation, the participants perceived less pressure psychologically, leading to a change of attitude when facing their daily life.

9.4.2 More acceptance of being a GAD patient

The category 'More acceptance of being a GAD patient' refers to the reflection of some participants reporting that they were not struggling so much to deal with GAD but rather to accept it. This is an attractive finding because almost all participants who came to take part in this study aimed to eliminate their disease. After a period of Zen meditation practice, some participants described that they had discovered different aspects of perceiving the disease (GAD). RA7 said: *"I used to think how good it would be if I could exchange my head, then all the problems should vanish once and for all. My father suffered from depression but I came to know this after he passed away. His image came to my mind quite often when meditating. I came to realize why he acted like that when he was alive... Later on, I think my neurosis must be part of his heritage... Not all good, but not all bad."* RA1 thought that due to the anxiety tendency of her personality this helped her to overcome difficulties in some way. For instance, rushing and consider everything in detail in advance are characteristics of an anxious personality: *"In addition to housework, I needed to look after my three children. My elder daughter was only two when my twin boys were born. I think I was then trained to be rushing and rushing by the situation at that time. Now I want to slow down my pace by learning meditation... Come to think of it, when my kids were small I had to be quick or I could not survive. This is the main reason why I got this disease, I think... When my mind gradually calms in meditating, some memories flash back in my mind as a time of hardship. Yet, these were the most meaningful..."* Both RA7 and RA1 recognized that their inherent nature regarding GAD held positive meaning in their life.

RB4 talked about her experience of acceptance as a GAD patient. She described perfectionism as a part of her character, and how this affected her family relationships: *"Urging myself to pursue a harder goal is a stubborn habit and it also affects relationships widely. For example, quarrels happen between me and my kids often...one of the rewards of my pursuing is to be drained, unhappy and depressed...I have to admit that I do have some kind of mental illness (silence). For people like us, anxiety is easily triggered by any non-essential things... Meditation helped me to realize something. Due to the deeply peaceful and rested experience while meditating, I find that when I do not push myself so hard, the tolerance of my son is greater..."* RB1 reflected on the relationships about his working attitude, GAD and meditation: *"While working, I require myself to reach the highest standards. I take over things that my colleges avoid...Finally, I was sick. I told my boss everything honestly...He kindly offered me one year's leave although no salary. Every time when my meditation starts, the question of why I am sick comes to me immediately and repeatedly as I am a good person. My sister said GAD was a warning which pointed out that I've abused myself. When I acquire a moment of calm in meditation, I agree with my sister as I had not enjoyed a peaceful moment for a long time..."* RB12 who was also an employee told a similar story: *"I decided to return Taiwan from China where I had a higher position and better salary. I doubted this decision often... After a period of meditation, things become clearer. Having this disease may be not all bad*

because it contributed to this decision. At least my wife, kids and mom are all happy as they can see me every day now.”

For the above exemplars, more acceptance of being a GAD patient brought different a viewpoint on the disease and this benefited them in a particular way; as a participant said: *“You will no longer spend a lot of time pondering on what I can do to get rid of it or spend a fortune on alternative therapies trying to cure it. Once you are not fighting against it, energy is preserved. Just follow what the doctor said and do meditation so your life can move on.”* (RA8).

9.4.3 Summary

In summary, under the theme ‘benefits of Zen meditation practice’ the majority of participants reviewed what and how benefits were attained through Zen meditation practising. In addition to the two categories of ‘Less pressure with daily life’ and ‘more acceptance of being a GAD patient’, relief of GAD symptoms was also noted by some participants, e.g. as improving sleeping quality, weaning off sleeping pills. As the following reported: *“I think Zen meditation may help me to have a deep sleep rather than a shallow one. Stopping ‘Stilnox’ is the best”* (RA7). *“I have stopped pills for 2 weeks now. It happened naturally. One night after meditating I felt relaxed. I went to bed and fell sleep straightaway.”* (RA4). *“...dreams are decreased which is so nice...”* (RA1). It should be noted that although these changes happened after they attended the Zen meditation programme, this can not be concluded as a causal effect between the Zen meditation and the benefits. As a participant said: *“These changes have happened slowly. You can sense the changes and feel that Zen meditation has worked on me in some way. However, meditation is not like medicine; it is not like having an anti-fever pill, you can expect that a fever will come down around 40 minutes later...”* (RB12). The majority of participants noted that these changes might not all be credited to the Zen meditation practice. Yet, Zen meditation was regarded as a contribution to the benefits.

9.5 Debriefing and reflection on individual interviews

Based on the participants’ diaries (4.11.4) and field notes (4.11.5) kept by the researcher, the researcher reflected on the completion of individual interviews. Comments regarding obstacles to Zen meditation discussed here.

9.5.1 Comments regarding obstacles

Obstacles to Zen meditation practice refers to different kinds of barriers mentioned by the participants when reviewing their experience. Several related conditions such as physical and psychological barriers, children (see below) and relationships (9.1.2) were involved. However, only the physical and psychological barriers are presented here to avoid the repetition of findings between focus groups and individual interviews.

Physical barriers

Physical barriers refer to conditions that hindered the practice or delayed the progress of Zen meditation as reported by most participants. A wide range of physical complaints were stated of which leg pain and numbness and fatigue were the most commonly reported. RB3 showed the greatest concern: *"I stop meditation because of leg numbness, so I can extend my legs and move them up and down for a while. I just worry about the circulation of my legs as I am old..."* Most participants encountered problems of leg numbness or pain after meditating for a certain period of time. RB4, however, held a different attitude to the numbness problem: *"Leg pain or numbness will happen, surely. The point is whether the duration between sitting meditation and sense the discomfort to be prolonged or not..."* Generally, leg pain and numbness stopped some participants from longer practice. Fatigue was another common barrier reported by the majority of participants. *"Actually, I enjoy meditation and wish to do it more. Yet, the kids stick to me although my husband is willing to look after our kids. Consequently, I can only do it once in the morning. Initially I tried to practise meditation after my kids went to bed in the evening but I was just tired. I find there is no delight at all when meditating in a fatigued condition."*(RB10). Likewise, RA7 reported: *"I do not practise meditation in case of tiring as it appears to have no benefits. I think meditation needs energy as it requires your full attention. It is different from just resting or relaxing."* RB4: *"Meditation is good to quiet my mind..., but I only do mediation when I have energy. I found that I dozed not long after meditation practising if I am weary..."* These participants acknowledged that fatigue hindered them in practising Zen meditation as no benefits could be perceived.

Psychological barriers

Psychological barriers refer to various psychological situations that prevented some participants from practising Zen meditation or influenced the effects of meditation. Two of the most common barriers reported by some participants were 'in a hurried mood' and 'in a conflict situation'. Some participants found that when they practised meditation in a rush, then no enjoyment could be received. RA3 said: *"Maybe my attitude is not quite right as I treat meditation as a task or a routine and want to finish it as quickly as possible. I think under this circumstance, Zen meditation turned into a burden for me rather than a time of break from busy life."* Similarly, RB10 reported: *"I do not feel relaxed or pleasure if I force myself to do Zen meditation in a rush. I had tried to do meditation three times a day ...The one in the afternoon did not feel as good as the other times. I guess this is because I slotted meditation in a tight schedule."* As presented above, practising meditation in a hurried mood seemed to bring no benefits. RA7 illustrated her understanding regarding this: *"I urged my brain to empty fast but it just cannot...I felt I went backwards that the feeling of relaxation vanished silently..."*

A conflict situation was another psychological barrier. Some participants recalled some situations that they neither felt peace nor calm, but rather stressed. While reading her diaries RB4 said: *"That*

week I was upset as I had the problem with my previous employer... I did meditation, but I ended up with more stress. When you need to go for something, then do it. Do not force yourself to meditate if you do not want to." Similarly, conflict situations were identified by RA1 when she started to be an election assistant: *"If you just need to handle many things and do not set your heart on meditating, you should get up..."* Life events were a factor that impeded concentration or hindered progress and arose across conflict situation. Then, meditation would not be of benefit. RA3 revealed her ambivalent attitude towards meditation when she explained why she only practised twice in that week based on her diary: *"I am rigid...I must finish housework before meditation...so no time for meditation because housework never ends. I just feel that there is no point to just sit (meditate) and develop irritation gradually."* Another participant shared frankly: *"I used to keep myself busy... This is disadvantage sometimes I know. Zen meditation appears to do nothing and just to sit which I just cannot stand. Honestly, the longer I sit the greater anxiety I feel. There is a tiny sound whispered inside saying 'get up and get your hands on work'..."* (RA6). Accordingly, it seems that when Zen meditation caused a conflict for participants it is because of a situation or a habit, and no benefit was received.

9.6 Overall summary

A wide range of experiences during the process of the Zen meditation programme were described by all participants. Consequently, four themes and related sub categories emerged from the individual interview data and were interpreted in this chapter. The first theme 'Separation' emerged whereas, the rest of the themes, 'Body experience' 'States of mind' and 'Benefits of Zen meditation practice' were interwoven within the transcripts. Compared to the focus groups where expressions were easily influenced by other participants, the individual interviews provided more privacy with an unhurried atmosphere so that participants' thought processes could be revealed. The next chapter discusses how findings and results of this study relate to the existing literature.

CHAPTER X DISCUSSION

10.0 Introduction

After evaluating the findings and reflecting on the literature review, issues related to answering the research questions are presented. Then, new knowledge as study outcomes is addressed. Next, reflections on the study process are presented as many issues arose during the study process. Successively, linking the studying findings with interpretative phenomenology is highlighted because it was the framework that underpinned this study. Finally, methodological issues and research limitations are examined.

10.1 Answering the research questions

The three research questions that the researcher intended to answer were ‘What are participants’ experiences regarding practising Zen meditation?’ ‘What is the process of participating in Zen meditation?’ and ‘What is the effectiveness of Zen meditation as an intervention to a group of GAD patients?’ (2.6). Overall, the first two questions can be answered fully and the last research question was answered to a certain extent because measurement was by the RSTAI and the study was not a RCT. However, insight into the last question is provided. The sequence of discussion below corresponds to the research questions.

10.1.1 Participants’ experiences regarding practising Zen meditation

This research question was answered mainly by individual interviews (9.1-9.4), covering a wide range of experiences such as the relationship between Zen meditation and self, body experience and mind states believed to be beneficial as identified by participants. Moreover, on reflection of the entire individual interviews, the obstacles to practising Zen meditation were also identified (9.5.1). Data from focus groups also contributed to this question where experiences of Zen meditation practice were described. Overall, compared to the literature, answers to this research question were convergent with the previous studies, including “The state of calm” (9.3.3), ‘Expectation of Zen meditation regarding GAD’ (8.1), ‘Separation’ (9.1) and ‘Benefits of Zen meditation practice’ (9.4) and side effects (9.5.1).

‘The state of calm’ -a core feature of Zen meditation experiences

First of all, the category ‘The state of calm’ (9.3.3) was the finding that featured distinctively as a unique quality of Zen meditation. Moreover, it most paralleled the literature in three ways as described below.

Firstly, as in 2.2.5, one of the three features of current meditation study is trying to identify the essential elements shared across various types of meditation practice, named ‘authentic’ qualities. ‘Thoughtless awareness’, ‘focusing attention to the present moment’, ‘slowing mind’s internal

dialogue’ and ‘experiencing perceptual clarity and peacefulness’ are authentic traditional qualities (2.2.5). In this study, based on the participants’ experiences, the qualities of ‘The state of calm’ matched ‘authentic’ qualities. For example, some participants experienced a moment of extreme tranquillity in which they were only aware of breathing and thinking stopped (9.3.3). ‘The state of calm’ is similar to several characteristics of stage IV in Austin’s meditative state of consciousness (Table 2-10), named ‘deeper level reached during concentration and receptive meditative modes’. When comparing these concepts, common characteristics shared were the ability to maintain ‘external or internal’ types of awareness, transient thoughts, no thoughts, transient experience of boundary of self and sense of time and space, and a feeling of becoming continually ‘one-pointed’ as described in Table 2-10. Likewise, in the Chinese literature, Master Sheng Yen (1995, page113) pointed out four stages of Zen meditation (2.2.4) in which features of concentration and stillness are close to the characteristics of ‘The state of calm’ when the mind was on hold and breathing is as long as a thread.

Overall, this study supports the idea that the particular state of Zen meditation featuring calm, peacefulness, thought-less and awareness exists. This state of calm was the most impressive experience of participants who had been through it. Moreover, it implies that the efficiency of (Zen) meditation relies on the ability of reaching good quality Zen meditation or a certain state of mind.

The most common experiences shared among qualitative meditation studies

This researcher compared experiences of Zen meditation in this study to other qualitative research (2.2.7). Consequently, a number of similarities were identified including ‘Expectation of Zen meditation regarding GAD’, ‘Separation’ and ‘Benefits of Zen meditation practice’. However, as noted in 2.2.7, there were no equivalent studies to match this study; either types of meditation or the nature of participants differed.

Three themes reported in this study ‘Expectation of Zen meditation regarding GAD’ (8.1), ‘Separation’ (9.1) and ‘Benefits of Zen meditation practice’ (9.4) correspond to the themes in Finucane & Mercer’s UK study (2006). For example, Finucane & Mercer (2006) reported a theme ‘perceptions, motivation and expectation’ in which the most common motivations for participants to participate in their study were the chronic problems with anxiety and depression, as a self-help strategy, and to avoid medication (2.2.7). The theme, ‘perceptions, motivations and expectation’, was comparable to a theme in this study ‘Expectation of Zen meditation regarding symptoms’ (8.1). However, there are differences in the content of the two themes; for instance, avoiding medication was the top expectation for the participants in Taiwan whereas in the UK only one participant worried about medication (Finucane & Mercer 2006). In Taiwan, participants relied on the treatment effects of medicine but were very resistant to the side effects of medicine for two reasons. Firstly, group compositions were different. In this study the group composition was homogenous in terms of

diagnoses whereas in Finucane & Mercer's study (2006), diagnoses of participants were mixed. Heterogeneous composition of a group might lead to data in less common (*composition of focus groups* 3.1.3). Secondly, the nature of patients with GAD might be an influential factor; that is, according to the top two criteria of diagnostic criteria of GAD (Table 2-3), patients with GAD tend to worry too much. Therefore, the negative side of medication was likely to be a great concern. In this study, the expectation of Zen meditation was depicted specifically (8.1), offering an insight through which the meaning of Zen meditation to these participants were revealed (10.2.1).

Similar concepts were noted between 'being in a group' (Finucane & Mercer 2006) and 'Separation' (9.1) where almost all participants acknowledged that participating in the meditation programmes group was supportive and meaningful. However, there are differences in detail under these two themes. For example, in this study participants felt relief as they could talk about their illness freely and thereby connected to other participants (9.1.1) (8.4). In this kind of group dynamic, participants could also reflect on the relationship between self and Zen meditation (9.1.2). On the other hand, in Finucane & Mercer's study (2006) several participants expressed relief about not having to talk about their personal problems (2.2.7). It appeared that the explanation of why to attend a meditation programme differed. Social stigma of mental disorders probably is at the core (2.1.1). In western society, participants may feel content when they are not asked to talk about their illness, while in this study, participants were pleased as they could talk freely about their disease and this kind of chance would not happen anywhere outside the hospital (8.4.1). In addition, group composition may have played a part. A mix of depressed and anxious participants were selected in Finucane & Mercer's study, but only GAD patients were selected in this study. Also, the conduct of the meditation programme varied. There were no focus groups conducted in Finucane & Mercer's study while focus groups were conducted after the Zen meditation programme.

The other theme were 'the benefits' reported by Finucane & Mercer (2006) (2.2.7) and 'Benefits of Zen meditation practice' (9.4). had many parallel concept; for example 'increase ability to relax', 'learning to take time out' and 'less pressure with daily life' (9.4.1). Other equivalent concepts were 'more acceptance of being a GAD patient' (9.4.2) and 'greater self acceptance' (Finucane & Mercer 2006) (2.2.7). A minor difference existed in that Finucane & Mercer's (2006) listed their concepts individually (2.2.7) while this researcher attempted to simplify concepts to two categories (9.4). This was a result of following Benner's phenomenological data analysis procedures (3.2.6) in which intents and meaning are emphasized.

