SUBSTANCE USE AMONG PSYCHOLOGY OUTPATIENTS WITH ANXIETY OR DEPRESSION

& RESEARCH PORTFOLIO

PART ONE

(Part Two bound separately)

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CHAPTER 1. SMALL SCALE SERVICE EVALUATION PROJECT

Do referrals in an Adult Mental Health Clinical Psychology Service vary consistently across each month of the year?

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Prepared in accordance with the guidelines for submission to

Health Bulletin (Appendix 1.1)

Do referrals in an Adult Mental Health Clinical Psychology Service vary consistently across each month of the year?

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ABSTRACT

Objective

The main objective of this study was to establish whether referral patterns varied across time in either the number of referrals made or the type of disorder referred to an Adult Mental Health Clinical Psychology Department.

Design

The design was a review of a database of patient contact record forms completed by Clinical Psychologists over 5 years.

Setting

Department of Clinical Psychology in West of Scotland – Urban setting.

Subjects

The subjects were patients who were referred to, and who attended, the Adult Mental Health Service used in this study.

Results

The data analysis was descriptive. No consistent pattern was found in the total number of referrals made to the department over the five-year period studied. Similarly, there was no discernable pattern of temporal distribution in the total number of referrals for each of the disorder categories considered.

Conclusion

Over the five-year period in the location studied, there was no consistent pattern of temporal distribution, in either the total numbers of referrals made, or in the types of disorders referred.

INTRODUCTION

Recent research has highlighted that there are some temporal patterns in the incidence of mental illness. Takei et al., (1992), for example, found a summer peak in first admissions to hospitals for women suffering from schizophrenia, and for men and women suffering from mania. Takei & Murray (1993) replicated this finding of seasonal variation of admissions for schizophrenia, but not for mania.

Suhail & Cochrane (1998) found a significant seasonal pattern in admissions of depression, these being highest in winter months. They also noted a summer peak for bipolar disorder in women only.

Barbini et al., (1995) looked at bipolar recurrences and noted that mania more frequently recurred in the summer. Silverstone et al., (1995) also studied bipolar disorders but found no consistent seasonal pattern for mania. Their study, however, did highlight an autumn preponderance of individuals with depressive disorders. Wehr & Rosenthal (1989) cite strong evidence of a bimodal seasonal influence on the timing of episodes of depression; they found both a summer and a winter peak.

Many studies identify significant seasonal variations in the prevalence of depression and this is shown, not just by admission and recurrence rates, but also by GP consultations, antidepressant medication prescribing practices, and suicides (e.g. Williams & Dunn, 1981). Blazer, Kessler & Swartz (1998) found that the prevalence rates of major and minor depression followed a seasonal pattern. Furthermore, seasonal affective disorder (SAD) is also known to follow a seasonal pattern with depressive

symptomatology at its greatest magnitude in autumn and winter (Lewy, Kern & Rosenthal, 1982; Rosenthal, Sack & Gillin, 1989).

Blacker, Thomas & Thompson (1997) looked at seasonal incidence and prevalence of psychiatric disorders in a sample of patients from a GP practice. They noted two peaks in the incidence of minor depression, one in the summer and one in the winter. For major depression, they found only a winter peak.

Hardin et al., (1991) evaluated self-reported seasonal changes in mood and behaviour in two normal samples and several clinical populations, including patients with seasonal affective disorder (SAD), eating disorder, bipolar affective disorder, and major depressive disorder. In addition to finding high scores for SAD, they also note a high degree of seasonal variation in the mood and behaviour of the eating disorders population.

Other studies have examined seasonal change in psychological well being in non-clinical populations. Schlager, Schwartz & Bromet (1993), for example, assessed current symptoms of a non-clinical population and found that for women, their symptoms were greatest during late autumn and early winter. The symptoms included features of anxiety, somatisation and depression. Lacoste & Wirz-Justice (1989) studied 285 healthy people and found late summer/ early winter peaks in self-rated anxiety and fatigue. Winter peaks and summer troughs in self-rated sadness, anxiety, demoralization, and poor self-esteem have also been noted (Terma, Boticelli & Link, 1989). Some studies have suggested that such seasonal patterns were more pronounced in women (Spoont, Depue & Krauss, 1991; Harris & Dawson-Hughes, 1993).

Thus, much research demonstrates that there is seasonal variation for recurrences and admissions of people suffering from depression, schizophrenia and mania (Takei et

al., 1992, 1994). Temporal variation has also been noted in antidepressant medication prescribing practices (Williams & Dunn, 1981), the prevalence of major and minor depression and SAD, and in the mood and behaviour of some clinical populations, such as people with eating disorders (Hardin et al., 1991). Psychological well-being has also been shown to exhibit temporal variation in healthy subjects. Symptoms including features of anxiety, somatisation, fatigue and depression have been generally shown to be greater in the winter.

The studies discussed suggest that there is some seasonal variation in certain disorders where admission is required, and in less severe cases such as minor depression or SAD, and even in the symptoms of healthy individuals. It is possible, therefore, that the numbers of referrals to a Clinical Psychology Department for some disorders may also vary depending on the season. Furthermore, the total numbers of referrals to a Department may also vary seasonally.

Health Professionals have been increasingly asked to justify themselves in terms of their efficacy and efficiency. Not only is proficiency in the NHS beneficial but, in a time of rising financial constraints, it may also be regarded as ethically commendable. Ineffective use of resources can lead to fewer treatment places resulting in less people receiving their right to healthcare (Williams, 1988). This has obvious implications for Clinical Psychologists for the improvement of the clinical and cost effectiveness of their service - a widely acknowledged ideal. The ability to anticipate probable numbers of referrals and referral types would perhaps help Psychologists to achieve this. If they can predict, for example, that the number of referrals for patients suffering from depression will increase in November, it might be worth having a 'depression clinic' at that time.

Furthermore, if there was a significant rise in the number of overall referrals at a particular time of year, a department could hire a locum to help out, or warn GPs of the likely increase in waiting times for that period. An idea of how referrals vary across time could, therefore, help psychologists to improve their efficiency and better cope with the demands on their time.

Objectives

The aim of this research, therefore, was to establish whether there are referral patterns across time, in either quantity of referrals or type of disorder referred. Thus, the temporal distributions of all disorders referred to the featured department were investigated over a time period of five years (1993-1997 inclusive).

METHOD

The characteristics of patients who were referred to, and who attended the Adult Mental Health Service of the featured department constituted the data used in this study. The sample included those who were referred for neuropsychological assessment and for physical pain. Subjects were excluded if they had not opted in, if they did not attend their first appointment or if there were missing data points, as this meant there was no category of psychological dysfunction for their problems. This was considered necessary to confirm the reason for referral. These subjects, however, were included when the total number of referrals was being investigated, as the problem category they fell into was not relevant at this stage of the analysis. A total of 2532 subjects were, therefore, included in

the preliminary investigation, and 1437 were included in the exploration of temporal distribution of referral of problem category.

Design

This study involved a review of a database containing referral and patient information. Clinical Psychologists working in an Adult Mental Health Service in one locality completed patient contact record forms that were stored on a computer database. At the time of the study, there were four Psychologists working in the department, although this number varied during the time period being studied. Referrals over a five-year period (1993-1997 inclusive) were included. These referrals were mainly from GPs, although Psychiatrists, and other Doctors and Health Professionals also referred.

Setting

The setting was a Department of Clinical Psychology in the West of Scotland, with an urban situation. The catchment area had a population of approximately 85,000. The predominant social deprivation index was 4 (Carstairs & Morris, 1991).