Apart from the discussion above which resulted from the comparison of Finucane & Mercer's study (2006) with this study, several benefits of meditation reported in Cohen-Katz et al's work (2005) were also found including increased relaxation, self-acceptance, self-awareness, self-care and improved sleep (2.2.7). Although the interpretation between these studies is different, the nature of

benefits was alike. This agreement of benefits across different studies confirmed that one of the major advantages of (Zen) meditation was a psychological benefit such as self-awareness and less pressure with daily life. These findings echo the current literature review 'psychological aspect of meditation effects' in 2.2.6 where 'Self awareness' 'Altering information processing' and 'Emotional arousal' were addressed. Overall, this theme, 'Benefits of Zen meditation practice', supported the view that through good quality meditation practice, psychological benefits can accrue.

To summarize, due to the advantages of applying a qualitative approach, the first research question, 'what are participants' experiences regarding practising Zen meditation?', was answered completely from a range of perspectives. Thereby, diverse experiences of Zen meditation practice could be understood and were discussed in the context of the existing literature.

10.1.2 The process of Zen meditation practice

For answering the second research question, 'What is the process of participating in Zen meditation?' findings from both focus groups and individual interviews were used. Nevertheless, focus groups contributed more to this question as the focus group approach was purposely designed to trace the Zen meditation process in terms of longitudinal aspects (4.2). Consequently, the theme 'The process of Zen meditation' (8.2) emerged from focus group data and contained three categories 'Struggling to reach a state of calm', 'Signs of improvement' and 'An individual process' (8.2). Findings from individual interviews related to this question were under the theme 'States of minds' (9.3). It was noticed that focus group data provided a perspective over time while individual interviews provided a cross-section or deeper interpretation regarding experience of Zen meditation process. In this way, data from focus groups and individual interviews supplemented each other (3.6) as detailed next.

'Struggling to reach a state of calm' (8.2.1), 'Signs of improvement' (8.2.2) and 'An individual process' (8.2.3) are categories described in the process of Zen meditation practice (8.2) from a longitudinal aspect. Through chronological descriptions, participants showed their continuous efforts to make progress over the six week programme. 'Struggling to reach a state of calm' (8.2.1) was a common phenomenon that was comparable to Finucane & Mercer's findings (2006) (2.2.7). Along with the accumulation of Zen meditation practice, participants gradually identified signs of improvement including 'finding a personal way to enter a state of calm', 'changing the sense of time' and 'adjusting the goal of Zen meditation practising' (Table 8-3); of which 'changing the sense of time' was a similar concept (Table 2-10) to 'sense of time and space' (2.2.4). 'Adjusting the goal of Zen meditation practising' was parallel to Finucane & Mercer's (2006) findings in which 'adapting flexible attitude towards practice' were noted (2.2.7). As discussed above, parts of themes and categories were found in existing literature. However, 'finding a personal way to enter a state of calm' and 'An individual process' are new and are further discussed in 10.2.2. Overall, findings from the focus groups indicated that the process of Zen meditation is one that requires continuous efforts; there are signs that can be

recognized as progress.

An individual perspective of the process of Zen meditation was gained through the interviews: ‘The state of engagement with real life’, ‘The state of detachment from real life’ and ‘The state of calm’ (9.3). Given that ‘The state of calm’ was discussed previously in 10.1.1, ‘The state of engagement with real life’ and ‘The state of detachment from real life’ are discussed here. ‘The state of engagement with real life’, compares to the Chinese literature, ‘roaming’ (Shen-Yen 1995, page 113) (2.2.4) which refers to a busy or wondering mind when Zen meditating. Secondly, ‘The state of detachment from real life’ might parallel the state of concentration in Shen-Yen’s (1995) stage theory. When compared to western literature, these two categories, ‘The state of engagement with and detachment from real life’, are likely to be found between stage I and the deeper level of stage IV of Austin’s framework (Table 2-10). In other words, participants shifted within a range of consciousness states; from one end where their concentration was interrupted by daydreams and participants were aware of flows of perceptions, thoughts and images to the other end where absorbing, the feeling of becoming one-pointed, sense of time, place and bounded self, were relatively minimized (Table 2-10). ‘The state of engagement with and detachment from real life’ seem to be a transition function that helped participants to improve their mind states from the very beginning. Thus, to identify these states (9.3.1-9.3.2) is necessary because they are the most common experiences before reaching the state of calm (9.3.3). Additionally, Zen meditation practitioners can be prepared if they know what may happen in advance.

Although parallel ideas exist between this study and other studies as discussed above, they are not exactly corresponding. Shen-Yen’s (1995, page 113) theory is founded on religion; Austin’s (1999) hypothesis is based on a neurological perspective but the basis for this study is participants’ lived experience. Findings from this study provide a more subtle gradation of Zen meditation progress and particularly in participants’ words. For example, several ‘signs of improvement’ were able to be identified and ‘the state of engagement with and detachment from real life’ were distinguished. These contribute to the study’s unique findings.

To sum up, the second research question was answered completely in terms of depth and breadth. Findings from focus groups depicted the progress of Zen meditation over time and showed the diverse phenomena of Zen meditation practice. As to findings from individual interviews they revealed the participants’ minds regarding how they understood the progress of Zen meditation.

10.1.3 The effectiveness of Zen meditation as an intervention to a group of GAD patients

The third research question explored the effectiveness of Zen meditation as an intervention for a group of GAD patients (2.6). In order to answer this question, the anxiety scale RSTAI was applied to show changes in anxiety levels over time (3.3). However, to generalize results of this

measurement was not the purpose but to form a comprehensive interpretation of this study's findings by integrating with the qualitative approaches (3.3.1; 4.2).

Given that there were no significant differences in the Trait Anxiety Scores and the State Anxiety scores at baseline between Group 1 and 2, this allowed the RSTAI data of the 2 groups to be pooled together. Consequently, 95 % CI for differences showed that the Trait Anxiety Scores improved significantly throughout the measurement points in both groups, whereas the State Anxiety Scores did not showed significant improvement (Table 7-6).

Compared to the literature, the above results agree with two meta-analysis papers, Grossman et al (2004) Arias et al (2007) (Table 2-11), and parallel the previous study conducted by this researcher (Appendix I) and Lee et al (2007) (2.2.8); that is, Zen meditation reduces anxiety symptoms especially on Trait Anxiety. These results support the interpretation of the individual interviews. For instance, benefits reported by participants were 'Less pressure with daily life' and 'More acceptance of being a GAD' (9.4). The features of these benefits addressed the changes of attitude towards self and life and these were generated gradually over the period of six week Zen meditation practising. This suggested that Zen meditation affected more on fundamental personality trait as State Anxiety Scores were reduced. On the other hand, Zen meditation might affect less on a temporary mood state as the State Anxiety Score reduced at some points but not a significant difference.

Considering the qualitative findings and quantitative results together, a broad perspective was gained. There are several factors of Zen meditation experiences that need to be reflected on before answering this research question. Firstly, the qualities of Zen meditation practice among each participant were not exactly the same. For instance, there were diverse levels of mind states as shown in 'The states of mind while meditating' (9.3) and different 'Body experiences' (9.2) were perceived among participants. Secondly, obstacles that hindered participants to practise should be noted, especially for some participants where Zen meditation became a stressor for them (9.5.1). Thirdly, researchers use various anxiety scales to measure anxiety symptoms as an outcome of a range of interventions. The theoretical assumptions that underpin scales are upheld by scholars. However, participants actually had their own views or expectations that to judge the effectiveness of interventions. For example, have a sound sleep or stop thinking (8.1) were used by most participants to judge the effectiveness of Zen meditation. In other words, the judgement about the effectiveness of Zen meditation between participants and researchers are not identical.

To summarize, seeking the answer to the third research question, 'What is the effectiveness of Zen meditation as an intervention to a group of GAD patients?', the statistics data helped to develop a picture of change and to identify the type of anxiety most affected by Zen meditation. Overall, Zen meditation as an intervention to a group of GAD patients was effective in decreasing anxiety

symptoms especially trait anxiety. Putting quantitative and qualitative data together, a new perspective on the effectiveness of Zen meditation to a group of GAD patients unfolded; Zen meditation has its potential on the effectiveness of GAD patients in terms of trait anxiety. Nevertheless, the themes and categories generated from the qualitative approaches should be considered i.e. the expectations of participants (8.1), the states of mind while meditating (9.3) and the obstacles of Zen meditation practice (9.5.1).

10.1.4 Summary

The three research questions were answered. Many facets of the experiences of Zen meditation practice were found. The process of Zen meditation was interpreted and compared in the context of existing literature. Finally, the effectiveness of Zen meditation was examined based on both qualitative and quantitative evidence.

10.2 New knowledge as study outcomes

Several findings of this study are new to the literature and can be added to the understanding of Zen meditation, including expectations of Zen meditation, an individual process, body experience, the concept of obstacles and the spiritual influence of Zen meditation.

10.2.1 Expectations of Zen meditation - the meaning derived from the participants

Ambivalence towards meditation, crave a good sleep, stop thinking, and regain memory and concentration were four expectations specifically identified by almost all participants under the theme 'Expectation of Zen meditation regarding GAD symptoms (8.1). However, these expectations were distinguished from the original purpose of Zen meditation presenting a unique perspective that derived from participants' lived experiences of illness.

Historically, Zen meditation aims to cultivate spiritual growth (2.2.1; Table 2-8). These expectations, however, showed participants' desire for recovery from their chronic disease, GAD. Zen meditation was regarded as a coping strategy or an instrument that might help them to fight against GAD rather than for personal growth. The way participants connected Zen meditation with themselves was from the basis of their own suffering experiences of GAD instead of a religious position. Their worries about side effects of medication, chronic insomnia, relentless apprehensive thoughts and deteriorating faculties formed a part of their lived world and shaped their perspective regarding Zen meditation. Additionally, when participants reflected on the Zen meditation programme as a whole in individual interviews, similar concerns were pervasive in the text as can be seen in the category, 'Examining the relationship between Zen meditation and self' emerged (10.1.2). In other words, these expectations were the basis on which the relationships between Zen meditation and participants were built. This could influence their motivation to practise Zen meditation in the future (9.1.2).

In interpretative phenomenology, Heidegger argues the idea that people are subjected to their situation and embodied in their social context; all experiences are interpreted by humans and are arranged by our presumptions which are concealed within the context. This study corresponded with the tenet of Heidegger's philosophy; people construct their world via interpreting the meaning of lived phenomena (Lopez & Willis 2004) (2.3.1). The way these participants described their Zen meditation experiences was echoed in their lived experiences. Through their understanding, the meaning of these expectations was normal, free from excessive worry and has a nice sleep. All these were different from the Zen literature (2.2.6) and therefore are unique as they derived from the participants' lived world.

10.2.2 An individual process

The finding that the improvement of Zen meditation differs from one participant to another in many ways is new to the literature, although while Sheng Yen (1995, page 39) mentioned in his book about individual difference, no further details were discussed. 'An individual process' refers to the fact that there was no steady improvement or a guaranteed linear progress (8.2.3). Some participants were able to move but some remained stagnant (8.2.3); few participants who reached the state of calm once or twice could achieve the same mind state from then onwards (9.3.3).

Generally, the progress in Zen meditation practice was shown in 8.2.1 and 8.2.2 where participants could identify signs of improvements. However, there was no guarantee of steady progress but rather it fluctuated and was individual. For example, '*finding a personal way to enter a state of calm*' (8.2.2) indicated that different approaches were adopted among participants. Moreover, life events of an individual participant was an important factor that interfered with the process and the quality of meditation. For instance, when a participant handled too many things, the process of Zen meditation was influenced negatively or stopped as discussed in 9.5.1.

The idea that no linear progress path in Zen meditation is reported by Austin (1999), but he presented it from a neurological perspective. The characteristic of unstable progress is good for Zen practitioners to know in advance so that they are not frustrated when practising. The contribution of this finding provides a micro, personalised view of the progress of Zen meditation compared to quantitative research where a macro view is highlighted and data presented are mainly in numerical forms. At the same time, gradations of progress were revealed in 8.2; for instance, various signs of improvement and struggling were perceived. Given that there is no standard way to progress, giving up comparisons with others and allowing a personal way to develop, can be suggested to practitioners. For GAD patients, this might free some from worrying as to how they are doing when compared with others.

10.2.3 Body experience of Zen meditation—an immediate feedback and a gateway to start

Body experience refers to the body responses to Zen meditation, including *body awareness* and *preparing for practise Zen meditation* (9.2.1-9.2.2). First of all, the subtle awareness of body position, muscle tension, breathing movement and senses were noticed by participants but these have not been reported before (2.2). Two reasons probably explain why body experiences of Zen meditation were disregarded. 1) Historically, Zen meditation is a means of Zen Buddhism; that is, spiritual awakening or enlightenment is the goal of Zen meditation. Thus, the physical aspect is less important (2.2.1; Table 2-8). 2) Warm-up exercise is usually integrated into meditation as a whole and therefore it is overlooked especially in quantitative study (2.2.8; Table 2-11). Nevertheless, body awareness is important because it is immediate and bodily feedback for participants should be addressed. As a record in RA4's diaries "*Today's practice...I could hear tree leaves rub against each other by wind...so joyful. I was brought back to the time of my school age...so free*". In brief, body awareness impressed participants as it was so close to them and immediate. Secondly, by carrying out warm up exercise, bodies could be relaxed and minds could be separated gradually from a busy life (9.3.2). In other words, practising warm-ups functioned as a gateway that led to a better preparation for Zen meditation to commence.

To sum up, body experience was a unique way that connected participants and Zen meditation together. This has not been discussed in the literature (2.2), but is crucial for meditation practitioners. When Zen meditation helped participants to become bodily and environmentally-aware, these experiences expanded their perception. Based on this study, an appropriate warm-up exercise is recommended before conducting sitting style Zen meditation.

10.2.4 The concept of obstacles

Physical and psychological barriers were obstacles identified in this study among which psychological barriers is a new finding (9.5.1); as to physical barriers, similar ideas were reported by Sheng Yen (1995, page 24). Psychological barriers, 'In a hurry mood' and 'in a conflict situation', prevented participants gaining benefits from Zen meditation and for some participants even increased tension. The unprepared or unsuitable psychological conditions led to difficulties in Zen meditation practising. 'Walking Zen' meditation adopts walking to replace sitting meditation (2.2.3) and could be applied in these circumstances. However, identifying psychological barriers might inform the learner about what they might face and how to manage them.

Psychological barriers provide a possible rationale as to why Zen meditation does not work for some participants or helps to explain why some participants stop practising Zen meditation. Accordingly, it seems a gap exists between the lived worlds of participants in this study and the world which traditional Zen meditation practitioners pursue (2.2.1); that is, participants with GAD struggle in earthly lives while Zen meditation aims to reach a state of 'no-thought' or 'inner nature' (Table 2-8)

(2.2.4). To recognize the gap probably offers the chance for a designer of a Zen meditation programme to learn to balance the discrepancies based on participants' situations. On the other hand, this also suggests that some people may not suit Zen meditation.

10.2.5 Spiritual influence

The last new discovery of this study is the spiritual influence of Zen meditation (8.3.1). The belief that a soul may escape away or be possessed by an evil spirit is widely held among Taiwanese. In fact, these beliefs were not only revealed in focus groups (8.3), but also were found in the recruitment process (Table 6-6 & 6-7); that is, worrying about being possessed by evil spirits kept some potential participants from participating in this study. Evil influence is believed to be much rarer compared to good influence. However, due to the concern about the negative spiritual influence, strategies were applied by participants to avoid unwanted influence, such as maintaining righteous thoughts while meditating, choosing an appropriate time and place (8.3.1). The meanings of this category are from two perspectives, the cultural perspective and the mental health perspective.

Firstly, this unique finding reflects the cultural context of the study site, suggesting that for the Taiwanese, Zen meditation has both good and evil influence on a human's soul. The background of Taiwan might explain this special cultural belief; that is, the two main religions in Taiwan are Taoism and Buddhism (1.2). This religious feature has an impact on health belief behaviour. For example, folk therapy is regarded as an important resource for Taiwanese across various areas but not psychotherapy. Polytheism is part of Taiwanese culture; there are a number of gods who are separately in charge of various aspects of people's lives including academic performance, fertility and life and death (Yeh & Lin 2006). Maintaining balance among heaven, earth and human is essential for the lives of the Taiwanese. An evil spirit will come if the balance is lost; restore the balance and one regains health (Yeh & Lin 2006). Since this cultural context pervades in Taiwan, Zen meditation involves the idea that a good and evil influence on a human's soul is natural; specifically, Zen meditation is regarded as a way to improve spiritual growth and health.

Secondly, another explanation related to 'spiritual influence' probably refers to adverse mental responses (8.3.1). In the literature, mental problems such as depression, confusion, and anxiety were reported (Otis 1984; Shapiro 1992). However, these terms are not familiar to ordinary Taiwanese. Thus people Taiwan use the terms they are familiar with to refer to something that is difficult to understand. Thereby, the category 'spiritual influence' is used to describe a person who behaves eccentrically. The ideas of the term 'spiritual influence' are easily accepted by Taiwanese as it fits the social context in Taiwan.

10.2.6 Summary

Through the discussions above, the new knowledge in this study contributes to the body of

knowledge generally in two ways: 1) Unlike the design of quantitative study that lays its foundation on what is already known, the findings of qualitative research provide new perspectives and help to have an insight on the gap in knowledge. For example, 'insight of expectation of Zen meditation' suggested a new way to re-consider the effectiveness of Zen meditation and 'the concept of obstacles' indicated a possibility that Zen meditation might not work equally on each individual. 2) The findings in this research can be used as guidance to inform practitioners in advance; for example, to acknowledge 'the individual process' that tends to occur during Zen meditation.

10.3 Linking the studying findings with interpretative phenomenology

The idea that integration between the study findings and key tenets of interpretative phenomenology should be explained is emphasized in research where phenomenology is claimed (2.3.5; 3.8.5). In this way, the findings can be underpinned theoretically and study rigour can be enhanced. Two main tenets 'the hermeneutic circle' and 'revealing the meaning of experience of Zen meditation practice' among the participants are discussed here in order to avoid the common criticism concerning the weakness of interpretative phenomenological nursing research, such as misrepresentation and superficial inclusion (2.3.5).

10.3.1 Linking with the hermeneutic circle

The hermeneutic circle (Figure 2-1) is an important concept for interpretative phenomenology (2.3.3). Several key elements are integrated in the circle: whole, part, pre-understanding, understanding, text, dialogue, sub-interpretation and pattern of interpretation. To link the hermeneutic circle with this study, key elements were dealt with deliberately in this Ph D. so that the original philosophical notions derived from interpretative phenomenology could shed light on the process of data analysis and produce study findings guided by the tenets.

Firstly, in the inner circle of the hermeneutic circle, it was emphasized that pre-understanding forms the base of interpretation of phenomena and at the same time influences the development of new understanding. The pre-understanding of the researcher was detailed (application of hermeneutic circle into this study 3.2.6). These reflections benefited the researcher greatly as it yielded a historical perspective from the past study till this study. The timeframe allowed the researcher to develop perspectives of the participants' experience; for example, when examining the effectiveness of Zen meditation as an intervention, perspectives could be obtained at different times and circumstances. Consequently, the multifaceted phenomena of experience of Zen meditation practice could be revealed.

Secondly, in the outer circle, the movement between text, dialogue, sub-interpretation and pattern of interpretation are addressed. The researcher immersed herself in the text of individual interviews and focus groups (4.11.1-4.11.2) as 'concern' (Sorge) and dialogue are the key concepts for Heidegger's

phenomenology (2.3.3). Dialogue revealed the lived worlds of the speaker (Moran, 2000 & 2.3.2). While analyzing data, sub-interpretation and the pattern of interpretation among participants were examined continuously. The categories evolved along with the progress of analysis (Appendix IV& Appendix V). Additionally, to maintain the movement between dialogue and interpretation in this study, field notes (4.11.5) were kept throughout the study process as a reference. Furthermore, to see clearly which stance the researcher chose and how this made an impact on data interpretation is highlighted in interpretative phenomenological study as it shaped the presentation of findings (2.3.3 & 3.2.6). Hence, the researcher was aware of her position when collecting and analyzing data (10.5.4) and was aware of the relationship between self and participants (10.5.3). These are all discussed and presented to readers.

10.3.2 The meaning of Zen meditation practice-- through the lens of the participants

To understand the way humans interact with the world and to reveal the meaning of phenomena is strongly emphasized in interpretative phenomenology (2.3.1). Therefore, the researcher attempted to ground herself in the participants' viewpoints when interpreting the data. Consequently, in the light of interpretative phenomenology, the findings of this research were shaped by the participants' perspectives. Two themes, 'Expectation of Zen meditation regarding GAD symptoms' (8.1) and 'Benefits of Zen meditation practice' (9.4), revealed the common meaning; that is, Zen meditation practice was regarded as a way to manage their life with GAD, either trying to improve symptoms or to become more accepting of being a GAD patient.

Inspecting the other themes and categories, the experience of suffering from GAD constructed the meaning of Zen meditation practice for participants; for example, two categories, 'The state of engagement with real life' (9.3.1) and 'The state of calm' (9.3.3) described two opposite mind states among participants. 'The state of engagement with real life' presented their daily life where they could hardly stop thinking. On the contrary, 'The state of calm' presented a moment of peace that they had been long pursuing. These kinds of description were all derived from their lived experiences. Moreover, in the meaning of new knowledge were further interpreted through the words that participants used and particularly under circumstances of the social context of study site.

To sum up, the lived experiences of illness provided the basis and determined the way that these participants understood their experience of Zen meditation. Through this standpoint a diversity of experience was displayed and the findings in this study adhered to interpretative phenomenology.

10.4 Methodological issues

Three issues regarding the research methods are discussed here; the appraisal of applying multi-method research, study rigour and translation.

10.4.1 The appraisal of applying multi-method research

Issues regarding multiple methods research design are discussed (3.6). The challenges arose when applying mixed methods research design including learning to manage interrelationships between findings that derived from different study approaches and the amount of data. However, as noted in 3.6, there are advantages when multiple methods design is applied. In this study, two advantages were study phenomena in multi-angles and providing insight concerning the relationship between Zen meditation and anxiety.

Challenges of applying multiple methods research design in this study

One of the main challenges was to manage the amount of data collected from the five tools (4.11), especially data collected from focus groups and individual interviews which was huge. The Chinese transcripts of the individual interviews and the focus groups were over 850 pages. The time invested for re-listening to the tapes and checking the accuracy was substantial. The positive side of the checking is that the researcher could be brought back to the scenes of data collection vividly. The tone, background noises and emotions of participants were replayed. Re-listening to the tapes created a distance between the scenes and the researcher, nurturing reflection and insights. In brief, when checking the verbatim transcripts, the researcher was more like an observer which is good because this allowed the researcher to compare differences between groups and between individual participants (8.4 & 9.5). However, there is a dilemma; should the researcher reduce the number of study approaches in order to avoid the possibility of over-collection of data? Or is a certain degree of over-collection necessary so that study phenomena can be compared?

In the case of this study, although the ways of group interaction were not exactly the same (8.4.1), these two groups were similar in several ways according to statistical analysis and their experience of Zen meditation practice (7.1, 7.3, 8.0, 9.0). Participants with diligent, middle and lukewarm attitudes towards Zen meditation could be found in both groups (8.2). It seems that if only one group had been included the findings of this study would be quite similar, but the truthfulness regarding the interpretation of the findings would be less. Because of the design of this study, the phenomena of Zen meditation practice could be compared between groups (8.0; 8.4). Under the circumstances of this study, the amount of data was an issue for this researcher but at the same time, the rigour of this study was boosted. The amount of data and the quality of study are connected closely. Overall, the balance between using multiple methods and maintaining the richness of data was necessary and was planned from the beginning and contributed to a 'rich' study.

The second challenge was the interrelationships between the findings produced by mixed methods. This issue became noticeable especially when the analysis of the focus groups was finished and analysis of the individual interview data started. There were links and similarities between the data of the focus groups and individual interviews. The overlap between the two sets of data findings was

complex. The interrelationships between findings of mixed methods are shown in Figure 10-1 conceptually. As can be seen, the three themes of the focus groups overlapped the four themes of the individual interviews. In order to elucidate clearly, Table 10-1 is presented next.

Figure 10-1 Interrelationships between findings of focus groups and individual interviews

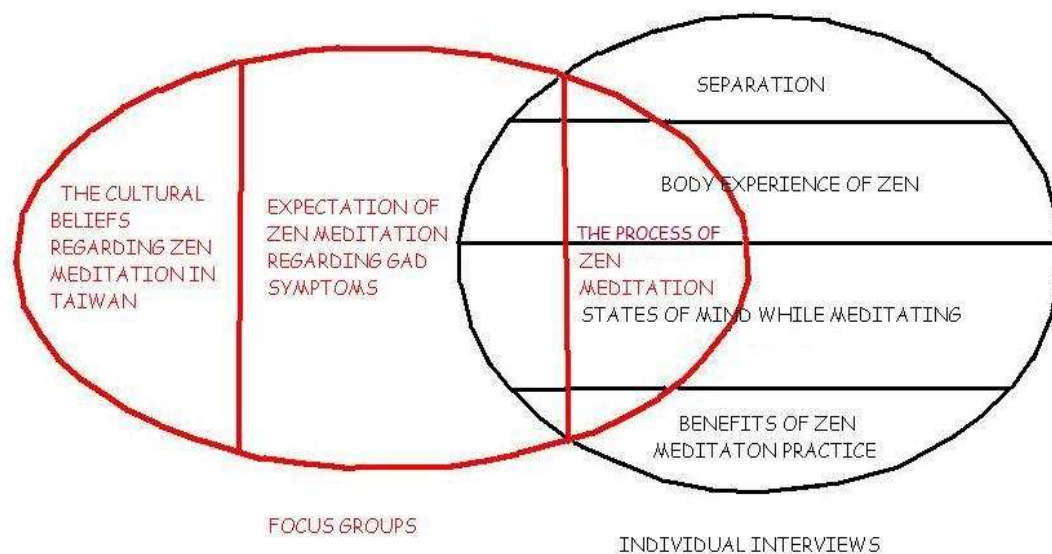


Table 10-1 Links between themes and categories of focus groups and individual interviews

Themes and categories of focus groups		Themes and categories of individual interviews
Expectation of Zen meditation regarding GAD <ul style="list-style-type: none"> • Ambivalence towards medication • Crave a good sleep • Stop thinking • Regaining memory and concentration 		Separation <ul style="list-style-type: none"> • Concern about other participants and the researcher • Examining the relationship between Zen meditation and self
The process of Zen meditation <ul style="list-style-type: none"> • Struggling to reach a state of calm • Signs of improvement • An individual process 		Body experience of Zen meditation practice <ul style="list-style-type: none"> • Body awareness • Preparing to practise Zen meditation
Cultural beliefs regarding Zen meditation in Taiwan <ul style="list-style-type: none"> • Spiritual influence 		States of mind while meditating <ul style="list-style-type: none"> • The state of engagement with real life • The state of detachment from real life • The state of calm
		Benefits of Zen meditation practice <ul style="list-style-type: none"> • Less pressure with daily life • More acceptance of being a GAD patient

In Table 10-1, the top two themes of focus groups interrelated with themes of individual interviews most. Firstly, some expectations of participants, such as 'Crave a good sleep' and 'Stop thinking', were satisfied at a certain level especially for those who reached 'The state of detachment from real life' or even 'The state of calm'. Likewise, when participants benefited from Zen meditation and had 'More acceptance of being a GAD patient', the 'Ambivalence towards medication' was then relieved.

Secondly, 'The process of Zen meditation' linked with the three top themes of individual interviews; that is, categories used to interpret the process of Zen mediation including struggling, improvement signs and an individual process were closely related to most categories included in 'Separation', 'Body experience' and 'States of mind while meditating'. Specifically, when the majority of participants examined how Zen meditation connected to them (9.1.2), this corresponded to the idea that the process of Zen meditation is an individual process (8.2.3). Furthermore, when a participant described how he/she was 'Struggling to reach a state of calm' (8.2.1), he/she sensed muscle pain and numbness (9.2.1) which was a kind of body experience as well. Likewise, when a participant was 'Struggling to reach a state of calm', it converged with the category, 'The state of engagement with real life' in which minds were busy and restless. It is also noted in Table 10-1 that 'Cultural beliefs regarding Zen meditation in Taiwan' is the theme that had no interrelations with other themes. This was because there were no experiences regarding flying out of soul or evil spirits reported in individual interviews.

The links between data sets, from another point of view, can be regarded as a reliable check. As noted in 3.6 mixed methods help to strengthen study validity and strive for consistency of meaning between multiple data analysis. The close interrelationships between the two sets of findings in Table 10-1 show the credibility of study findings of this study.

Due to the interrelationship between findings, the researcher faced the problem of how to interpret them clearly. After discussions with the supervisor and Taiwanese mentor, it was decided to follow the data and Benner's method where the researcher compared the categories to the entire context as a whole. For example, the themes, 'Body experiences' and 'States of mind', were shared both in focus groups and individual interviews. Yet, they were rather scattered in various group sessions and were not expressed as deeply as they were in individual interviews (3.2.1). Therefore, these two themes were reported as part of findings of individual interviews instead of in focus groups. In brief, the researcher needed to read back and forth constantly between texts of focus groups and individual interviews to compare the meaning between them and then understand the phenomena as a whole. In this way, how to present the findings that interwove different sets of data could be decided.

Advantages of applying multiple methods research design in this study

As noted in 3.6, the first advantage was that the study phenomena were illustrated from multiple angles. By using both focus groups and individual interviews (4.11.1-4.11.2), the experiences of Zen meditation were explored from different aspects so that a wider perspective could be achieved. Generally, in this study, focus groups provided a general and longitudinal view of Zen meditation whereas individual interviews probed a deeper personal perspective. For example, the atmosphere in the focus groups facilitated the issue of culture regarding Zen meditation in Taiwan to emerge (8.3). In the groups, the cultural theme formed naturally as it is inherent in each participant's belief system.

Thus, everyone was involved in the discussion. Take the theme ‘The process of Zen meditation’ as another example; every participant plunged into the talk about their progress especially in the later sessions because this was a common experience among them. As to individual interviews, it was obvious that the data revealed by individual interviews provided more detail. For example, issues related to obstacles (9.5.1) revealed in the interviews were more informative than from focus groups as this sort of data might be inhibited in focus groups (3.1.1). Privacy and a non judgemental atmosphere were created in individual interviews, so participants felt freer to talk about obstacles or the negative side of Zen meditation based on their personal experiences. Overall, from the balance of these two approaches, one of the advantages gained was that findings are complementary, diverse and study validity was enhanced as noted in 3.6.

Another advantage of using mixed methods in this study was providing insight concerning the understanding relationship between Zen meditation and anxiety. Factors that influenced how effective Zen meditation was were explained in 10.1.3, contributing to the body of knowledge regarding Zen meditation and GAD.

10.4.2 Study rigour

Rigour is a vital element in research as it ensures that findings of studies are robust as well as reflecting the true state of human experience (2.3.5). In this section the effectiveness of how the strategies were used to strengthen rigour in this study are presented. Credibility, dependability, confirmability and transferability (3.8) are articulated here so the trustworthiness of findings in this study can be assessed by the readers.

Credibility

Credibility indicates the truthfulness of data and data interpretations (criteria of rigour applied in this study 2.3.5). To boost the truth-value of the data and findings (3.8.1), the strategies, prolonged engagement and persistent observation, were applied within this study process. Furthermore, as a result of methodological triangulation, the intertexture between two sets of findings demonstrates sophistic interaction as discussed in 10.4.1 and Figure 10-1. Additionally, data sources from field notes and diaries provided different aspects of data producing diverse information as presented in 8.4 & 9.5. Similarly, the RSTAI produced statistical data to help answer the research questions more completely. The truth value of findings of this study are strengthened therefore greatly.