Procedure

The time of referral was classified according to the month of year in which the patient was referred. The problems formulated at first appointment were classified according to a list of disorder categories prepared and used by the department. Psychologists selected the appropriate category from the list according to their clinical judgment. This list was idiosyncratic to the Department and was extensive, containing 363 disorder categories.

The present study used the subheadings of this list in order to reduce the number of disorder categories to a more manageable amount (24). Problems were grouped according to these 24 major disorder categories (for details see Appendix 1.2). The total number of referrals for each month of each year was compared. Thus, January 1993 was compared with January 1994, January 1995, January 1996 and January 1997, and so on for each month respectively. The total number of referrals for each individual disorder category was also compared. Subsequently, the mean for each month over the five years was calculated and standard error scores were also calculated.

RESULTS

Section 1

Analysis of the database used descriptive measures. Initially the total numbers of referrals per year were studied. Figure 1 shows a histogram of the total numbers of referrals for each year from 1993-1997. Data for subjects who did not attend their first appointment, or did not opt in, were included at this stage of the analysis.

Insert Figure 1 about here

As can be seen from this graph, referral numbers fell from 1993 to 1996. There is a small increase in referrals again in 1997, but the number in 1997 is still less than the 1993 and 1994 level.

Figure 2 represents the mean number of referrals for each month across years. Standard error bars are also shown.

Insert Figure 2 about here

The means for July and December are slightly lower than the means for the other months. However, when the standard error bars are examined, it can be seen that the mean for December is not substantially lower than the means for the other months of the year. The top error bar for July, however, is lower than the bottom error bar for February and March. This suggests that the mean number of referrals for July (1993-1997) is substantially less than the mean number of referrals for February (1993-1997) and March (1993-1997). However, when the total number of referrals for each July are examined separately, no consistent pattern is observable. A particularly low number of referrals in July 1996 is likely to account for the lower overall aggregated mean for July months. It is unlikely, therefore, that the difference observed in Figure 2 is indicative of a consistent trend.

The data were studied to ensure that the number of referrals was not progressively increasing or decreasing for any month over the five-year period, as this would have been hidden in Figure 2. No such pattern, however, was observed in the data.

Thus, it seems from Figure 2 that, apart from July, there was no substantial difference in the number of total referrals made to the featured department over the months of the year.

Section 2

The database was then studied to investigate any temporal distribution in the types of disorders referred. The same method as used to study the total numbers of referrals was applied.

Looking at referrals for Anxiety, January to June referrals appeared to be higher than July to December referrals. Taking standard error bars into account, it appeared that January, March, May and June referrals were substantially higher than July, October, and December referrals. When total numbers of referrals for anxiety were examined for each month of each year separately, however, it appears likely that this difference is due to a particularly high number of referrals in these months for one year only. That is, rather than a consistently high number of referrals for these months regardless of the year. Referrals, for example, were particularly high in June 1996, and were particularly low in July 1994, and 1996. Furthermore, the error bars on this graph are large which suggests that the differences discussed may be due to error variance rather than consistent differences in the mean. Thus, it seems unlikely, that there is a consistent temporal pattern in referrals for anxiety to the featured department in the time period studied.

There was a difference in the means for phobia referrals; January and June being considerably higher than October. There was also a difference in the means on the PTSD referral graph. March, April, June, September, October, and December referrals were

higher than July and November. The June mean also appears to be higher than most months (except January, September, October, and December). For both these disorder categories, however, as with anxiety, there is greater error about the mean. Thus, the differences reported may be due to error variance, not consistent differences in the mean, as there do not appear to be consistent increasing or decreasing trends. Furthermore, the differences in total referral numbers are low (normally less than 1). A similar argument holds for the mean differences for affective disorders. July and November referrals appear to be lower than March, April, August, September, October, and December.

Similarly small differences were observed for many of the other disorder categories. The differences involved, however, always represented 1 or 2 referral cases, and were considered therefore, to have no service implications for the featured department.

As with the total numbers of referrals, the data for each disorder category were studied to see if the numbers of referrals were progressively increasing or decreasing. This was found not to be the case.

It is important to note that a proportion of the subjects were categorized as having co-morbid problems. The number of subjects with one, two and three additional problems was recorded (See Table 1). It was assumed that the primary problem coded was the main focus of treatment, and was therefore most relevant for inclusion in the investigation of seasonal variation of referrals. It can be seen from Table 1 that the percentage co-morbidity is lower in 1997.

Insert Table 1 about here

DISCUSSION

Examination of Figure 2 (which represents the mean number of referrals for each month of each year) highlighted a fall in referral numbers in July, although this fall was not substantial, and seemed to be attributable to a fall in referral numbers only in July 1996. Any decrease in referral numbers may be attributable to the local holidays, which are in July. Similarly, a downward trend in December could also be due to holidays.

For the investigation of disorder type, although trends were noted for some disorder categories, and differences were observable in means, these do not appear to represent a consistent pattern of seasonal variation in referrals. This was because when examined for each year separately, the differences were due to 'one-off' peaks or troughs in one year only, rather than a consistent pattern of increase or decrease over the five years included. In addition, the differences observed represent 1 or 2 referral cases and are not, therefore, likely to have service implications for the featured department.

Some disorder categories are more likely to follow a pattern of seasonal variation, such as depression (see Suhail et al., 1998, Blacker et al., 1997 for examples), seasonal affective disorder (SAD), and certain specific phobias, such as phobias of certain insects (e.g. wasps). SAD was included in the category 'Affective Disorders'. This more general category may have masked any seasonal pattern for this disorder. Referral numbers, however, for SAD were so small that it was unlikely that any pattern would have been evident. Specific phobias of wasps, and other seasonal insects, were included in the 'Phobia' category. The information on the database was not specific enough to allow identification of the type of phobia referral. It is likely, however, that there would not have been a sufficient number of referrals to detect a temporal pattern in the data.

The subheadings used to categorize the data may have been over-inclusive. The categories chosen were the categories habitually used by the Psychologists working in the department. This meant, however, that disorders such as Mania and Depression, were grouped together under the same subheading, Affective Disorders. The literature suggests that there may be summer peaks for mania, and winter troughs for depression (Wehr & Rosenthal 1989). Thus, even if this pattern was also observable in referral patterns, it might not be apparent from this study as the numbers of referrals for each disorder may cancel out any difference.

It is important to note that this was a study of temporal distribution of referral patterns not conditions. It is possible that people may suffer with problems for many months, or perhaps hope that the problem will naturally decrease and may therefore delay seeking a referral. Furthermore, medication use may mask any problem for a period of time. GPs and other referring agents also influence referral patterns. The workload of the GP, to highlight one other potentially relevant factor, may affect his or her likelihood of making a referral. Similarly, the length of the department waiting list may also have an impact on referral patterns, with referring agents being more likely to delay a referral, or refer elsewhere when the list is long. Apart from the type of disorder being referred, therefore, there are many other influences on referral patterns. It should be noted, however, that this investigation did not set out to explore these influences.

In both the investigation of total referral numbers, and referral type, referrals for males and females were grouped together. This may have masked a gender-related pattern. Some researchers have found seasonal variation in female subjects with certain disorders, but no variation in males (Spoont et al., 1991, Harris et al., 1993). Studying

male and female subjects together may thus have masked any such gender differences. Similarly subjects of all age categories were grouped. Eagles et al., (1997) found a seasonal fluctuation in psychological well-being in an elderly population. Perhaps different age groups are more prone to seasonal problems, and grouping all age groups together would mask such a pattern. However, such investigations were beyond the scope of this research.

It is important to note that there has been no inter-rater reliability to check the consistency of the Psychologists completing the form, and selecting disorder categories.

Finally, there is one potential source of artefact in this study that should be acknowledged in that there has been some variability in the number of Psychologists working in the department, which may have had an effect on referral patterns.

In conclusion, referrals to the Clinical Psychology Adult Mental Health service featured in this study were not found to vary consistently across each month of the year, over the five years studied. Investigations of different settings in other areas, with different social deprivation indices, or different client groups may yield different results.

REFERENCES

Barbini, B., DiMolfetta, D., Gasperini, M. & Manfredonia, M. G. Seasonal concordance of recurrence in mood disorder patients. *European Psychiatry* (1995), 10 (4), 171-174.

Blacker, C. V. R., Thomas, J. M. & Thompson. C. Seasonality prevalence and incidence of depressive disorder in a general practice sample: Identifying differences in timing by caseness. *Journal of Affective Disorders* (1997), 43 (1), 41-52.

Blazer, D. G., Kessler, R. C. & Swartz, M. S. Epidemiology of recurrent major and minor depression with a seasonal pattern: The National Co-morbidity Survey. *British Journal of Psychiatry* (1998), 172, 164-167.

Carstairs, V., & Morris, R. Deprivations and Health in Scotland. Aberdeen University Press. 1991.

Eagles, J. M., McLeod, I. H. & Douglas, A. S. Seasonal change in psychological well being in an elderly population. *British Journal of Psychiatry* (1997), 171, 53-55.

Hardin, T A., Wehr, T. A., Brewerton, T. & Kasper, S. Evaluation of seasonality in six clinical populations and two normal populations. *Journal of Psychiatric Research* (1991), 25 (3), 75-87.

Harris, S. & Dawson-Hughes, B. Seasonal mood changes in 250 normal women. *Psychiatry Research* (1993), 49 (1), 77-87.

Lacoste, V. & Wirz-Justice, A. (1989) Cited in Schlager, D., Schwartz, J. E., & Bromet, E. J. Seasonal Variations of current symptoms in a Healthy Population. *British Journal of Psychiatry,* (1993) 163, 322-326.

Lewy, A. J., Kern, H. E., Rosenthal, N. E. (1982) Cited in Schlager, D., Schwartz, J. E., & Bromet, E. J. Seasonal Variations of current symptoms in a Healthy Population. *British Journal of Psychiatry,* (1993) 163, 322-326.

Masterton, G. Monthly and Seasonal Variation in Parasuicide. A Sex Difference. *British Journal of Psychiatry,* (1991) 158, 155-157.

Rosenthal, N. E., Sack, D. A. & Gillin, J. C. (1989) Cited in Schlager, D., Schwartz, J. E., & Bromet, E. J. Seasonal Variations of current symptoms in a Healthy Population. *British Journal of Psychiatry,* (1993) 163, 322-326.

Schlager, D., Schwartz, J. E., & Bromet, E. J. Seasonal Variations of current symptoms in a Healthy Population. *British Journal of Psychiatry,* (1993) 163, 322-326.

Silverstone, T., Romans, S., Hunt, N. & McPherson, H. Is there a seasonal pattern of relapse in bipolar affective disorders? A dual Northern and Southern Hemisphere cohort study. *British Journal of Psychiatry,* (1995) 167 (1), 58-60.

Spoont, M. R., Depue, R. A. & Krauss, S. S. Dimensional measurement of seasonal variation in mood and behaviour. *Psychiatric Research* (1991), 39 (3), 269-284.

Suhail, K., & Cochrane, R. Seasonal Variations in hospital admissions for Affective Disorders by Gender and Ethnicity. *Social Psychiatry and Psychiatry Epidemiology,* (1998) 33, 211-217.

Takei, N., O'Callaghan, E., Sham, P., Glover, G., Tamura, A., & Murray, R. Seasonality of Admissions in Psychoses: Effect of Diagnosis, Sex, and Age of Onset. *British Journal of Psychiatry,* (1992) 161, 506-511.

Takei, N. & Murray, R. Gender Differences of schizophrenia in seasonal admissions in Scotland. *British Journal of Psychiatry* (1993) 162, 272-273.

Terma, M., Boticelli, S.R. & Link, B. G. (1989) Cited in Schlager, D., Schwartz, J. E., & Bromet, E. J. Seasonal Variations of current symptoms in a Healthy Population. *British Journal of Psychiatry,* (1993) 163, 322-326.

Wehr and Rosenthal (1989) Cited in Hardin, T A., Wehr, T. A., Brewerton, T. & Kasper, S. Evaluation of seasonality in six clinical populations and two normal populations. *Journal of Psychiatric Research* (1991), 25 (3), 75-87.

Williams, A. Health Economics: The end of Clinical Freedom. *British Medical Journal,* (1988), 297, *1183-1186.*

Williams, P. & Dunn, G. (1981) Cited in Blacker, C. V. R., Thomas, J. M. & Thompson. C. Seasonality prevalence and incidence of depressive disorder in a general practice sample: Identifying differences in timing by caseness. *Journal of Affective Disorders,* (1997), 43 (1), 41-52.

Table 1: Percentage of Sample with Co-morbid Problems

Table shows percentage of sample with 1 co-morbid problem, 2 co-morbid problems, and 3 co-morbid problems.

Table 1: Percentage of Sample with Co-morbid Problems

Year	Percentage of Sample with 1 Co-morbid Problem	Percentage of Sample with 2 Co-morbid Problems	Percentage of Sample with 3 Co-morbid Problems
1993	32.5	0.50	3.53
1994	29.6	7.61	3.66
1995	33.1	6.69	2.33
1996	14.8	4.83	1.21
1997	0.90	0.00	0.00

Figure 1: Total Number of Referrals 1993-1997

Total number of referrals to the department for each year.