Dependability

Parallel to the concept of reliability in quantitative study, dependability refers to how rigorously the study was conducted consistently (criteria of rigour applied in this study 2.3.5). Several strategies were used to enhance dependability (3.8.2). Groups 1 and 2 were the third and the fourth round of the programme. Thus, the quality of Zen meditation received by the participants remained constant.

Moreover, inquiry audit technique and an audit trail were used as planned (3.8). For instance, how the prompt schedules evolved over time was presented in 5.1.9, 5.1.11, 5.2.8 & 5.2.10. Consequently, through the entire design and conduct of this study the voice of the participants was interpreted reliably.

Confirmability

The strategies used to ensure the neutrality of the data were described in 3.8.3. Through continuous discussion throughout the study process especially in data analysis, the congruence of interpretation between the supervisor, the Taiwanese mentor and the researcher was reached gradually. Through these efforts, the bias in this researcher was minimized as the researcher benefited from the supervision of the professor with western background and the mentor with her mother culture. Especially, the discussion regarding cultural issues such as in 8.3 & 9.2.5 provided chances for the researcher to reflect Taiwanese culture that had been taken for granted; that is, reflexivity helped to improve confirmability (2.3.5).

Transferability

The researcher attempted to provide enough information regarding this study so that readers can judge the possibility of the transferability in their own social context (3.8.4). Not only were thick descriptions of the background in Taiwan related to this study provided (1.1; 2.1.1; 2.2.1; Table 2-4 & 2-5), but also the findings of this study were interpreted in detail (Chapters VII-IX). Therefore, the possibility of the transfer of findings from this study to other studies or concepts can be considered.

In summary, to improve plausibility of rigour in this study, this researcher made efforts to bring together, a range of literature including socio-political contexts, a positioning of this literature, a position of oneself, strategies for boosting credibility, dependability, confirmability and transferability, and the research products to the readers. Therefore, the trustworthiness of findings in this research was enforced.

10.4.3 Translation

Generally, the translation went smoothly as planned, although some difficulties arose during the process mainly caused by cultural factors (10.5.1). The strengths of the translation procedure used in this study were that the frequency of translation between languages was minimized as one translator (the researcher) was involved in the translating process, and the richness of original data was preserved as a verbatim transcripts used for analyzing was in the resource language (Figure 4-1). Moreover, the supervisor, a native English speaker, gave advice when quoting words from participants and themes and categories were translated into English. Truth-value of data was improved through frequently held discussions. Thereby, problems that may have occurred in the

translation process such as inconsistency caused by many translators, cultural differences and linguistic factors could be minimized greatly (3.7). Overall, apart from the lengthy process of translation, the factors that influenced the quality of translation were considered so that accuracy of meaning was assured. This procedure can be used as reference in terms of language management for cross-culture studies as no standardized procedures exist for translation work in qualitative studies (3.7).

10.4.4 Summary

In this section, prominent issues related to methodology were addressed and discussed. The usage of mix-methods in this study was inspected closely including challenges and advantages. The level of robustness was examined in every aspect so the readers could have enough information to judge the truth-value of this study. Lastly, translation was discussed as it involved data management and was a decisive step in producing study findings.

10.5 Reflection on the study process

Based on the field notes kept by the researcher along with this study progress (4.11.5), several prominent issues are discussed: the length of study process, the options of choosing different types of Zen meditation techniques, the long term relationship between the participants and the researcher and the multiple roles of this researcher.

10.5.1 The length of study process

Two reasons possibly explain why this study process was lengthened: an additional pilot study and the translation process. Firstly, pilot study 2 was added because of the problems raised in pilot 1 (5.1), causing the delay of the main study. On reflection, the researcher was too anxious at the very beginning, as a note recorded in field notes (27th Sept. 2005) *“three potential participants have been invited, they were all very kind but rejected me... When the clinic closed the doctor showed his great sympathy... I pray that at least I get one participant by the end of this week”*. Nevertheless, because pilot study 2 was run to test the recruitment of both females and males as one of its purposes and consequently it went well (5.2.4), the speed of recruitment was improved afterwards.

Secondly, the time spent on translating themes and categories took longer than expected, especially when dealing with the theme ‘cultural beliefs regarding Zen meditation in Taiwan’. Finding words that matched the content and cultural context of two languages needs great consideration. Linguistic factor is one of the key factors that influence the translation process (3.7) and this situation appeared in this study too; that is, there are no English words that have equal meaning to Chinese for the key concept. For instance ‘evil spirit’ (8.3.1) is the translation used in this PhD that most matched the phrase in English but this meaning is not exactly the same. Literally, what participants believe is that when a person practises Zen meditation incorrectly, he or she may be ‘walking into fire and become

vulnerable to evil spirit '. However, 'walking into fire' does not make sense in English as 'fire' in Chinese is different than in English. Fire is a symbol related to balance in the human body and this is a traditional Chinese concept. However, this study followed a suitable way of conducting translation suggested in the literature (3.7); that is, data collection, transcription and analysis were undertaken in the first language of the respondents, simultaneously, a native researcher helped to minimize translation bias (Maclean 2004, Irvine et al 2007) (3.7). Moreover, the supervisor in this study worked along with the researcher from the start of data analysis so rigour was maximized in terms of translation procedure.

10.5.2 The options of choosing different types of Zen meditation techniques

The options of choosing different types of Zen meditation techniques by participants arose when obstacles appeared (9.5.1). There are different techniques for Zen meditation practitioners (2.2.3). In this study sitting style Zen meditation was adopted. This is because, firstly, sitting Zen meditation is traditional. Secondly, in the design of the Zen meditation programme, warm-up exercises were performed by participants before the sitting Zen meditation started (Appendix II). Most importantly, the scope of this study explored the experience of sitting style Zen meditation at the beginning. Accordingly, the option of choosing different types of Zen meditation techniques was not open to the participants. However, providing no options to participants did not cause harm to them because participants decreased the frequency of Zen meditation practice or even stopped practising sitting Zen meditation if they did not want to continue.

10.5.3 The appraisal of long term relationship between the participants and the researcher

In this study, the long term relationship between participants and the researcher was an obvious feature and decisive for data collecting along with closure of the study relationship. Field notes (4.11.5) were used for the discussion in this session.

The influence of long term relationship on data collection

The researcher attempted to examine the impact of the long term relationship between participants and the researcher particularly in both focus groups and individual interview approaches. Meanwhile, the contacts during the period played an important role in sustaining a good relationship based on the field notes.

The relationships lasted two to three months from when the researcher was introduced to the participants in the OPD (4.7), through the progress of the Zen meditation programme. The researcher called the participants weekly to remind them of their Zen session (4.8). Yet, many participants were enthusiastic to talk about their fresh experiences of Zen meditation via the phones. As a note recorded in the field notes (1 Aug 2006): *"RB6 expressed regret for not coming this Saturday as she was travelling in east Taiwan. I felt disappointed too. Then, she immediately started*

to tell me eagerly about what she had sensed about Zen meditation for the past days...felt like she was trying to compensate for her absence this week” Another field note showed (13 Aug 2006): *“RB5 replied that he was likely to come this Saturday...yet his hesitation was shown in his voice obviously. I judged that I had better checked my feeling with him at once as he might say yes on the phone now but would not appear on the day. My inquiry relieved him greatly and consequently he started to talk about his difficulties in making progress in Zen meditation...I was glad as I have learnt his true thoughts...for people like RB5 who was relatively silent in a group situation, talking on the phone seems a comfortable way for them...”* Although reminder calls aimed to maintain attendance rates (4.8), the calls sometimes provided good chances which helped the researcher to grasp a comprehensive view, making sense of Zen meditation as a whole from participants’ viewpoints. These efforts built up the long term relationship and paved the way for a better quality of data collection (3.1.5, 3.2.5.).

In terms of focus groups, the prominent influence was the way that participants expressed themselves in the group discussion. They adopted a direct and enthusiastic way to articulate their experiences (8.4). For example, in the field notes of Group 1 session 4 the researcher wrote *‘when RA1 talked about her experiences of loss of sense of time and self, all participants were wondering and asking questions at once. I felt relaxed as they did not need a moderator for a while’*. However, on the other hand this relationship sometimes caused difficulties for moderating. For example, sometimes participants plunged into things that were not relevant to study topics, because they were getting familiar with each other and the authority of the moderator was decreased as the relationship developed. Additionally, this relationship caused delay in finishing the group sessions on time. Generally, this was good because data from focus groups were rich and wide ranged.

Generally, for formal individual interviews, an interviewer usually needs to ice break as well as to explain the purpose of the study and interview procedure to the interviewee (3.2.5). However, in this study, all participants were ready to talk immediately skipping the warm-up stage. The individual interview prompt schedule (Appendix VI) was used less often because almost all participants actively provided information that covered the questions listed on the schedule. On reflection, the interview skill that the researcher used most was exploration, because participants already knew what the researcher’s concerns were. Thus, to clarify ideas or ask for further descriptions became the most common interview skills used, such as “what do you mean by ‘peaceful’?”. This could bring in-depth data. The negative side of the long term relationship was that in addition to the Zen meditation experience, the majority of participants wanted to share more stories with the researcher.

Overall, the influence of the long term relationship between the participants and the researcher was such that almost all participants expressed their opinions openly as well as genuinely; that is, participants reported both positive and negative aspects of their experiences regarding Zen

meditation. In summary, the long term relationships set a suitable ground for good quality and trustworthiness of data, despite that this caused difficulties in time control.

Closure of research relationship

As a result of the long term relationship between participants and the researcher, the closure of the research relationship took time to complete. In fact, the preparation of the closure of the research relationship started early at the first focus group (4.12.1) and the feedback groups were also designed to act as closure in addition to seeking feedback from study findings (4.11.6). These groups ran smoothly and participants could express their feelings to each other (6.5).

Generally, the relationships between participants were strong, especially in Group 1 (8.4.1); that is, even in individual interviews the issue of separation emerged and formed a theme (9.1). It seems that when participants showed emotional connection with each other, this helped to locate themselves better in terms of coping their chronic disease (GAD) and adapting Zen meditation as shown in the field notes of the two feedback groups (08 July 2006 & 01 Sept 2006): *“I still do Zen meditation once every one to two days but surely you are more motivated in the (Zen) programme”*(RA7); *“I came every week as even just listening to others is attractive...”* (RB5).

To sum up, the closure of the research relationship involved emotion from participants. The research design prepared participants to deal with the closure of the research relationship. Additionally group dynamics influenced the relationship as did the researcher.

10.5.4 Reflection on the multiple roles of the researcher

The roles that the researcher plays in different situations in this study were considered at the beginning (4.12.4). There were various roles resulting from the study design including administrator, group moderator, interviewer and translator. The reflections on the each role are discussed successively.

Firstly, as an administrator, based on field notes the researcher had highs and lows. At the beginning the researcher was very anxious about the recruitment progress, worried that participants might be disappointed once Zen meditation failed their expectations (5.1.6, 8.1). After that, the researcher was concerned about the attendance rates. Yet, most participants modified their pattern of daily practising or adjusted their goals of Zen meditation gradually (8.2.) and along with the group dynamics being good, this helped to maintain attendance rates.

Secondly, when acting as a group moderator and an interviewer of individual interviews, sometimes these roles were affected by participants' expectations; that is, there was a role conflict between researcher and psychiatric nurse. Not only did the researcher collect data from participants, but also

they were eager to seek information from the researcher. Most participants expected the researcher to act as a health provider rather than as a researcher. Most information was regarding GAD. The common questions were “*Does anyone recover from GAD without recurrence?*” “*Can Zen meditation practice greatly improve my symptoms?*” From participants’ viewpoints, the researcher was not only a researcher but also a psychiatric nurse. This is because the researcher was introduced as a researcher but also as a senior psychiatric nursing lecturer. The nature of focus groups and individual interviews were influenced by the multiple images of the researcher to a certain extent. On reflection, anxiety possibly held the researcher back when it was time to steer the discussion into research-relative directions. As to individual interviews, interview time was elongated at some points. To balance the needs of the researcher and the needs of participants was a continuous challenge throughout this study process.

Lastly, being a translator was a good experience because the ability of managing two languages developed. Especially, the researcher’s mother culture could be viewed from a distance or new perspective. For example, when the researcher was preparing to explain concepts of categories and quotations to the supervisor, a reflection of socio-cultural context in Taiwan had already been started. Furthermore, when the researcher tried to respond to the inquiries from the supervisor, the differences between the two cultures became obvious, i.e. the influence of major religions, Taoism and Buddhism, and Chinese culture in Taiwan society that are taken for granted could be seen.

10.5.5 Summary

Different aspects of the study process have been examined. Both advantages and disadvantages occurred when this study was carried out; the positive side was that the quality of research data was produced in depth and breadth while the negative side was its time consuming nature. In fact, the strength and weakness of this study process were reciprocal.

10.6 Study limitations

Several limitations of this study are discussed here including sampling, Zen meditation intervention, the results of the RSTAI, data analysis, triangulation, cultural differences and using English as language.

For the purpose of this study, only patients with GAD were included (4.6.1). Therefore, transferability of these study findings to studies with different samples should be cautious as there are different features between different anxiety disorders (2.1.3 & 2.1.4). For example, excessive anxiety and worry are the core symptoms of GAD (Table 2-3) while panic disorder manifests panic in symptoms like palpitation and sweating (DSM IV-R 2000, p430). Furthermore, in this study, the expectations of Zen meditation (8.1) embody the characteristics of the GAD sample. In brief, researchers need to consider the similarity and dissimilarity between different samples based on their

study purposes.

There are a range of types of meditation (Table 2-9), yet only Zen meditation was used in this study (1.1, 2.2.1). Therefore, the appropriateness of comparing findings between different types of meditation may arise. It was argued that there was mutual ground among different types of meditation (2.2.2) and, likewise, the importance of essential elements or authentic qualities among different types of meditation (2.2.5). However, despite that the qualities of Zen meditation practice reported in this study (10.1), to discern these qualities more evidence is needed before findings can be verified and a consensus reached.

The generalization of results of the RSTAI in this study is limited due to the small sample size and lack of randomization. However, the results of the RSTAI were meant to supplement the picture regarding changes of anxiety levels over the period of study process.

Data analysis was interpreted through the framework of interpretative phenomenology; therefore this limits the interpretation from other perspectives. For instance, an ethnographic paradigm may be able to give more insight regarding cultural aspects of Zen meditation. Alternatively, grounded theory may present the findings in a different way. Overall, the framework used in this study gave a distinctive perspective to interpret the study findings which was rather philosophical.

Triangulation can be applied in various ways to enhance study rigour: data, theoretical, investigator and methodology triangulation (2.3.5). However, two types of triangulation methods, data and methodology, were applied in this study as a result of study design and study resources (3.8.1). Therefore, the credibility of data may be limited.

Cultural differences were one of the limitations because the social-cultural context in Taiwan has its different nature and varies from other societies. Thus, the possibility of transferring the findings of this study to another study in a different country can be limited. The pervasive Taoism and Buddhism cultural context (2.2.1) and the health care system (1.2) in Taiwan should be considered.

English is a foreign language for this researcher. To convey meaning in English has been a great challenge. The professor put efforts to enhance the expression as exactly as possible. Yet to express ideas in a lifelike way in English may be still limited because this researcher did not grow up in an English speaking country.

10.7 Overall summary

In this chapter, two of research questions were fully answered and the last one was answered to a certain extent (10.1). The complex phenomena of experiences of Zen meditation practice were

revealed as well as the diverse aspects of the process of Zen meditation practice. This study supported that Zen meditation has potential benefits of GAD participants. However, the benefits are subject to several conditions, including the quality of Zen meditation. The quality and the obstacles of Zen meditation provided an insight regarding issue of causal effect between meditation and GAD.

Parts of the findings produced in this study were introduced as new knowledge (10.2). Five new concepts were discussed, enriching the understanding of Zen meditation from the perspective of interpretative phenomenology. Furthermore, the ways that this study connected to interpretative phenomenology and methodological issues are presented (10.3, 10.4).