Figure 1: Total Number of Referrals 1993-1997

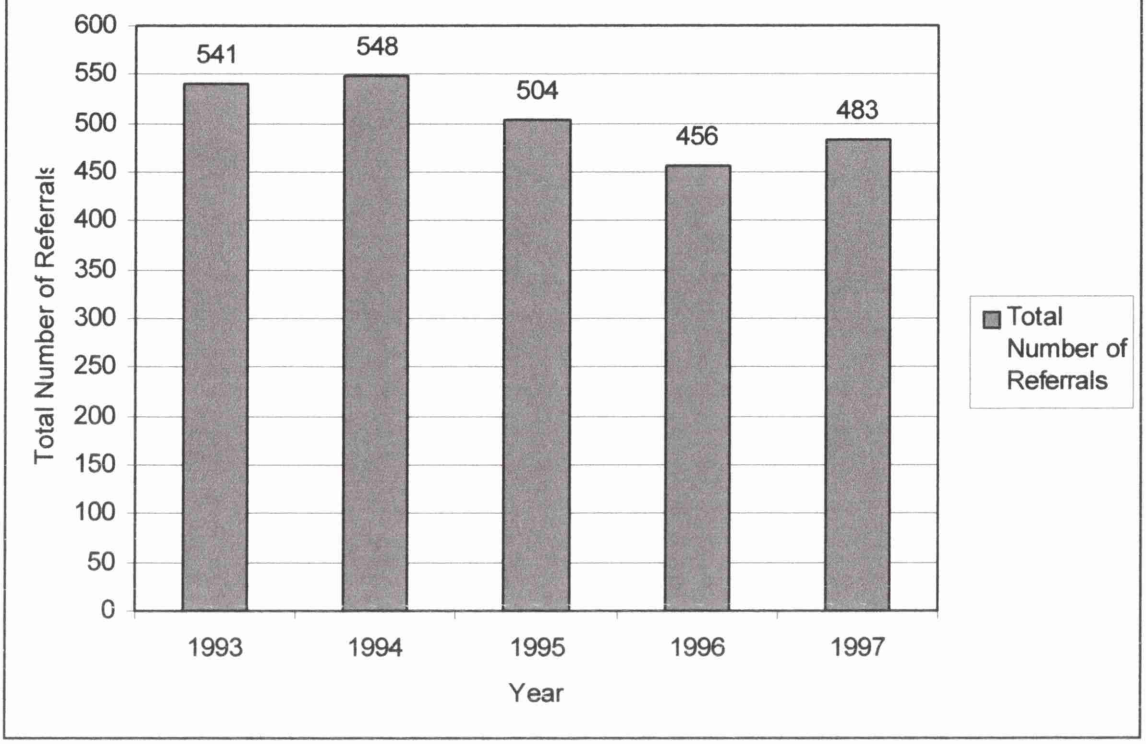
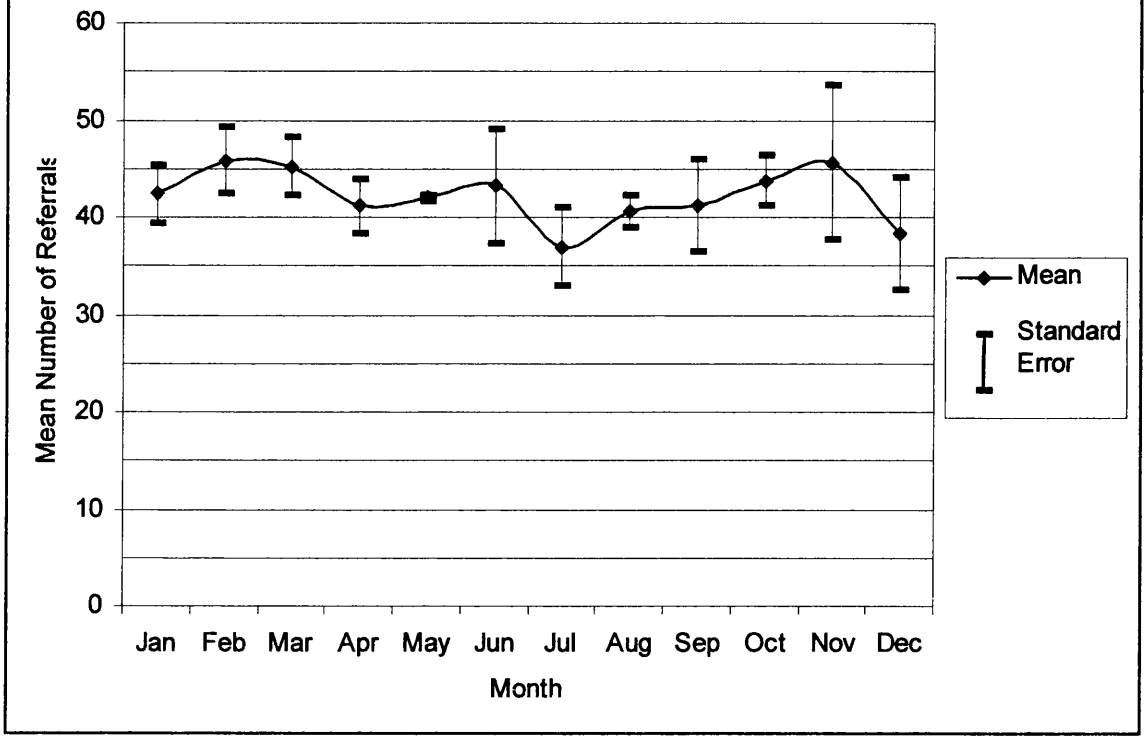


Figure 2: Mean Number of Referrals 1993-1997

Temporal distribution of referrals, displayed monthly for data aggregated from 1993-1997. Note that the mean for July is lower than the means for February & March.

Figure 2: Mean Number of Referrals by Month of Referral 1993-1997 with Standard Error Bars



CHAPTER 2. MAJOR RESEARCH PROJECT LITERATURE REVIEW

Substance Use Disorders and Anxiety and Depression:

A Review of the Literature

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Prepared in accordance with the guidelines for submission to

Alcohol and Alcoholism (Appendix 2.1)

Substance Use Disorders and Anxiety and Depression: A Review of the Literature

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Running Head: Substance Use Disorders and Anxiety and Depression

Key Words: Alcohol, Anxiety, Co-morbidity, Depression, Expectancies, Substance use, Therapeutic Alliance

ABSTRACT

The literature examining the association between substance use disorders and anxiety and depression is critically reviewed. Papers were selected for review following literature searches of PsycINFO, Medline and BIDS databases from the last 25 years. The most frequently cited larger scale studies examining the association were selected for inclusion.

Research on clinical populations yields variable prevalence rates, however, epidemiological studies help to clarify this issue and suggest that there is a high prevalence of co-morbid substance misuse in people with anxiety or depression, compared to the general population.

Clinical interest in co-morbidity arises from the impact it may have on treatment. There are indications that people with co-morbid alcohol and drug abuse and dependence may gain less benefit from certain psychological interventions. Substance use is thought to affect treatment directly via its influence on behavioural interventions and indirectly via its effect on therapeutic alliance. This research is reviewed

Finally studies exploring expectations regarding alcohol and drugs and the influence of these on substance use and misuse are discussed.

Areas for further research are highlighted.

INTRODUCTION

There has long been a research interest in co-morbidity, defined as the co-occurrence of two or more disorders at the same time in the same individual. Co-morbidity of substance abuse and dependence has been studied in a wide variety of disorders including schizophrenia, personality disorders, affective disorders and anxiety disorders (Regier et al., 1990). The review will focus specifically on anxiety and depression.

The issue of co-morbidity is of interest to both clinicians and researchers. Clinically, co-morbidity may impact on the therapeutic alliance between therapist and patient and has also been found to be associated with poorer treatment outcomes (Kessler, 1995). Individual's beliefs or 'expectancies' about the positive and negative consequences of drug consumption have been identified as significant in the alcohol literature (Brown, Christiansen & Goldman, 1987). It is suggested that this may be an important treatment target for individuals with co-morbid disorders.

Three hypotheses are debated in the literature to explain the association between substance abuse with anxiety and depression. Firstly, it is asserted that drug use precedes and may cause anxiety and depression; hence they are a consequence of substance use and withdrawal (eg Allan 1995, Schuckit & Hesselbrock 1994, Schuckit & Monteiro 1988). A second hypothesis suggests that drug use follows the onset of anxiety and depression and may be a form of self-medication (Quitken et al., 1972). This hypothesis is based on learning theory and assumes that alcohol and drugs reduce dysphoric emotional states and that this effect reinforces further substance use (Conger, 1956). Finally, it has been suggested that a third aetiological factor may be responsible for both substance use and

mental health problems (Merikangas et al., 1996). A considerable body of literature has been conducted in this area. However, the evidence conflicts and a detailed review of the evidence for these hypotheses is beyond the scope of this review. The interested reader is directed to Kushner et al., (2000).

This paper will review studies on the prevalence of co-morbid substance use disorders with anxiety and depression, on the impact of co-morbidity on responses to psychological intervention and therapeutic alliance, and on expectations regarding alcohol and drugs and the influence of this on substance use. Areas for future research will be highlighted.

CO-MORBIDITY OF SUBSTANCE MISUSE WITH ANXIETY AND DEPRESSION

Three types of studies have investigated levels of co-morbidity of substance misuse with anxiety and depression:

1. Studies investigating populations of people with anxiety or affective disorders.
2. Studies investigating populations of people with substance misuse disorders.
3. National Epidemiological Studies.

These will be reviewed in turn.