The reflection of this study process as a whole was presented so that readers can be informed regarding background and decision making trails while this study was carried out (10.5). Finally, study limitations inspected every aspect of this study and the considerations of transferability of findings of this study were suggested, such as social- cultural contexts in Taiwan (10.6).

To conclude, this study extended and added to the current understanding regarding Zen meditation among participants with GAD. Via the perspective of interpretative phenomenology the meaning of Zen meditation experience among these participants was discovered. In the next chapter the conclusion and recommendations of this study are presented.

CHAPTER XI CONCLUSION AND RECOMMENDATIONS

11.0 Introduction

In this chapter, the main findings of this study are summarised and how this work has added to the body of knowledge and the associated literature are addressed. Additionally, recommendations for clinical application, nursing education and further research are made.

The health needs of GAD patients have been overlooked despite the evidence of epidemiology that shows that GAD is a highly prevalent disease among many societies (2.1.1, Table 2-2). Pharmacotherapy and psychotherapy are the most common models in western societies to treat GAD. Nevertheless, not all patients with GAD benefit from these models. Different treatment options that fit in with the cultural context of individual societies may benefit patients as anxiety disorders are a group of mental disorders in which culture plays a cardinal part in aetiology (2.1.3). For patients with GAD in Taiwan, Zen meditation is an option that fits in with Taiwanese culture. Yet the knowledge regarding Zen meditation especially qualitative aspects is not well known.

Therefore, this study aimed to provide a deeper understanding of practising Zen meditation among GAD patients and to examine the effectiveness of a Zen meditation intervention to manage anxiety in a group of GAD patients. To achieve these purposes, a combination of qualitative and quantitative methods was applied, including repeated focus groups, individual interviews, field notes, diaries and the RSTAI. Heidegger's interpretative phenomenology was adopted to guide the qualitative data analysis. Several strategies were used to strengthen the study rigour including methodological triangulation. Twenty-one participants in two groups were included.

Three key themes were revealed in repeated focus groups. Firstly, 'Expectation of Zen meditation regarding GAD symptoms' reflects the viewpoint of participants; that is, Zen meditation is regarded as a way to fight against GAD. 'Ambivalence towards medication', 'crave good sleep', 'stop thinking' and 'regain memory and concentration' were the subordinate categories. Secondly, 'The process of Zen meditation', refers to improvement during Zen meditation practice including the categories of 'struggling to reach a state of calm', 'signs of improvement' and 'an individual process'. Lastly, 'The cultural beliefs regarding Zen meditation in Taiwan' refers to the 'spiritual influence' which is the cultural aspect of Zen meditation in Taiwan.

Four themes emerged from individual interviews. Firstly, 'Separation' refers to the issues that participants tried to deal with in relation to the termination of the programme, including 'concern about other participants and the researcher' and 'examining the relationship between Zen meditation and self'. Secondly, 'Body experience of Zen meditation practice' incorporates categories of 'body awareness' and 'preparing to practise Zen mediation'. Thirdly, 'States of mind while meditating'

consists of three categories, 'the state of engagement with real life', 'the state of detachment from real life' and 'the state of calm'. Lastly, 'Benefits of Zen meditation practice' incorporates the categories of 'less pressure with daily life' and 'more acceptance of being a GAD patient'. Moreover, obstacles to Zen meditation practice were identified such as physical and psychological barriers.

The RSTAI was administrated at baseline, post and two week follow-up of the Zen meditation programme, with a 100% response rate. Based on the diaries, the average Zen meditation practice frequency was six to seven times per week and lasted twelve to fifteen minutes for each meditation. There was no significant difference at pre-test between Group 1 and 2 in the State Anxiety Score or Trait Anxiety Score. This allowed the combination of data from the 2 groups to happen. Consequently, 95% confidence intervals for differences showed that the Trait Anxiety Score improved over time. However, State Anxiety Scores did not show a similar improvement. These results suggested that Zen meditation improved a rather stable anxiety tendency i.e. Trait Anxiety Scores instead of transient characteristics i.e. State Anxiety Scores. This was convergent with the findings of the qualitative data, i.e. benefits of Zen meditation practice (9.4) were identified but it was gradual rather immediate.

11.1 Findings of this study that contribute to the existing body of knowledge and associated literature

This study contributes to the body of knowledge and associated literature in three ways. Firstly, the findings of this study confirm that the essential elements or the authentic traditional qualities of meditation should be addressed. As discussed in 'The state of calm-a core feature of Zen meditation experiences' (10.1.1), the quality of meditation or the characteristics such as 'empty feeling' or 'forgotten the existence of self'(9.3.3) can contribute to the body of knowledge, particularly for studies that attempt to investigate the efficacy of meditation. Secondly, to understand the meaning of phenomena is emphasized by interpretative phenomenology (Lopez & Willis 2004). In this study, the meaning of Zen meditation for these GAD patients was revealed in the context of Taiwanese society. This adds to the existing body of knowledge. How participants' lived experience of GAD shaped and conceived their understanding of Zen meditation was interpreted (9.2.1); that is, returning to a healthy or normal life seemed to keep participants connected with meditation but paradoxically through meditation GAD became more acceptable. Thirdly, a comprehensive understanding of Zen meditation is reported, resulting from the application of mixed methods. Apart from the findings that were convergent with previous studies (the most common experiences shared among qualitative meditation studies 10.1.1), the findings reported here including themes (i.e. diverse Zen meditation processes, body experiences, concept of obstacles and spiritual influences 9.2.2-9.2.5), enrich the current knowledge through the insight of participants' 'lived experiences'.

To conclude, the findings of this study contribute to the existing body of knowledge by providing meanings that are derived from participants' perspectives and are guided by interpretative phenomenology.

11.2 Recommendations for clinical application

Based on the evidence of this study, there were no severe side effects perceived by participants. Zen meditation benefited the majority of participants in several ways, such as improving their trait anxiety score, modifying sleeping quality, less pressure with daily life and more acceptance of being a GAD patient.

Therefore, for nurses who intend to apply a Zen meditation programme to clinical situations as an intervention, practical recommendations based on the findings are suggested as follows:

- Information suitable for conduct of a Zen meditation programme includes: 'Examining the relationship between Zen meditation and self' (9.1.2) as this helps to clarify the expectations that an individual may conceive and to examine the connection between self and Zen meditation practice; 'Body experience while meditating' (9.2) as it is an immediate physical experience and 'States of mind while meditating' (9.3) because individuals can be prepared regarding what may be experienced in terms of their mind in advance.
- It should be noted that the progress of Zen meditation is individual. For some Zen meditation practitioners, the process may progress smoothly, but for others stagnation or fluctuation may happen (8.2). It would be helpful to find a way which is suitable for each individual through discussion (8.2.2).
- The signs of improvements identified, e.g. finding a personal way or a changing sense of time, can be used as a reference for encouraging practitioners to maintain regular practice.
- Obstacles to Zen meditation can be noted if appropriate. Try not to set goals for meditation as this may produce tension in pursuing goals. In other words, Zen meditation practising should be treated in the simplest way i.e. just try to focus on breathing.
- Participants may benefit from a group interaction along with a Zen meditation programme. Therefore, to facilitate group interaction can provide better support in terms of maintaining regular practice as well as coping with GAD.
- Closure of relationships that develop during the Zen meditation sessions is important and should be incorporated as a part of the entire programme.
- In terms of selecting practitioners, in addition to mental states, the spiritual belief regarding Zen meditation of a patient should be assessed carefully.

11.3 Recommendations for nursing education

Three main recommendations for nursing education based on this study's findings and process are: increasing nursing knowledge the lived experience of GAD, recognizing cultural influence in the nursing field and issues regarding mix-methods design.

- These findings deepen nursing knowledge regarding GAD especially perspectives that are derived from participants. For example, the ways participants viewed Zen meditation in the focus groups reflected their understanding regarding living with GAD. These findings, underpinned by interpretative phenomenology, can be use as materials in nursing education especially in the nursing care of GAD patients.
- In Taiwan, western medicine is dominant in the health care system, but alternative therapy is still popular. When carrying out this study, issues related to Taiwanese culture arose. For example, meditation has long been believed to benefit health, but different views of Zen meditation were revealed such as issues regarding evil spirits. Therefore, this is vital to consider when designing nursing research or delivering a Zen intervention in Taiwan. Moreover, this should be noted in nursing education so that the conflict between people's belief systems and health interventions can be avoided.
- Nursing research is one of the important subjects in nursing education. According to this study, a mix-method research paradigm proved helpful in terms of integrity and study rigour. Insight gained from qualitative approaches could inspire new considerations. However over-repetition should be considered in terms of research resources; that is, the balance between the amount of data and study rigour is one of the important issues when designing mix-method research (10.4). In terms of nursing education, the experience of the conduct of this study especially the 'Challenges of applying multiple methods research design in this study' (10.4.1) can be used as a practical example for nursing research.

11.4 Recommendations for further research

For researchers who are interested in Zen meditation study in the nursing field, some recommendations for further studies are suggested here.

- For researchers who intend to investigate causality of meditation practice, it is suggested that the quality of Zen meditation should be considered an important factor in the research design. This is because a core feature of the Zen meditation experiences (10.1.1) was revealed in this study.
- Studies using similar research approaches to study Zen meditation are suggested so that the findings and results can be compared.
- Different styles of qualitative study paradigms are recommended to be applied to Zen meditation study i.e. grounded theory or a case study approach so that findings can be compared and verified.
- As an extension of the findings of this study, different types of Zen meditation could be compared in the future. In this study, the options of different types of Zen meditation such as

walking Zen meditation were not possible. For some participants who are uncomfortable in sitting style meditation or find concentration difficult, different styles of Zen meditation could be introduced to them so that different styles of Zen meditation could be compared.

- To explore or to trace the experience of Zen meditation practice over a longer period may produce different data if practitioners practise for longer than 3 months. This could help to deepen or to supplement the findings of this study.
- Specific studies that recruit participants with different psychiatric diagnoses such as phobic disorders or panic disorders may be useful. This could help to discern the experiences or meaning of Zen meditation practice among different study samples.

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Appendix I Meditation Therapy in Treatment of Anxiety Disorders

Abstract from Original Article

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Meditation Therapy in the Treatment of Anxiety Disorders

Chea – Fen Lu M.S.N.¹, Jenny Chang Liao M.S.N.¹, Chia – Yih Liu M.D.^{2,3},
Hsing – Yuan Liu M.S.N.¹, Ya – Huei Chang B.S.N.²

Objectives: This study investigated the effects of zen meditation on anxiety reduction in anxiety-disordered patients. **Methods:** Outpatients diagnosed as anxiety disorder who gave informed consent for participation in the study were enrolled. These subjects were randomly assigned to either the control group (n = 26) or the experimental group (n = 23). The experimental group practiced zen meditation for an average of 15 minutes per day. The control group subjects completed the self-reported "Revised State and Trait Anxiety Inventory" (RSTAI) at pre-meditation and the 15th week while the experimental group filled out the RSTAI at pre-meditation, during the 6th week, and during the 15th week after meditation. The "Hamilton Anxiety Rating Scale" (HARS) was rated for each subject by a psychiatric professional who was blind to the study. The HARS was completed by both groups at pre- and post-Zen meditation. **Results:** There was no significant difference in

the anxiety level before zen meditation practice between the two groups. Pre and post test RSTAI scores in the control group were similar. In the experimental group, RSTAI score in the 6th week were significantly different from pre-meditation scores, especially in the 15th week. There was a significant difference in the mean score change (pre vs post) between the two groups. Zen meditation had a positive effect on both state anxiety and trait anxiety. HARS scores were significantly different at pre and post meditation in both groups, and especially in the experimental group. However, the mean difference of score change (pre vs. pre) was not significantly different between the two groups. No correlation was found between meditation time and reduction of anxiety. **Conclusion:** In this study, short time Zen meditation significantly reduced state and trait anxiety in anxiety-disordered patients. (Full Text in Chinese)

Key words: zen meditation, anxiety disorder
(Taiwanese J Psychiatry 1998; 12: 343~51)

Appendix II The Zen meditation programme booklet

Chapter 1: Notification for participants in Zen meditation

1. Welcome! First of all, to make the decision to take action toward a new experience needs courage. You began the process by coming today.
2. The major goal of this Programme is that by practising Zen meditation, we may help you to manage your anxiety so you can gain a new perspective that we trust will help you.
3. Good health requires investment of time and energy just as a business does. Therefore, it is suggested that you practice twice a day and 10 minutes each time.
4. Diligence is the key element for Zen meditation practice.
5. Please wear a comfortable top and trousers that are suitable for exercise.

Diligence is the decisive factor

Chapter 2: Zen Meditation programme

Week 1 (Session 1): The art of attention

1.1 Procedures

Warm up exercise 5-10' → meditation 5' (increase 5' every session) → message 10-15' → group discussion 50'

Arrangement of warm up exercise weekly

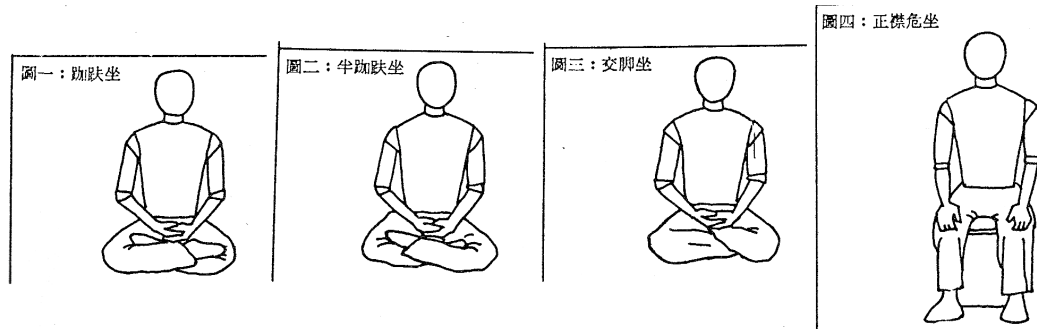
Session 1	Session 2	Session 3	Session 4	Session 5	session 6
Head & neck	Shoulders, elbows& wrists	Waist & thighs	Knees & foot	Floor movements	Review

1.2 Skills of Zen meditation

1.2.1 Body adjustment

- Exercise should fit your physical strength and you should practise daily. Focus on what you do and seek to be joyful.
- Massage: rub your hand against the other to warm → gently massage your eyes → your face → front head → rear head and neck → right shoulder → right arm → front right arm → left should (then follow the same order as right arm) → chest → abdomen → back → waist → right thigh → knee → lower leg → instep → the other leg (follow the same order as right thigh).
- Selection of meditation time: not specific but avoid 1 hour after a meal. Maintain a state of not thinking for at least 5 minutes.
- Position of Zen meditation:

- (1) Choose one of the following figures that are suitable for you. Usually, a harder cushion helps to support your back. Do not lay your back against anything. (2) Straighten your back (3) join your hands (4) relax your shoulders (5) gently push your tongue behind the upper front teeth (6) close your mouth (7) close your eyes



The principle of body adjustment is to be comfortable. Relax both body and mind. Your environment should be quiet; maintain air ventilation but do not be blown about; use soft light; wear loose clothes; keep yourself warm.

1.2.2 Breath adjustment

Before breath adjustment, you should breathe normally which is about 16-20 times breath per minute. Do not pant. Steps are: deep breath → breath counting → following breathing.

- Breathe deeply 3 times: place your hands on lower abdomen so that you can feel the raise and drop of it → inhale → slowly leads the air to lower abdomen, feel the raise of lower abdomen → chest raising → hold for 10 seconds → blow from mouth slowly. Repeat the process 3 times.
- Count your breaths (exhale or inhale count 1). Count from 1 to 10. This is a unit. Repeat it. You may change the way you. Instead of counting from 1 to 10, you may count backwards from 10 to 1, or count even (or odd) number to 20. The change of the way of counting is to keep you focused. This will prevent you from losing your concentration by habituating the same way of counting. The purpose of counting is to free you from disorganized thoughts or daydreams.
- Following breathing: After a period of counting, your mind will become clear, without daydream or ideas. Then, just focus your attention on breathing in and out. Counting is not required at this stage.