1. Populations of People with Anxiety or Depressive Disorders

Since there is a considerable body of research examining the prevalence of substance abuse and dependence in people with anxiety and depressive disorders, it was beyond the

scope of this paper to provide an exhaustive review. Therefore, the most frequently cited, of those papers that are well-controlled, use large samples and well-validated measures of assessment, have been selected for review. These papers are summarised in Table 1.

Insert Table 1 about here

In people with depression, reported rates of alcohol disorders range from 8% to 21% (eg Hasin et al., 1985; Lin et al., 1998) and rates of drug abuse and dependence range from 9% to 43% (Hasin et al., 1985; Lin et al., 1998). In samples of people with anxiety, reported rates of alcohol abuse/dependence range from 8% to 24% (eg Thyer et al., 1986; Bibb & Chambless, 1986). The prevalence of drug abuse or dependence has not been examined in this population, to date.

Many of the studies in this area have found that within samples of people with anxiety and depression, men have higher levels of substance abuse than women (Hasin et al., 1985; Bibb & Chambless, 1986; Lin et al., 1998). For example, Lin et al., (1998) found that 38% of men and 13% of women with depression had co-morbid substance use disorders. Similarly, Bibb & Chambless (1986) found that 36% of men and 18% of women with agoraphobia had alcohol dependence. This reflects the higher base rate of substance use disorders among males in the normal population (eg Kessler et al., 1997).

Ideally, comparison to control groups would be carried out to ascertain whether co-morbidity rates are elevated in particular groups. Unfortunately, this is not possible as

none of the above studies included a control group. However, Kushner et al., (1990) suggest that, in the absence of a control group, prevalence rates may be compared to community-based prevalence data. The estimated prevalence of alcohol abuse and dependence in the general population is 14%, and the prevalence of other drug disorders is 6% (Regier et al., 1990). Due to the variance in the reported prevalence of substance use in anxious and depressed populations, it is not possible to draw conclusions from these studies regarding whether substance misuse disorders are more prevalent in these groups than the general population.

Methodological issues must be considered when evaluating these studies and may account for some of the discrepancies in reported prevalence rates. Firstly, the rate of co-morbidity fluctuates depending on the disorder being considered. For example, 21% of people with agoraphobia also have alcohol problems compared to 8% of people with panic disorder (Bibb & Chambless 1986; Thyer et al., 1986). Rates of 7% to 10% have been reported for alcohol abuse in people with unipolar depression (Lin et al., 1998; Abraham & Fava, 1999), while higher rates (24%) have been found in people with bipolar disorder (Hasin et al., 1985). This therefore accounts for some of the discrepancies in prevalence rates reported.

In order to assess the presence of co-morbid substance use disorders some studies have used self-report measures (Thyer et al., 1986; Bibb & Chambless, 1986) while others have used structured interviews (Lin et al., 1998; Abraham & Fava, 1999). It is interesting to note that in the study by Bibb & Chambless (1986) disparate levels of alcohol dependence were uncovered in the same sample, using different methods of assessment. Self-report scales indicated that 21% of the sample met criteria for alcohol

dependence but structured interviews identified only 12% of the same sample as alcohol dependent. Therefore the prevalence rate reported may depend partly on the method of assessment used.

The sample upon which the prevalence estimate is based may also affect the rate found. Lin et al. (1998) found a particularly high rate of drug abuse/dependence and a low rate of alcohol abuse/dependence compared to other studies. However, in contrast to the majority of other studies, this was based on army veterans rather than psychiatric patients. It is possible that base rates of drug and alcohol problems in this population differ from other depressed populations. This limits the generalisability of the findings and may account for the unusual levels of substance use disorders found. The majority of other studies reviewed in this paper used inpatient or outpatient psychiatric samples. No consistent relationship between the type of patient and prevalence of substance use was observed.

Research in this area generally focuses on the relationship between anxiety or depression and categorically defined substance abuse and dependence, ie substance use that is sufficiently problematic to meet diagnostic criteria. Little is known about the continua of alcohol and drug problems, from abstinence, through problematic drinking, to abuse and dependence, in people with anxiety and depression. Kushner (1996) suggests that, 'alcohol and anxiety symptoms have the potential to interact reciprocally before the point at which diagnostic thresholds are met'. The same might be suggested for other drugs of abuse and for symptoms of depression.

In conclusion, studies examining the prevalence of substance use disorders in populations of anxious and depressed people have yielded variable prevalence rates and

the level of drug abuse in anxious populations has not been examined. It remains difficult to conclude whether rates of substance misuse are elevated in this population relative to the general population.

2. Populations of People with Substance Misuse Disorders

There is also a substantial body of research examining the prevalence of anxiety and depression in people with substance abuse and dependence and it was beyond the scope of this paper to provide an exhaustive review. Therefore, the most frequently cited, of those papers that are well-controlled, use large samples and well-validated measures of assessment, have been selected for review. These studies are summarised in Tables 2 and 3.

Insert Tables 2 and 3 about here

Reported rates of co-morbid anxiety disorders in people with alcohol dependence vary from 10% to 36% (eg Schuckit et al., 1997; Mullaney & Trippet, 1979). Similar levels of variability have been found for co-morbid depression with rates ranging from 12% to 45% (eg Schuckit et al., 1997; Bowen et al., 1984). In people abusing drugs other than alcohol, co-morbid anxiety is reported to range from 13% to 43% (eg Ross, Glaser & Germanson, 1988; Pozzi et al., 1997), and co-morbid depression ranges from 14% to 24% (eg Pozzi et al., 1997; Compton et al., 2000).

It is interesting to note that Smail et al., (1984) found that the most anxious participants were most dependent on alcohol and those who were mildly anxious were less severely dependent. Few other researchers consider the relationship between the severity of symptoms. Most studies in this area focus exclusively on categorically defined disorders. However, as already noted, there may be a reciprocal relationship between substance use and mental health problems, even below the diagnostic threshold.

Again, the majority of these studies do not include comparison control groups. The estimated community prevalence for anxiety disorders is 1% to 11%, and depression is 5% to 26% (Regier et al., 1990). Thus, due to variability in the prevalence rates it is again difficult to draw conclusions regarding whether anxiety and depressive disorders are more prevalent in people with substance misuse disorders than the general population. However, the only study in this area to include a control group illuminates this issue. Schuckit et al., (1997) used a structured interview to distinguish between psychiatric syndromes that developed in the context of alcohol and drug use from those that occurred independently. They found rates for independent panic disorder and social phobia were elevated compared to controls, but that this was not the case for agoraphobia or major depression. This suggests that rates of certain disorders are elevated in people with alcohol disorders, while rates of other disorders are not. However, this requires replication and investigation in samples of people with abuse and dependence on substances other than alcohol.

A limitation of many of the studies in this area is that anxiety and depression are measured in substance abusers in the early stages of treatment, when they may be experiencing withdrawal symptoms (Mullaney & Trippet, 1979; Dorus & Senay, 1980;

Bowen et al., 1984). Even studies reporting that participants are interviewed after acute detoxification may not be adequate (Powell et al., 1982; Herz et al., 1990). Alcohol induced depression, for example, is known to last for two to four weeks after abstinence (Brown & Schuckit, 1988; Davidson 1995) and symptoms of protracted withdrawal from alcohol, including anxiety and low mood, are likely to remain for several months (Schuckit & Hesselbrock, 1994). Thus concurrent temporary anxiety and low mood, which are substance induced, are likely to artificially inflate co-morbidity levels. This issue is highlighted by Schuckit et al. (1997). In this study, co-morbidity of independent depression and anxiety was 12% and 9% respectively and when concurrent disorders were included, these figures rose to 42% and 12% respectively.