1.3 Focus group

Week 2 (Session 2): Conquer the common difficulties

2.1 The common problems for beginners

2.1.1 Physical aspect

- Body sore, numbness of lower limbs
- Unable to maintain sitting position
- Drowsiness

2.1.2 Psychological aspect

- Unable to concentrate, thinking too much
- Feeling irritable

2.2 Focus group

Week 3 (Session 3): Mind adjustment

3.1 Deal with your thoughts that hard to get rid off

- Mirror skill: treat the trickling of thought as you are watching a film as if you are an audience.
- Try to be neutral: stop judging or criticize

Mind adjustment is crucial. When you have peace of mind, everything is settled naturally. You are advised to have a regular daily schedule as it helps to settle your body as well as your mind.

3.2 Imagination may work. Think about pleasant experiences to replace an irritable mood. Senses are likely approaches for the threshold of Zen meditation:

- (1) From sight: image water, the sun, the moon, trees or stature of Buddha
- (2) From hearing: imagine wind, water, soft music or soft sounds like woodblock
- (3) From breathing: imagine that the air inhaled is pure and clean and the air exhaled is unclean.
- (4) From tongue: tongue against upper palate and fix your mind on the point
- (5) From body: focusing on one part of your body such as lower abdomen or nose.

Principles of using imagination:

- You can choose your own object for imagination based on your experience.
- The object you chose should be simple, contented and sedate.
- The object should be assist the relaxation of body and mind
- What you need is to choose one of the above senses. Once one of the senses is stable, the rest of them will settle continuously.

3.3 Focus group

Week 4 (Session 4): Experiencing

4.1 Experiencing the Zen meditation

Feelings

Sensations

Thoughts

Observations

4.2 Focus group

Week 5 (Session 5): Awareness

5.1 Being aware when practising Zen meditation

Feelings

Sensations

Thoughts

Getting close to yourself in terms of thoughts, sensations and feelings

5.2 Focus group

Week 6 (Session 6): Integration

6.1 Integrating Zen meditation into your life

Learning & insight

Daily life and Zen meditation

Future plan regarding Zen meditation practice

6.2 Focus group



禪坐指引手冊~~焦慮管理班

第一篇：焦慮管理禪坐班 聚會前注意事項

6. 歡迎您來參加焦慮管理禪坐訓練班。首先您願意撥時間學習，及改變原有的假日休閒方式來參與全新的禪坐團體經驗，其實就是踏出其中最艱難的一步。
7. 相信透過禪坐的練習，能讓我們更能夠接納自己的情緒，改善焦慮程度與傾向，進而找到生活的智慧。
8. 健康跟事業一樣其實是要花時間去經營的，花心力去投資的。因此居家每日練習靜坐2次，每次最少10 分鐘是最基本的要求，您也才能真正逐漸領會到靜坐的好處。
9. “有恆”是決定成敗的重要關鍵。
10. 請著輕便衣褲以利暖身運動。

聯絡人:

呂雀芬老師: 03-3283078; 0958913517; sphiataiwan52@ Hotmail.com

“有恆”是決定成敗的重要關鍵
 “有恆”是決定成敗的重要關鍵
 “有恆”是決定成敗的重要關鍵

第二篇 焦慮管理禪坐課程

第一週：第一節 專注的方法

1.1 禪坐課程的上課方式：

秩序如下:運動 15-20' → 坐禪 15' → 按摩10-15' → 問題討論30-40' (約90 分鐘)

第一節	第二節	第三節	第四節	第五節	第六節
頭、頸	肩、手肘、 腕	腰、腿	膝蓋、足踝	地板動作	複習

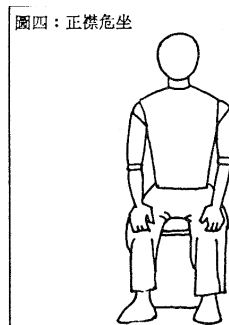
1.2 禪坐的方法：

1.2.1 調身

- 最好平日有規律的運動，運動應配合本身體力，專心而喜悅的做，有恆的做。
- 按摩方法: 兩掌搓熱→輕輕按摩雙眼→雙掌按摩臉部→額頭→後頸→雙肩→兩臂→手背→胸部→腹部→背部→腰部→右大腿→膝蓋→左大腿→膝蓋。
- 禪坐時間: 宜避開飯後一小時，此外並不限定哪一個時段，建議每天固定兩個適合自己的時間。維持腦中的淨、定，心念不起的狀態至少至少5分鐘。
- 禪坐姿勢:

① 雙足跏:請選擇適合自己的坐姿，但任何姿勢後背均不可依靠。

②背脊豎直 ③結手印 ④鬆兩肩 ⑤舌尖抵上顎 ⑥閉口用鼻息 ⑦眼自然閉合



調身的原則主要為安適，身心均放鬆，環境宜安靜，空氣流通但避免風直吹，光線柔和，衣著寬鬆，注意保暖。

1.2.2 調息

靜坐調息前，呼吸應順暢， 每分鐘16-20 次，勿喘息。調息步驟：深呼吸→數息→隨息。

➤ 先做3次深呼吸

將雙手輕放於小腹→鼻吸一口氣→引入小腹，使小腹隆起→繼續吸氣→肺部隆起→閉氣十秒→由口慢慢吐氣→重複三次

➤ 數息

呼、吸一次 數1→由1數到 10。此為一單元，如此不斷的反覆。至於數數字的方式，可由1~10, 或由10~1，或數2, 4, 6 至20。

或數如此變換是為了避免因習慣而失去專注時之用。 目的：克服雜念、妄念。

➤ 隨息

當數息一段時間，雜念、妄想漸漸消除，便改將注意力放在呼、吸出入之上(隨鼻息)，心念就繫在呼吸的進出往來之間。

1.3學習心得與討論

第二週 第二節 禪坐常見問題的克服

2.1 初學者常見的問題

2.1.1 生理層面

- 身體酸、下肢麻木
- 無法維持適當的坐姿
- 嗜睡

2.1.2 心理層面

- 易受其他念頭干擾，而無法專心數息
- 依舊心煩意亂 難以收心

2.2 學習心得與討論

第三週 第三節 凝神致志

3.1應以何種態度去面對涓涓不息的思潮:

- 鏡子技巧:把自己當作是觀看影片的觀眾，直接切斷紛亂的思潮。
- 秉持中性的態度。

調心-調心是最重要的一部分，調身與調息是調心的基本準備動作。心中平靜安定，則一切自然篤定妥當。調整日常作息，使生活正常有規律。

3.2 透過觀想(冥想)的方法來達到禪定，藉由引發儲存在腦中清新安適的經驗來取代浮躁不安的妄念。

- ①從眼根觀: 觀水、觀日、觀樹、觀莊嚴的神
- ②從耳根觀: 觀風聲、水聲或其他音符如輕恬
- ③從鼻根觀: 如數息或隨息想，如每吸一口氣 想吸進的是清淨的空氣，遍通體內，吸氣時則將濁穢之氣排於身外。
- ④從舌根觀: 以舌抵上 ，心繫該處。
- ⑤從身根觀: 如觀眉心、鼻端、腳心、丹田。

觀想的原則:

- 觀想的對象，不需抄襲。
- 觀想的對象必須是單純恬淡輕鬆安祥。
- 觀想的對象必須能引起自己身心鬆弛。
- 觀想時只繫念於一處，守住一根，一根清靜安定，其他五根亦隨之 安定。

3.3學習心得與討論

第四週 第四節 本性自存

4.1 禪坐練習中的情緒經驗~~浮現與處理

- 感覺
- 感官
- 想法
- 觀察情緒的起與落

4.2 學習心得與討論

第五週 第五節 覺察

5.1 感受的覺察

- 感覺
- 感官
- 想法
- 親近自己

5.2 學習心得與討論

第六週 第六節 統合

6.1 禪坐與生活的融合

- 經驗呼吸
- 禪坐與生活
- 未來的禪坐計畫

6.2 學習心得與討論

Appendix III The metaphor of cow taming regarding Zen meditation

Process of Enlightenment---Cow taming metaphor---Master Pumin (Ming dynasty 1368-1644)

(1) Not tending

Sharp horns on the head with roaring in the air; wandering in the mountains, streams and getting far; a piece of black cloud across the mouth of the valley; not noticing repeatedly treading on nice seedlings

(2) First adjusting

A rope prickles through my nose; the harder I try to run away the more pain I receive; Deep-rooted bad nature is hard to adjust; the cowherd works hard to hold me

(3) Being control

Gradually regulating, submissive and slowing down running; cross water, clouds following each step of the cowherd; the hands of the cowherd hold the rope tight without any break; the cowherd forgets about tiredness

(4) Looking back

Accumulation of hard work then being able to look back; wild mind turning soft gradually; the cowherd still does not let go his hand totally, tying the rope to the tree

(5) Submission

Under shadow of green willow trees beside the cool stream; I am free to go anywhere; I am bathing by the glorious light of the setting sun and can smell the sweet of the meadow; the cowherd leaves the rope

(6) No fence

Enjoy the nice sleep on the ground; no need for whipping to drive me; the cowherd sits under the pine tree; he blows a song of delight

(7) Freedom

By the willow shore; spring water shinning as it reflects the glow of the setting sun; drink and eat when I need with natural rhythm; the cowherd sleeping soundly on the stone

(8) Mutual forgetting

The white cow walks in white clouds; people without intention, as is the cow; moon rays light through the white clouds and the clouds reflect the moon; white clouds and bright moon go their own ways

(9) Alone

The cow is nowhere and the cowherd is at leisure; a cloud in the green woods; singing and clapping under the moon; there is still a pass on the way

(10) Both are vanished

The cow and the cowherd are gone; cold moon light full in the empty universe; want to know what it means; just as the flourish of wild flowers and green grass

Appendix III

(一) 未做

生犛頭角忘咆哮，
奔走溪山路轉遙，
一片黑雲橫谷口，
誰知步步犯佳苗。

(二) 初調

我有亡魂暮暮身，
一鞭奔繞痛加鞭，
從來劣性難調制，
猶得山童盡力牽。

(三) 受制

漸調漸伏息奔馳，
渡水穿雲步步隨，
手把芒繩無少緩，
牧童終日自忘疲。

四 廻首

日久功深始轉頭，
顛狂心力漸調柔，
山童未肯全相許，
猶把芒繩且聚留。

(五) 馴伏

綠楊陰下古溪邊，
放去牧來得自然，
日落碧雲芳草地，
牧童歸去不須牽。

禪悟的歷程——牧牛圖——明代普明禪師

(六) 無碍

露地安眠意自如，
不勞鞭索永無拘，
山童穩坐青松下，
一曲界牛樂有餘。

(七) 任運

柳岸春波夕照中，
淡烟芳草綠茸茸，
饑餐渴飲隨時過，
石上山童睡正濃。

(八) 相忘

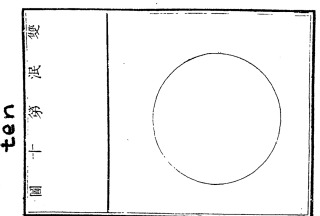
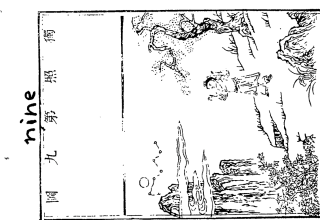
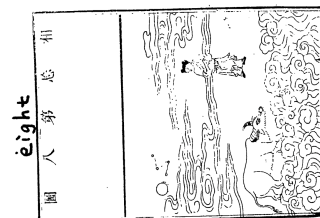
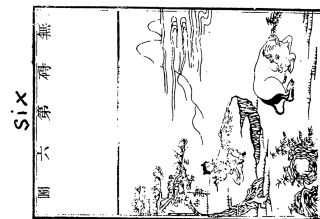
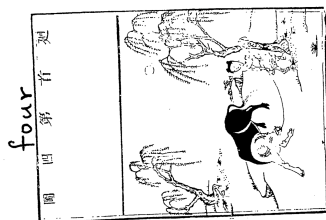
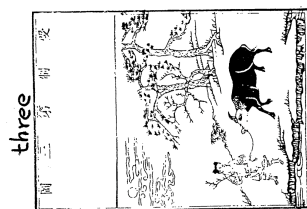
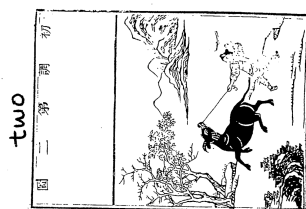
白牛常在白雲中，
人自無心牛亦同，
月遠白雲雲影白，
白雲明月任西東。

(九) 獨照

牛兒無處牧童閑，
一片孤雲碧嶺間，
拍手高歌明月下，
歸來猶有一重關。

(十) 雙泯

人牛不見杳無蹤，
明月光寒萬象空，
若問其中端的意，
野花香草自叢叢。



Appendix IV Trails of codes, themes and categories emerged from focus groups

Appendix IV Trails of codes, themes and categories emerged from focus groups			
	Codes	Themes	Categories
1	Preunderstanding and imagination related to Zen meditation	Expectation of Zen meditation regarding GAD	Ambivalence towards meditation, Crave a good sleep
2	Trying to stop thinking		
3	Experiences of long term use of on medication/Worrying about dependency	Process	Stop thinking, Regaining memory and concentration
4	Medication bring sense of security		
5	Desire a sound sleep	Cultural aspect of Zen meditation in Taiwan	Struggling to reach a state of calm Signs of improvement: Finding a personal way, changing the sense of time, adjusting the goals of Zen practising
6	Relaxations as an ultimate pursuing/A pathway toward stillness		
7	Body sensation/ sense of time	Cultural aspect of Zen meditation in Taiwan	An individual process-personal entry Spiritual influence
8	Sharing symptoms of GAD: poor memory, chest tightness, fatigue, be concentration and focusing, irritable, tummy uncomfortable		
9	Describe exceptional experience while meditating		
10	Description of the sense of self observing experience during daily life		
11	Uneven (not linear) progress		
12	Searching for standard pathway / interested about other's experience		
13	Common shared beliefs: enlightenment, emptiness, spiritual foster		
14	Evil spirit/ possessed/soul will fly out		
15	The way of Zen meditation been viewed by the participants		
16	Investment of great efforts/ struggling		
17	Group dynamics		
NB:	compared to other codes data of code 10, 17 were not enough to form a theme. For further discussion please refer to 7.4 & 9.4.1.		

Appendix V Trails of codes, theme and categories emerged from individual interviews

Appendix V Trails of codes, themes and categories emerged from individual interview			
Codes		Themes	Categories
1 Greeting/ concerning about the researcher		Separation	Concerning about other participants
2 Concerning about other participants			Examining the relationship between Zen meditation and self
3 Preparing to Practise Zen		Body experience	Body awareness
3a breathing			Preparing for Zen meditation practice
3b stretching			
3c warm-up			
4 Keep thinking when meditating		Mind states	The state of engagement with real life
5 Effects (desired):relax, empathy, leisurely and carefree			The state of detachment from real life
6 Not practising : (not in a right mood of meditation situation)			The state of calm
7 Reflection (re changes of self)		Benefits of Zen meditation practice	Less presure with daily life
8 Progress / meditation quality			More acceptance of being a GAD patient
9 Linking : Zen & symptoms of GAD &self			
10 Zen meditation style & habbit			
11 Physical hinder			
12 Psychological hinder			
NB : Data of codes 6, 11 and 12 were rather scattered but yet meaningful so they were discussed in 8.5			

Appendix VI The development of individual interview prompt schedule

The individual prompt schedule 1st version

- Q1: Could you talk about why you are willing to take part of this study?
- Q2: how do you appraise it now when look back of this process?
- Q3: Overall, would you please give me an example to illustrate the prominent difference or changes between pre- and post- Zen meditation practice, over the practising period?
- Q4: In terms of Zen meditation, could you describe any difference you perceived along with time changing of the practising process?
- Q5: In terms of GAD symptoms, do you find out any positive or negative influence since Zen meditation practice?
- Q6: How do you think Zen meditation has done any helpful or unhelpful to you?
- Q5a: Would you give me an example of benefit, which you have experienced?
- Q5b: Would you give me an example of disadvantage, which you have experienced?
- Q7: After practising Zen meditation, is there any mood change or difference in your daily life? Would you give me some examples?
- Q8: In terms of attitude, have you has any changes? i.e., is there any difference way in which you value your self or the people around you?

The individual prompt schedule 2nd version

1. Could you talk about the experience of the latest Zen meditation?
 - ⇒ What did you feel then?
 - ⇒ What were your thoughts then?
2. Could you talk about the experience of first time of Zen meditation?
 - ⇒ What did you feel then?
 - ⇒ What were your thoughts then?
3. Could you compare the differences of Zen meditation experience between the very beginning and now?
4. Could you describe the most impressive Zen meditation experience? What makes it special?

The individual prompt schedule 3rd version

1. Could you tell me, what comes to your mind while you just sit down to practise Zen meditation? How do you feel about it?
2. Could you tell me, what comes to your mind while you right before you finished the Zen mediation practice? How do you feel about it?
3. What you tell me is about the very beginning and the moment before you finish the Zen practice, Could you tell me what's you thoughts and feeling from end to end?
4. Could you tell me, what is your feeling and thoughts after you finish your Zen meditation practice?
5. How often do you practise Zen meditation weekly?
6. What is difference of Zen meditation experience between the beginnings of practising from the latest one?
7. What is your experience about warm-up exercise?
8. What is your experience about body massage after Zen meditation practice?

Appendix VII The letter from the Chairman of the Psychiatric Department to act as a mentor in Taiwan

Prof. Lorraine N. Smith, BSc, Med, PhD
Nursing & Midwifery School
University of Glasgow
59 Oakfield Avenue, Glasgow G12 8LW, Scotland

22, July 2005

Dear Prof. Smith:

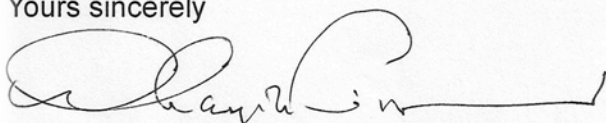
Firstly, I apologize for this late reply because I have not been in Taiwan for a period of time.

It's my great honour to be invited as a mentor of Miss Chueh-fen (Sophia) Lu. It's a new experience for me and I will fully support Chueh-Fen while she inquired in Taiwan.

I have known Chueh-Fen for over 20 years, since she was a clinical nurse and I was a resident doctor in a hospital in Taipei. So many years passed, now I am very glad that she has a chance to study abroad and to carry on her academic career. I am sure that she will have a rich learning experience under your guidance.

I'll keep contact with you, regarding to the duty of being a mentor. Please do not hesitate to contact me if you have any questions.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Chia-Yih Liu', with a stylized, flowing script.

Chia-Yih Liu, MD

**Appendix VIII Ethics approval issued by the Ethics Committee of the Nursing
Department in study site**

2005/8/19

Professor Lorraine N Smith
University of Glasgow
59 Oakfield Avenue
Glasgow, UK
G12 8LW

Dear Professor Smith:

Full title of the study: **An Exploration of Female General Anxiety Disorder
Patients Undertaking an Intervention of Zen
Meditation to Manage Anxiety**

**Reference number of
Ethics Committee:**

朱雲龍 . Chu. Tsang Lam.

The Ethics Committee gave a favourable opinion to this study in August 2005. The proposal had been sent to the relevant departments to seek their comments. On behaviour of the committee, I am please to confirm that the study has been approved by the Committee. Therefore, this study will be allowed to be carried out at till the end of September 2006.

Sincerely yours

Appendix IX Ethics Approval I issued by Medical Research Ethics Committee in study site

26 April 2006

To Whom It May Concern:

RE: An Exploration of Female General Anxiety Disorder Patients Undertaking an Intervention of Zen Meditation to Manage Anxiety

The above study, including the following information:

Protocol ID: Protocol Version dated 4/18/2006

Protocol-Specific Chinese Informed Consent Document version dated 4/18/2006

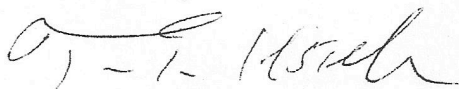
Principal Investigator: Chueh-Fen Lu

Co-Investigator: Chia-Yih Liu

IRB No. 95-0108

, was approved by Institutional Review Board of Hospital on 18 April 2006. The committee is organized and operates according to GCP and the applicable laws and regulations. Approval by Department of Health, the Executive Yuan, is required prior to initiating of this study in Taiwan, Republic of China.

Sincerely Yours,



Tsang-Tang Hsieh, M.D.

Chairman

Institutional Review Board

Appendix X Ethics Approval II issued by Medical Research Ethics Committee in study site (for refined criteria)

July 17, 2006

To Whom It May Concern:

RE: An Exploration of General Anxiety Disorder Patients Undertaking an Intervention of Zen Meditation to Manage Anxiety

The above study, including the following information:

Protocol ID: Protocol Version dated 2006/7/12

Protocol-Specific Chinese Informed Consent Document version dated 2006/7/12

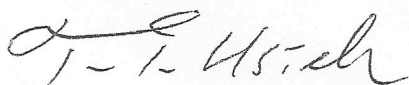
Principal Investigator: Chueh-Fen Lu

Co-Investigator: Chia-Yih Liu

IRB No. 95-0432C

, was approved by Institutional Review Board of [redacted] Hospital on 2006/7/12. The committee is organized and operates according to GCP and the applicable laws and regulations. Approval by Department of Health, the Executive Yuan, is required prior to initiating of this study in Taiwan, Republic of China.

Sincerely Yours,



Tsang-Tang Hsieh, M.D.

Chairman

Institutional Review Board

Appendix XI The informed consent

Informed consent

I am conducting research titled: “An Exploration of Experience of Generalized Anxiety Disorder in Patients Undertaking Intervention of a Zen meditation programme in Taiwan”. I would like to invite you to participate in this study. Please feel free to ask any questions while you are reading through this form.

My name is Chueh-Fen Lu, a current PhD student in Glasgow University, Scotland. I have worked as a psychiatric nursing teacher for 13 years. This study will be conducted by myself and supervised by Professor Lorraine N Smith in the UK and with the mentorship of the Chairmen of the psychiatric department.

Background information

Zen meditation is popular in our society. It is generally believed that through meditation, people can cultivate spiritual harmony, create an inner calmness and promote health. Many researchers have examined the mechanism of Zen meditation physiologically or psychologically yet hardly any studies have explored Zen meditation experiences based on an individual perspective. Thus, the goal of this study is to understand the experiences of Zen meditation practice. Your participation will be the most valuable contribution to the body of knowledge regarding Zen meditation in Taiwan. Also, you may be benefited by taking part in this study.

Study procedure

The procedure could be divided into three major parts: attending Zen sessions, focus groups and an individual interview. For the purpose of data analysis, the focus groups and individual interviews may be recorded with your permission.

① Attending a Zen meditation programme and focus groups: 6 sessions Zen meditation and the booklet will be free offered. After each session a focus groups will take place and is estimated to last about 40 minutes. Daily practice is important to progress with Zen meditation. Therefore a convenient diary will help you to be consistent in your practice.

② Individual interviews: An individual interview will be hold after the Zen programme is completed at a time and place convenient for you. It takes about 45 minutes to an hour and your personal experience is the primary concern.

In addition, a two page anxiety scale needs to be filled out at the first and last session of the Zen programme and at the time of the interview. This is estimated to take 5 minutes each time.

Risks and benefits of being in this research

Risks: numbness or soreness of the legs and/or back is the most common side effects reported. This, however, may differ from one person to another.

Benefits: Many papers suggest that Zen meditation has positive effect on anxiety related symptoms, but there is no guarantee. Please maintain your medical treatment as your doctor prescribed. However, you can meet people who suffered from the same illness like you and this may benefit you in terms of coping with the illness.

Confidentiality

All of your personal details will be protected and used only for the purpose of this research. All the records, including tapes and transcriptions will be properly stored and locked in the researcher's office. In addition to the researcher, only people involved in this study can have access to the records, including Professor Smith and Mentor Association Professor Gau. Findings will remain anonymous.

Voluntary participation

It is your right to decide to join the study or not. Your decision will not affect your health service under any circumstances.

While you join this study, you are free to stop participating at any point in this study and you do not need to have any reason to drop.

Contact details

You may have questions rise during any moment and you are very welcome to ask question as your convenience. Please do not hesitate to contact the researcher.

ChuehFen Lu (03) 3283078; 0958913517; sophiataiwan52@hotmail.com

Statement of consent

I have read through the information above and been given proper explanation. I am satisfied with the answers given to my questions. I consent to join this research.

_____(Signature of the participant)_____(Date)

_____(Signature of the participant)_____(Date)

參與同意書

很榮幸的邀請您參與這項研究，當您閱讀這份說明的同時歡迎您提出任何問題。

我是呂雀芬，任教長庚技術學院之精神科教師近15年，目前是蘇格蘭(Scotland)格拉斯格大學(University of Glasgow)護理系博士班學生，本研究主要由本人執行，而我的指導教授 Lorraine N. Smith以及長庚精神科劉嘉逸主任則擔任這項研究計畫的指導及諮詢工作。此項將要進行的研究名為”廣泛性焦慮症患者之禪坐經驗探討”。

研究背景:

在我們台灣的社會中,坐禪是一項古老的養身方式。一般而言,人們相信經常練習打坐有益健康,達到內心寧靜及精神協調的狀態。科學界做了許多研究嘗試解釋它有效的機轉。儘管目前科學界對禪坐的機制仍存有著許多不同的觀點,然而打坐對焦慮的效果獲得較一致的肯定。從文獻中發現禪坐的研究多偏重在生物測量如腦波、腦血流等,但欠缺來自打坐者本身經驗的理解。因此本研究目的在探討初學禪坐者的經驗或歷程,您的參與與經驗將成為深入了解禪坐知識的重要來源。您的貢獻是彌足珍貴的。更重要的是希望透過學習禪坐對您的焦慮症狀產生改善的效果。

研究程序:

研究的過程分為兩部分--打坐課程的教導焦點問題討論,與及團體課程結束後的個別訪談,為了資料的完整性與分析的需要,在您的許可下,會把互動對話進行錄音。

第一部份: 6個課程的禪坐指導以及課後的經驗討論,將會有一位女性打坐教師及小手冊指導您如何正確的打坐,研究者會在團體中針對某些打坐過程的特定問題,徵詢您的意見,總共花費時間預計四十分鐘。除了團體練習之外,居家每日練習5-10分鐘是達到效果必要的過程,這部分要麻煩您在手冊中做簡要的記載。

第二部份個別訪談: 6週的課程結束後您應能正確地禪坐,請持之以恆。研究者將會主動連絡適合您會談的時間與地點,過程估計大約會花費45分鐘到1小時。訪談問題約有8-10題,將以您個人的禪坐經驗為主。

另外一份兩頁的焦慮問卷(需時5分鐘)會需要您的填答。填答時間為開課前;課程結束後及個別訪談時。

參與研究的可能風險和利益:

風險: 有些報告在打坐期間可能會有腳或背部會有痛麻的反應，但當您有經驗或打坐的次數多時會漸漸的消失。

利益: 您仍應依照您醫師的指示進行治療。但當您參與活動時您可以認識其他焦慮症朋友。當有任何問題研究者將主動扮演連繫者的角色與您的醫師聯絡。此課程可以讓您學到有效的放鬆技巧，且為答謝您對本研究的參與，此項課程是完全免費的。

保密性:

所有您的個人資料將會被嚴密的保護決不洩露,我們知道暴露個人資料不但是違法也是侵犯人權，可能會造成無法收拾的傷害。另外所有的記錄包括錄音帶或筆記將會被妥善保管，僅有研究參與的人員能使用，且僅限於研究用途，即使將來的學術報告均會匿名處理。

志願權利:

您有絕對的權利決定您是否要參與，同時不管您的選擇為何,都不會絲毫影響您的健康服務。 即使是您已參與這個研究了，任何時段您有權利停止參與活動，您並不需要說明退出的原因。

聯繫辦法:

在任何時間果您有問題,非常歡迎您提出問題,聯絡辦法:

呂雀芬03-3283078; 0958913517

sophiataiwan52@hotmail.com.

合約

我已完整的讀過同意書，而且已經了解所有的細節，我同意參與此項研究。

_____(參與者簽名)_____(日期)

_____(見證人簽名)_____(日期)

_____(研究者簽名)_____(日期)

我們將會給您一份資料供您保存

Appendix XII The poster of the Zen meditation programme at the OPD of Psychiatric Department

We are looking for you



Are you currently suffering from general anxiety disorder?

Do you enjoy learning new things?

Do you want to know people with similar illness experience?

In addition to medication, do you want to use alternative therapy to manage anxiety symptom?

If you say “Yes” to the above questions then you are -- **“The right person we are looking for”**



Zen meditation programme is about to commence

Goal of the programme: anxiety management

Requirements: Attending 6 sessions of the programme punctually and to take part in group discussion afterward + individual interview + filling a short anxiety scale+ diary keeping



How does the programme process?

When: Saturday 10 a.m.-12 noon

Where: Private group room

Fee: Sessions and handouts are all free



Please contact:

ChuehFen Lu, instructor of Chang-Gung institute of technology, PhD student of Glasgow University

03-3283078; 0958913517; E-mail address: sophiataiwan52@hotmail.com

禪坐焦慮管理班招生囉



~~妳正在為
廣泛性焦慮症所苦嗎?

~~妳樂於花時間學習新
事物嗎?

~~妳想要認識一些相同
疾病經驗的朋友嗎?

~~除了醫師及藥物之
外，

妳也希望配合其他的方
法來使焦慮症狀更能自
我控制嗎?

如果妳對這些答案回答
是的話



禪坐班將於近期
開始...

課程目標: 焦慮管理

需要您配合的事項:

- ✚ 準時出席課程及參
與課程後之團體問
題討論
- ✚ 個別訪談
- ✚ 週記
- ✚ 焦慮問卷填答



課程進行方式

時間: 週6上午10點~中午12點

地點: 舒適隱密之團體專屬教
室

費用: 全免, 贈送講義



聯絡人: 呂雀芬老師 長庚技術
學院護理系講師; 英國格拉斯
哥大學(University of Glasgow)
護理博士班進修中

03-3283078; 0958913517;

E-mail Address:
sophiataiwan52@hotmail.com

>>>那麼妳就是我們要找的人>>>

Appendix XIII The letter of study information to psychiatric doctors at the OPD

親愛的醫師 Dear Doctors :

您好, 這是我目前急需完成的研究, 假如您有認為合適的個案煩請您推薦, 不勝感激!!

This is my current study for my PhD degree. I would most appreciative getting potential participants' referrals who meet the following criteria:

Inclusion criteria:

- A psychiatric diagnosis of General Anxiety Disorder.
- Female
- Diagnosis made within the last one year
- Aged 18-65 years
- Without antecedent experience on Zen meditation practice including individual or group practice.
- Willing or interested to have further information about the research programme and available to give their contact details.

Exclusion criteria:

- GAD in combination with any other severe psychiatric disorders e.g. schizophrenia; bipolar disorder.
- Considered to be a suicidal risk.

相關資料 Relevant information:

1. 研究摘要 Study information sheet
2. 同意書 Informed consent (我會談病人時會再逐條詳細說明, This will be explained to potential participants in details.)

萬分感激您在百忙之中的協助!! Thank you for taking time from your busy schedule to assist me with this study.

Kind regards

崔芬敬上 ChuehFen Lu

Study Information sheet

Title: An Exploration of Female General Anxiety Disorder Patients Undertaking an Intervention of Zen Meditation to manage anxiety.

Research objectives:

1. To reveal the process of Zen meditation in female General Anxiety Disorder (GAD) patients undertaking a Zen meditation intervention to manage anxiety.
2. To evaluate the effectiveness of Zen meditation as an intervention for anxiety.
3. To provide a deeper understanding of the impact of practising Zen meditation among female GAD patients.

Ethics approval: Currently being sought.