In conclusion, studies examining the prevalence of anxiety and depression in populations of people with substance misuse disorders have also yielded variable prevalence rates. It is suggested that this variability is partly due to methodological issues, particularly the confounding influence of withdrawal effects. However, more rigorous research identifying independent disorders provides evidence that the prevalence of some anxiety disorders is elevated in people with alcohol dependence (Schuckit et al., 1997).

3. National Co-morbidity Surveys

Studies investigating populations of people receiving treatment are likely to over-estimate the prevalence of co-morbidity. Individuals with multiple disorders are more likely than those with one disorder to be referred for treatment (Berkson, 1949) and therefore more

likely to be included in a study. Consequently, when examining co-morbidity, it is valuable to consider epidemiological studies of the general population.

The Epidemiologic Catchment Area (ECA) survey (Regier et al., 1990), which included 20 291 people, established that almost a third of people who had a mental health disorder had experienced a substance use disorder at some point in their life (22% had an alcohol disorder, and 15% had another drug disorder). Similarly, over a third of persons with alcohol disorders, and over half of those with other drug use disorders, had experienced another mental disorder. Anxiety and affective disorders were among the most common mental disorders found to occur co-morbidly.

Kessler et al., (1997), in the National Co-morbidity Survey, interviewed 8 098 participants and found an elevated risk for alcohol dependence in people with social phobia, specific phobia, agoraphobia and generalised anxiety disorders. This supports findings from the ECA (Regier et al., 1990).

Finally, Swendsen et al., (1998) combined data from four epidemiological investigations in Europe and USA including a total of 22 954 participants. They found that the presence of alcohol abuse and dependence was associated with a two to three-fold higher lifetime risk of anxiety and depression. Unfortunately this analysis does not examine use of substances other than alcohol.

These studies suggest that there is a high level of co-morbidity between substance use disorders and anxiety or depressive disorders in the general population. Epidemiological investigations provide an accurate and consistent estimate of co-morbidity as they incorporate large numbers of participants, use structured interviews, and are not biased by the use of clinical populations.

Evidence arising from studies on clinical populations has generated variable rates of co-morbidity. Further work is required to clarify the level of co-morbidity in these populations and particularly to examine the prevalence of drugs of abuse other than alcohol in anxious populations. Little is known about the relationship between the range of symptoms of anxiety and depression and the range of alcohol and drug use, from abstinence, through problem use to dependence. Research examining this issue may generate interesting results.

In view of the association between substance misuse and anxiety or depression, mental health professionals should be aware that those patients with anxiety and/or depression might have, or be at risk of developing, substance use disorders. However, a recent audit found that levels of alcohol and drug use are under-estimated in Psychology Services (Watson, 2000). It was reported that General Practitioners were aware of alcohol problems in only 1% to 4% of patients they referred to Clinical Psychology Services. This level is considerably lower than that expected based on the prevalence studies discussed above. It is unclear whether this discrepancy is due to a failure to detect substance abuse in this vulnerable population or to a lower rate of substance misuse in primary care populations than is found in psychiatric samples used in most studies. This issue requires clarification.

IMPACT OF CO-MORBID SUBSTANCE USE DISORDERS ON TREATMENT

Clinical interest in the prevalence of co-morbidity has arisen from evidence that co-morbidity is indicative of poor treatment outcome. Co-morbid conditions are more likely

to follow a severe and persistent course and are less responsive to treatment than single disorders. Furthermore, people with co-morbid conditions are more likely to experience severe impairment in life domains such as social and occupational functioning (Kessler, 1995).

There is a small amount of literature on the effects of co-morbid alcohol and drug problems on response to treatment for anxiety and depression. It has been suggested that attempting to help individuals overcome agoraphobia or severe social anxiety, while they are drinking heavily or using anxiolytic medication, is likely to be futile (Stockwell et al., 1984; Petersson & Lader, 1981). There is some evidence that this is the case. Chambless et al. (1979) found that central nervous system (CNS) suppressants decrease the effectiveness of exposure and desensitisation treatment for agoraphobia. However, their study included a small sample (N=27) and used unqualified therapists from three different professions. In addition, the drug used in the study was a prescribed medication hence the effects may have been different from those of heavy and uncontrolled alcohol or drug use. Other researchers have specifically examined the effects of alcohol on desensitisation and exposure treatments (Thyer & Curtis, 1984; Cameron et al., 1987) and found that alcohol retards the process of desensitisation. However, these studies also used small samples. Furthermore, they examined the effects of alcohol used in a controlled manner not in the way it might be used by an individual who is alcohol dependent. Despite these limitations, the results of these studies suggest that alcohol and other CNS suppressants may retard the effects of behavioural treatments for phobias. This is because such drugs limit the anxiety experienced in the exposure situation and therefore deny the person the opportunity of learning to control their anxiety and remaining in the situation until their

anxiety decreases. This is because alcohol or drugs limit the anxiety experience in the exposure situation and therefore deny the person the opportunity of learning to control their anxiety and remaining in the situation until their anxiety decreases (Stockwell et al., 1984).

Another reason for the impact of co-morbidity on treatment outcome is that substance misuse may result in the adoption of inappropriate treatment programmes by the clinician. Substance use is associated with increased tension and low mood (Stockwell et al., 1982). Alcohol and opiates are CNS suppressants and are therefore capable of inducing feelings of sadness (Schuckit & Monteiro, 1988). CNS stimulants can induce feelings of anxiety, agitation and panic (British Medical Association, 1986). In addition, protracted withdrawal symptoms include anxiety, restlessness, sleep impairment and emotional instability (Schuckit & Monteiro, 1988). Thus the effect of drugs, and prolonged symptoms of withdrawal, may result in symptoms that mimic anxiety and depressive disorders. This may lead to a treatment aimed at anxiety or depression being adopted if the underlying substance misuse is undetected. However, in these circumstances this intervention is unlikely to be effective.

Co-morbid anxiety and depression have been shown to reduce the likelihood of treatment for substance misuse being effective. Helzer & Pryzbeck, (1987) used the data from the ECA (Regier et al., 1990) to examine the effect of co-morbidity on treatment for alcohol and drug use disorders. They found that failure to address co-morbid anxiety or depression in the treatment for substance use disorders predicted a poorer response to treatment. The treatment was also longer in duration and had a higher relapse rate. McLellan et al., (1986) replicated this finding, reporting that the nature and extent of pre-

treatment psychiatric problems is the single best predictor of treatment response for both alcohol and drug dependent samples.

As well as impacting on treatment outcome, co-morbidity has also been found to affect the therapeutic alliance. It is well recognised that the establishment of a working relationship between client and therapist is an important component of therapy. This therapeutic alliance has been defined as a collaborative relationship that consists of an emotional bond and shared attitudes regarding the tasks and goals of treatment (Bordin, 1979). The relationship has consistently predicted client response to psychological interventions in a variety of clinical settings and across different therapies. For example, Horvath & Symonds (1991) in a meta-analysis incorporating 24 studies found a moderate but reliable positive association between working alliance and therapy outcome. This relationship was not affected by type or length of therapy.

Some research has directly examined the relationship between therapeutic alliance and treatment outcomes in people with alcohol dependence. Positive ratings of therapeutic alliance by clients and therapists were positively associated with better drug use outcomes among methadone maintenance clients (Luborsky et al., 1985; Tunis et al., 1995), and positive client and therapist ratings of therapeutic alliance were significant predictors of treatment attendance and treatment outcome in an alcohol dependent sample (Conners et al., 1997).