Study design: An intervention study using Focus groups and in-depth interviews after Zen meditation practice. At the same time, both self-reported anxiety scale (Revised State and Trait Anxiety Inventory) and diaries will be administered for increasing robustness of this study.

Sample: Volunteer female patients, aged 18-65, with GAD diagnosis of no more than 6 months, neither combine with Schizophrenia nor Bipolar disorder. Potential sample size is 2 groups of 12 patients each.

Data collection: The STAI will be administered at 3 points and patients will maintain a personal diary on Zen meditation. In addition,

Data collection period: It is estimated that the data collection will last for 12 months.

Data analysis: In addition to a descriptive and analysis statistic will be used for the RSTAI, An interpretative phenomenological approach will be used for in-depth individual interviews. In terms of focus group interviews and diaries the thematic analysis will be applied.

Report: To the hospital, as a PhD thesis and papers in alpha-related journals.

Contact Details:

1. Chueh-Fen Lu: 03-3283078; E-mail Address: sophiataiwan52@hotmail.com2.
2. Professor 2. 2. Lorraine N Smith:(+44) 0141 330 5498; E-mail Address: L.N.Smith@clinmed.gla.ac.uk

Appendix XIV The self-report form

1. Name: _____
2. Date of birth: _____
3. Education: _____
4. Occupation: _____ Position: _____
5. Marriage: married ☐ single ☐ devoice ☐ widow/widower ☐ separated ☐
Others _____
6. Family who live with you: _____
7. The age of youngest child (If applicable): _____
8. The date of being diagnosed: _____
9. A place that suitable for you to practise Zen meditation is : _____
10. The suitable time for you to practise Zen meditation is: _____
11. How can you came to the Zen meditation venue: _____
12. What concerns you most in terms of general anxiety disorder: (Please describe)

13. Any idea or question regarding Zen meditation?

焦慮管理禪坐班 學員基本資料表

Roll Number A1
Date of filling in 4/23

1. 姓名: _____
2. 出生年月日: 民國 40 年 1 月 20 日
3. 您的最高教育程度 國小
4. 職業 _____ 職稱 家庭主婦
5. 婚姻狀態: 已婚 ☒ 未婚 ☐ 離婚 ☐ 鰥寡 ☐ 分居 ☐
其他 _____
6. 與您同住的家人有 老公
7. 若您有小孩, 最小的孩子年紀為 31 歲
8. 被診斷為廣泛性焦慮症之日期: 民國 93 年 4 月
9. 家中適合您禪坐之地方為: 不固定
10. 您認為適合您禪坐之時間為: 30分
11. 您來參加禪坐班的交通方式: 搭火車
12. 焦慮症狀相當令人困擾, 對您而言最為苦惱的是: (請描述)

臨時發病 時常感覺沒安全感

13. 您最期望禪坐能對您提供哪一方面的幫助?

幫助睡眠

Appendix XV The development of the focus group prompt schedule

The focus group individual interview prompt schedule 1st version

G1	
Opening	<ol style="list-style-type: none"> 1.Welcome participants. 2.Introduce researchers, the teacher of Zen meditation and restate the purposes of this study. 3.Inviting participants to introduce themselves –especially on issues about their expectation and pre-understanding regarding to Zen meditation.
Key questions:	<p><u>1.Cognitive:</u></p> <ul style="list-style-type: none"> • What comes up in your mind when you were practicing Zen meditation? • How do you think about it? • Why these things came up instead of another things <p><u>2.Sensation:</u></p> <ul style="list-style-type: none"> • Are there any kind of feelings of your body (Muscle, Respiration, Skin, Posture) • While you were practicing Zen meditation, have you had any special impression on your perception? (Visual, Auditory, Tactile, Olfactory, Taste) <p><u>3.Emotional and Attitude aspect:</u></p> <ul style="list-style-type: none"> • Please tell me at the moment while you were practising Zen meditation what characters of emotion you have experienced? • How do you think and feel about that?
Ending questions:	<ol style="list-style-type: none"> 1.Generally, what are the difficult parts for you when you were practicing Zen meditation today? 2.what is the most enjoyable part for you when you were practicing Zen meditation today? 3.Inviting any other comments from participants for today's group
G2-G5	
Opening	Welcome participants and then inviting participants to asking what have happened from last group meeting to now
Key questions:	<p><u>1.Cognitive:</u></p> <ul style="list-style-type: none"> • What comes up in your mind when you were practicing Zen meditation? • How do you think about it? In other word, why these things came up instead of another things? <p><u>2.Sensation:</u></p> <ul style="list-style-type: none"> • While you were practicing Zen meditation, have you had any special impression on your perception? (Visual, Auditory, Tactile, Olfactory, Taste) or • there any different feelings of your body (Muscle, Respiration, Skin, Posture) • How do you think and feel about that? <p><u>3.Emotional and Attitude aspect:</u></p> <ul style="list-style-type: none"> • Please tell me at the moment while you were practising Zen meditation what characters of emotion you have experienced? • How do you think and feel about that?
Ending questions:	<ol style="list-style-type: none"> 1. Generally, what is the most difficult part for you when you were practicing Zen meditation today?

	2. What is the most enjoyable part for you when you were practicing Zen meditation today? 3. Inviting any comment from participants of today's group
G6	
Opening	1. Thanks to participants for all of their attendance. 2. Encourage participants to ask questions about any problems that happened when they were practising
Key questions	1. Comparison the differences between the first week and today on the prospect of cognition. 2. Comparison the differences between the first week and today on the prospect of sensation. 3. Comparison the differences between the first week and today on the prospect of emotion and attitude.
Ending questions	1. How can this programme be improved? 2. On a scale from 1 to 10, one being not useful at all, 10 being extremely useful, how would you rate your sense of usefulness of Zen meditation effect on anxiety symptoms? 3. Would you explain why you give the score?

The focus group prompt schedule 2nd version

G1	
Opening	<ol style="list-style-type: none"> 1. Welcome participants 2. Introduce researchers, the teacher of Zen meditation and restate the purposes of this study. 3. Tell us your name and the place you lived
Transition	<ol style="list-style-type: none"> 1. Tell us your expectation 2. Tell us any ideas regarding Zen Meditation
Key questions	<p><u>1.Cognition:</u></p> <ul style="list-style-type: none"> • What comes up in your mind when you were practicing Zen meditation? • How do you think about it? • What influence these things that came up in your mind <p><u>2.Sensation:</u></p> <ul style="list-style-type: none"> • Are there any kind of feelings of your body (Muscle, Respiration, Skin, Posture) • While you were practicing Zen meditation, have you had any special impression on your perception? (Visual, Auditory, Tactile, Olfactory, Taste) <p><u>3.Emotion and Attitude:</u></p> <ul style="list-style-type: none"> • Please tell me at the moment while you were practising Zen meditation what characters of emotion you have experienced? • How do you think and feel about that?
Ending questions:	<ol style="list-style-type: none"> 1. What are the difficult parts for you when you were practicing Zen meditation today? 2. What is the most enjoyable part for you when you were practicing Zen meditation today? 3. Inviting any other comments from participants for today's group
G2-G5	
Opening	Welcome participants
Transition	Please think back to experience Zen meditation during last week, talk about what was your first impressions?
Key questions:	<p><u>1.Cognition:</u></p> <ul style="list-style-type: none"> • What comes up in your mind when you were practicing Zen meditation? • How do you think about it? <p><u>2.Sensation:</u></p> <ul style="list-style-type: none"> • While you were practicing Zen meditation, have you had any special impression on your perception? (Visual, Auditory, Tactile, Olfactory, Taste) or • there any different feelings of your body (Muscle, Respiration, Skin, Posture) • What do you think and feel about that? <p><u>3.Emotion and Attitude:</u></p> <ul style="list-style-type: none"> • Please tell me at the moment while you were practising Zen meditation what characters of emotion you have experienced? • What do you think and feel about that?
Ending questions:	<ol style="list-style-type: none"> 1. Generally, what is the most difficult part for you when you were practicing Zen meditation today? 2. What is the most enjoyable part for you when you were practicing Zen meditation today? 3. Inviting any comment from participants of today's group
G6	
Opening	<ol style="list-style-type: none"> 1. Thanks to participants for all of their attendance. 2. Encourage participants to ask questions about any problems what happened when they were practising
Transition	1. What have you learned from the Zen Mediation Programme?
Key questions	1. Comparison the differences between the first week and today on the

	<p>prospect of cognition.</p> <p>2. Comparison the differences between the first week and today on the prospect of sensation.</p> <p>3. Comparison the differences between the first week and today on the prospect of emotion and attitude.</p>
Ending questions	<p>1. How can this programme be improved?</p> <p>2. On a scale from 1 to 10, one being not useful at all, 10 being extremely useful, how would you rate your sense of usefulness of Zen meditation effect on anxiety symptoms?</p> <p>3. Would you explain why you give the score?</p>

Appendix XVI The permission for use of the RSTAI

A certificate letter of authorization for the measurement-- “修訂情境和特質焦慮量表”

I authorize that the measurement named “修訂情境和特質焦慮量表” and was revised in 1984 is able to be used by 呂雀芬 to carry on her PhD research, “An exploration of female general anxiety disorder patients undertaking an intervention of Zen meditation to manage anxiety” .

鍾思嘉
Name of the authorizer

July 8, 2005
Date

Shi-Ki Chung
Signature

中華民國 94 年 7 月 8 日

Appendix XVII A sample of the RSTAI (in Chinese)

自我評量問卷 (一)

姓名：_____

日期：7/15 pre

作答說明：下面有一些人們用來描述自己的語句，作答時，先看各題的語句，然後根據你現在的感受～也就是這個時刻的感受，在右方適當的答案處，將圓圈塗黑。答案並沒有對錯之別，只要選出最能說明你目前感受的答案即可，不必在每一題上花太多時間。

	一點也不	有一點	頗為	非常
1. 我覺得鎮靜.....	①	②	③	④
2. 我覺得安全.....	①	②	③	④
3. 我很緊張.....	④	②	③	①
4. 我後悔.....	④	②	③	①
5. 我覺得輕鬆自在.....	①	②	③	④
6. 我覺得不如意.....	④	②	③	①
7. 我現在就會為可能發生的不幸而擔憂.....	④	②	③	①
8. 我覺得安閒.....	①	②	③	④
9. 我覺得焦慮.....	④	②	③	①
10. 我覺得舒適.....	①	②	③	④
11. 我覺得有自信.....	①	②	③	④
12. 我覺得焦急.....	④	②	③	①
13. 我覺得神經過敏.....	④	②	③	①
14. 我覺得神經緊張.....	④	②	③	①
15. 我覺得舒暢.....	①	②	③	④
16. 我覺得滿足.....	①	②	③	④
17. 我擔憂.....	④	②	③	①
18. 我覺得太激動而且急躁不安.....	④	②	③	①
19. 我覺得高興.....	①	②	③	④
20. 我覺得愉快.....	①	②	③	④

自我評量問卷(二)

姓名：_____

日期：2/15

作答說明：下面有一些人們用來描述自己的語句，作答時，先看各題的語句，然後根據你平時的感受，在右方適當的答案處，將圓圈塗黑。答案並沒有對錯之別，只要選出最能說明你目前感受的答案即可，不必在每一題上花太多時間。

代表你平時

- | | 幾乎沒有
① | 有時
② | 常常
③ | 幾乎都是
④ |
|-----------------------------------|-----------|---------|---------|-----------|
| 21.我覺得愉快..... | ① | ② | ③ | ④ |
| 22.我容易疲倦..... | ① | ② | ③ | ④ |
| 23.我有想哭的感覺..... | ① | ② | ③ | ④ |
| 24.我希望我能像別人那麼快樂..... | ① | ② | ③ | ④ |
| 25.我不能很快下決心，以致坐失良機..... | ① | ② | ③ | ④ |
| 26.我覺得安閒..... | ① | ② | ③ | ④ |
| 27.我沈著冷靜而且鎮定..... | ① | ② | ③ | ④ |
| 28.我覺得困難重重，以致難於克服..... | ① | ② | ③ | ④ |
| 29.我太擔憂一些無關緊要的事..... | ① | ② | ③ | ④ |
| 30.我很快樂..... | ① | ② | ③ | ④ |
| 31.我易於把事情看得很難..... | ① | ② | ③ | ④ |
| 32.我缺乏自信..... | ① | ② | ③ | ④ |
| 33.我感到安全..... | ① | ② | ③ | ④ |
| 34.我嘗試著去避免面對危險或困難..... | ① | ② | ③ | ④ |
| 35.我覺得憂鬱..... | ① | ② | ③ | ④ |
| 36.我很滿足..... | ① | ② | ③ | ④ |
| 37.一些無關緊要的念頭在我心中出現而困擾著我..... | ① | ② | ③ | ④ |
| 38.我對失望很介意，以致於難以釋然..... | ① | ② | ③ | ④ |
| 39.我是個穩定的人..... | ① | ② | ③ | ④ |
| 40.一想到最近與自己有利害關係的事時，我就會緊張或煩亂..... | ① | ② | ③ | ④ |

Appendix XVIII A sample of diary

Week 1	date	7		15		7		16		7		17		7		18		7		19		7		20		7		21	
	Practice	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B		
		V																											
	Time of warm up	15																											
	Time of meditation	5'																											
	Comments																												

signature _____

Appendix XVIII A sample of a diary

1.

There are two columns (A &B) and you are advised to practise twice per day. As shown above, you use “V” to indicate your practice. (time for warm-up can be adjusted depending on your individual condition
2.

If you are too busy to practise and only practice once, then you just need to fill in column A and leave the column blank on the day.
3.

Daily practice may facilitate you to develop a meditation habit.
4.

Keep going!

Appendix XVIII A sample of diary

禪坐居家執行記錄單

第	日期	7		15		7		16		7		17		7		18		7		19		7		20		7		21	
		執行	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	
一	暖身時間	15	/	10分	8分	10	3分	8-9'	3分	10分	3分	5分	2-3分	11分	/														
	打坐時間	5'	/	6-7	6	5-6	5分	6-7	5分	6	4-5分	5分	4	5分	/														
	今天之感受	在教室時，老師帶入，在教室有同學，可以愈過		還蠻舒服的，眼睛睜開，可以休息一下		精神比較好，早上坐，晚上比較累		呼吸，感覺不錯		小靜一下		晚上睡得好		覺量度中		精神，不容易		有幾秒鐘，可以專心呼吸											

- 建議您一天執行兩次禪坐，因此有 AB 兩欄，請分別打 V，及填入打坐時間即可（暖身時間可依您個人之狀況調整）
- 若您太忙僅執行 1 次，則只要填 A 欄即可
- 健康跟事業一樣其實是要花時間去經營的，花心力去投資的。因此居家每日練習靜坐 有益於領會到靜坐的好處。
- “有恆”是決定成敗的重要關鍵。加油!!!

Appendix XIX The meaning of drinking behavior among aboriginal junior college students (English abstract)

The Meaning of Drinking Behavior Among Female Aboriginal Junior College Students

**Chueh-Fen Lu, Chen-Fang Lou, Miao Chuan Chen,
Ching-Chuan Tung**

The purpose of the study was to explore the experience of alcohol drinking among female aboriginal junior college students. Eleven subjects, who drank at least once per month, accepted in-depth individual tape- recording interview for 1 to 3 times. The contents of these interviews were transcribed word by word. For increasing the validity of the study, a triangulation method was used including- peer debriefings, participators' review and epidemiological survey. The data analysis revealed that the meaning of drinking experience could be explained by a major theme, namely "pull-push relationship". The relationship can be subcategorized as "cognitive ambivalence" and "emotional complex". The former described the contradiction of drinking behavior; while the latter, the linkage with conventionality. This study thus was an attempt to depict background context of the major theme from three aspects: cultural differences between Han and aboriginal tribes, ruling regulation in school, and characteristics of female adolescents. It is suggested that drinking behavior of female aboriginal adolescents need to be further understood and form a multi-dimensional perspective. The finding of this study could provide schools a framework for better understanding of drinking behavior in female aboriginal adolescents.

Key words: aboriginal female junior college students, drinking behavior, pull-push relationship

Lecturers, Chang-Gung Institute of Technology