Alcohol involvement and dependence have been found to predict poorer therapeutic alliance. Conners et al. (2000) examined the predictors of therapeutic alliance in a large sample of people with alcohol abuse or dependence (N= 1 187). The Working Alliance Inventory (Horvath & Greenberg, 1989), a 36-item scale with 3 subscales addressing the

goals of therapy, the tasks of therapy and the bond between client and therapist, was used as the measurement instrument. Gender, level of alcohol involvement, severity of alcohol dependence and consequences of alcohol use were all found to predict a lower therapeutic alliance. The influence of co-morbid alcohol and other drug involvement on therapeutic relationship during treatment for other mental health problems however has not been investigated.

In summary, research on the impact of co-morbidity on treatment outcome has focussed mainly on treatment for alcohol and drug disorders. There is some suggestion that co-morbid substance use may decrease the effectiveness of behavioural treatments for anxiety. However this research is not conclusive, and further research on the impact of alcohol and drug use and abuse on cognitive and behavioural therapies for depression and the complete range of anxiety disorders would be beneficial.

Research also suggests that alcohol involvement and severity of dependence may impact on treatment outcome indirectly via therapeutic alliance. Given the above research it is reasonable to expect that co-morbid substance abuse among anxious and depressed patients may have a negative impact therapeutic alliance and treatment outcome. However, this has not been explicitly examined.

ALCOHOL AND DRUG EXPECTANCIES

The belief that alcohol is the 'cup that cheers' or provides 'Dutch courage' is widely held in the general population, suggesting that alcohol is perceived to have a mood elevating and anxiety reducing effect. High doses of opiates are also known to create feelings of

happiness and calmness, while stimulant drugs such as amphetamine and cocaine are known to produce feelings of excitement and well-being (British Medical Association, 1986).

Research on beliefs about the effects of drugs focuses on alcohol and is embodied in Alcohol Expectancy Theory. In this model alcohol consumption is related to 'alcohol outcome expectancies' that is, beliefs about the consequences of drinking alcohol. Positive beliefs about alcohol include beliefs about social and physical pleasure, social assertion, tension reduction and sexual arousal (Brown, Christiansen & Goldman, 1987), while negative consequences include aggression, negative social consequences or illness (Jones & McMahon, 1993). The expected consequences of alcohol consumption impact on behaviour, regardless of whether the expected consequences are true (Jones, Corbin & Fromme, 2001).

Research in this field has demonstrated that positive alcohol expectancies are significantly and positively associated with self-reported drinking behaviour. This has been repeatedly demonstrated in adolescents (eg Christiansen & Goldman, 1983; Fromme & D'Amico, 2000) and in adults (eg Brown, Christiansen & Goldman, 1987; Fromme, Stroot & Kaplan, 1993). The positive alcohol expectancies of people with alcohol dependence have also been found to differ from those of university students (Brown, Goldman & Christiansen, 1985), non-problem drinkers and problem drinkers (Conners et al., 1986). Specifically heavier drinking was associated with beliefs about social and physical pleasure, social assertion, sexual arousal and tension reduction. Difference in expectancies regarding alcohol explained the incremental variance in frequency and

quantity of drinking behaviour, even when demographic factors that are known to contribute to drinking (age and gender) were controlled (Mooney et al., 1987).

Prospective analyses show that expectancies about the consequences of consuming alcohol predict changes in drinking and development of alcohol related problems. For example, Christiansen et al., (1989) found that 25% of the variance in adolescents' drinking at two year follow-up was explained by their expectances for change in social behaviour at the outset of the study. Kilbey et al., (1998) found that lower expectancies about the negative consequences of drinking predicted the emergence and persistence of alcohol dependence in a community sample of young adults.

Given the general expectation that alcohol reduces tension and elevates mood, and the finding that positive beliefs about alcohol predict drinking behaviour, it might be expected that in people with anxiety and depression, positive beliefs regarding alcohol, in particular, beliefs that alcohol reduces tension and elevates mood, are likely to be associated with problematic drinking. Smail et al., (1984) is the only study known to the author to examine this issue. In this study 12 out of 17 participants with agoraphobia or social phobia attributed tension-reducing properties to alcohol and reported that alcohol was helpful in coping with feared situations. However, this study only has a small sample (N=17), and does not utilise a reliable and valid measure to assess beliefs about alcohol.

The literature reviewed on alcohol expectancies highlights that a consistent positive association can be found between positive beliefs about alcohol and drinking behaviour. This association has been noted in adolescents, adults, social and problem drinkers and people with alcohol dependence. Given this association, it might be expected that there would be a relationship between beliefs about alcohol and drinking behaviour amongst

populations of people with anxiety and depression, particularly in relation to beliefs about tension reducing and mood elevating properties of alcohol. However, only one small study has examined this issue. Replication of this study incorporating a large sample, empirically validated measures, and examining this association in people with other anxiety disorders and depression would be beneficial. The effect of expectancies about drugs on drug use remains to be empirically investigated.

CONCLUSIONS AND FUTURE DIRECTIONS FOR RESEARCH

Studies examining the prevalence of co-morbidity of substance use disorders with anxiety or depression in clinical populations have yielded variable prevalence rates (eg Hasin et al., 1985; Lin et al., 1998). Methodological issues have been discussed but it remains difficult to conclude whether rates of substance misuse are elevated compared to the general population. Epidemiological investigations help to illuminate this issue, providing the most accurate and consistent estimate of co-morbidity. These investigations suggest that almost a third of persons who have a mental health disorder have experienced a substance use disorder and similarly, over a third of persons with substance use disorders have experienced another mental health disorder (Regier et al., 1990). Further work is required to clarify the level of co-morbidity in clinical populations and to examine the prevalence of drugs of abuse other than alcohol in anxious populations. It would also be interesting to explore the prevalence of co-morbidity in primary care samples since the majority of research has focused on psychiatric samples and there is evidence of lower rates of substance misuse being detected in primary care groups (Watson, 2000). Future

research might also examine the relationship between substance use, problems and dependence and symptoms of anxiety and depression across the complete range of severity including below diagnostic thresholds, given the paucity of information regarding this issue.

Research on the impact of co-morbidity on treatment outcome has focused mainly on treatment for alcohol and drug disorders (eg Helzer & Pryzbeck, 1987). A small number of studies on anxiety suggest that co-morbid alcohol or drug use might reduce the effectiveness of behavioural treatments (Chambless et al., 1979; Thyer & Curtis, 1984; Cameron et al., 1987). However, it would be useful to extend this research to examine the impact of both alcohol and other drug use on a wider range of therapies and disorders. Research also suggests that alcohol involvement and severity of dependence may impact on treatment outcome indirectly on therapeutic alliance (Conner et al., 2000). However, to date the effect of co-morbid substance use problems on therapeutic alliance in anxiety and depression treatments has not been empirically examined. Further research in this area may inform treatment planning.

Finally, alcohol expectancy research demonstrates a significant, positive relationship between positive beliefs about alcohol and drinking behaviour (Jones, Corbin & Fromme, 2001). Given this association, it might be expected that there would be a relationship between beliefs about alcohol and drinking behaviour amongst populations of people with anxiety and depression, particularly in relation to beliefs about tension reducing and mood elevating properties of alcohol. However, this has not been tested. The effect of beliefs about drugs on drug use also remains to be empirically investigated. Further research in

this area is likely to impact on treatment for individuals with anxiety and depression who have co-morbid substance abuse.

REFERENCES

Abraham, H. D. & Fava, M. (1999) Order of onset of Substance Abuse and Depression in a Sample of Depressed Outpatients, *Comprehensive Psychiatry*, **40**, (1), 44-50.

Allan C. A. (1995) Alcohol Problems and Anxiety Disorders – A critical review. *Alcohol and Alcoholism*. **30**, (2), 145-151.

Bibb, J. L. & Chambless, D. L. (1986) Alcohol use and abuse among diagnosed agoraphobics. *Behaviour Research & Therapy*. **24** (1) 49-58.

Berkson, J. (1949) Limitations of the application of four-fold tables to hospital data. *Biological Bulletin*, **2**, 47-53.

Bordin, E. S. (1979) The generalisability of the psychoanalytic concept of the working alliance. *Psychotherapy, Theory, Research and Practice*, **16**, 252-260.

Bowen, R. C., Cipywnky, D., D'Arcy, C. & Keegan, D. (1984) Alcoholism, Anxiety Disorders, and Agoraphobia. *Alcoholism: Clinical and Experimental Research*. **8** (1), 48-50.

British Medical Association (1986) The Facts about Drugs. Pearce, N. (Ed) pp 11-34, *BBC and Broadcasting Support Services*, Plymouth.

Brown, S. A., Christiansen, B. A. & Goldman, M. S. (1987) The Alcohol expectancy Questionnaire: an instrument for the assessment of adolescent and adult alcohol expectancies, *Journal of Studies of Alcohol*, **48**, 483-491.

Brown, S. A. & Schuckit, M A. (1988) Changes in depression among abstinent alcoholics. *Journal of Studies on Alcohol*, **49**, 412-417.

Cameron, O. G., Liepman, M. R., Curtis, G. C. & Thyer, B. A. (1987) Ethanol retards desensitisation of simple phobias in non-alcoholics. *British Journal of Psychiatry*, **150**, 845-849.

Chambless, D. L., Foa, E. B., Groves, G. A. & Goldstein, A. J. (1979) Brevital in flooding with agoraphobics. *Behaviour Research and Therapy*, **17**, 243-251.

Christiansen, B. A. & Goldman, M. S. (1983) Alcohol-related expectancies versus demographic/background variables in the prediction of adolescent drinking, *Journal of Consulting and Clinical Psychology*, **51**, 249-257.

Christiansen, B. A., Smith, G. T., Roehling, P. V. & Goldman, M. S. (1989) Using alcohol expectancies to predict adolescent drinking behaviour after one year. *Journal of Consulting and Clinical Psychology*, **57**, 93-99.

Compton, W. M., Cottler, L. B., Phelps, D. L., Abdallah, A. B. & Spitznagel, E. L. (2000) Psychiatric Disorders Among Drug Dependent Participants: Are They Primary of Secondary? *The American Journal on Addictions*, **9**, 126-134.

Conger, J. J. (1956) Alcoholism: Theory, Problem and Challenge. Reinforcement Theory and the Dynamics of Alcoholism. *Quarterly Journal Studies on Alcohol*, **17**, 296-305.

Conners, G. J., O'Farrell, T. J., Cutter, H. S. & Thomson, D. L. (1986) Alcohol expectancies among male alcoholics, problem drinker, and non-problem drinkers. *Alcoholism: Clinical and Experimental Research*, **10**, 667-671.

Conners, G. J., Carroll, K. M., DiClemente, C. C., Longabaugh, R. & Donovan, D. M (1997) The therapeutic alliance and its relationship to alcoholism treatment participation and outcome. *Journal of Consulting and Clinical Psychology*, **65**, 588-598.

Conners, G. J., DiClemente, C.C., Derman, K. H., Kadden, R., Carroll, K. M. & Frone, M. R. (2000). Predicting the therapeutic alliance in alcoholism treatment. *Journal of Studies on Alcohol*, **61** (1), 139-149.

Cox, B. J., Norton, G. R., Dorward, J. & Fergusson, P. A. (1989) The Relationship between panic attacks and chemical dependencies. *Addictive Behaviours*, **14**, 53-60.

Dorus, W. & Senay, E. C. (1980) Depression, Demographic Dimensions, and Drug Abuse. *American Journal of Psychiatry*, **137** (6), 699-704.

Davidson, K. M. (1995) Diagnosis of Depression in Alcohol Dependence: Changes in Prevalence with Drinking Status. *British Journal of Psychiatry*, **166**, 199-204.

Fromme, K., Stroot, E. A. & Kaplan, D. (1993) Comprehensive effects of alcohol: development ad psychometric assessment of a new expectancy questionnaire, *Psychological Assessment*, **5**, 19-26.

Fromme, K. & D'Amico, E. J. (2000) Measuring adolescent alcohol outcome expectancies, *Psychology of Addictive Behaviours*, **14**, 206-212

Hall, R. C. W., Popkin, M. K., Devaul, R. & Stickney, S. K. (1977) The effect of Unrecognised Drug Abuse on Diagnosis and Therapeutic Outcome. *American Journal of Drug and Alcohol abuse*, **4,** (4), 455-465.

Hall, W. & Farrell, M. (1997) Co-morbidity of mental disorders with substance misuse. *British Journal of Psychiatry*, **171**, 4-5.

Hasin, D. Endicott, J. & Lewis, C. (1985) Alcohol and Drug Abuse in Patients with Affective Syndromes. *Comprehensive Psychiatry*, **26**, (3), 283-295

Helzer, J. E. & Pryzbeck, T. R. (1987) The co-occurrence of alcoholism and other psychiatric disorders in the general population and its impact on treatment. *Journal of Studies on Alcohol*, **49**, 219-224.

Herz, L. R., Volicer, L., D'Angelo, N. & Gadish, D. (1990). Additional Psychiatric Illness by Diagnostic Interview Schedule in male Alcoholics. *Comprehensive Psychiatry*, **30** (1), 72-79.

Hesselbrock, M. N., Meyer, R. E. & Keener, J. (1985) Psychopathology in hospitalised alcoholics. *Archives of General Psychiatry*, **42**, 1050-1055.

Horvath, A. O. & Greenberg, L. S. (1989). Development and Validation of the Working Alliance Inventory. *Journal of Counseling Psychology*, **36** (2), 223-233.

Horvath, A. O. & Symonds, B. D. (1991). Relation between working alliance and outcome in psychotherapy: A meta-analysis. *Journal of Counselling Psychology*. **38** (2), 139-149.

Jones, B. T. & McMahon, J. (1993) Negative and Positive Alcohol Expectancies as Predictors of Abstinence after Discharge from a Residential Treatment Program: A One-Month and Three-Month Follow-up Study in Men. *Journal of Studies on Alcohol*, **55**, 543-548.

Jones, B. T., Corbin, W. & Fromme, K. (2001) A review of expectancy theory and alcohol consumption. *Addiction*, **96**, 57-72.

Kessler R. (1995) The National Co-morbidity Survey: Preliminary results and future directions. *International Journal of Methods in Psychiatric Research*, **5**, 139-151.

Kessler R. C., Crum, R. M., Warner, L. A., Nelson, C. B., Schulenberg, J. & Anthony, J. C. (1997) Lifetime Co-occurrence of DSM-III-R Alcohol Abuse and Dependence with other Psychiatric Disorders in the National Co-morbidity Survey. *Archives of General Psychiatry*, **54**, 313-321.

Kilbey, M. M., Downey, K. & Breslau, N. (1998) Predicting the emergence and persistence of alcohol dependence in young adults: the role of expectancy and other risk factors. *Experimental and Clinical Psychopharmacology*, **6**, 149-156.

Kushner, M. G., Sher, K. J. & Beitman, B. D. (1990) The relation between alcohol problems and the anxiety disorders. *American Journal of Psychiatry*, **147**, (6), 685-695.

Kushner, M. G. (1996) Relationship between Alcohol Problems and Anxiety Disorders. *American Journal of Psychiatry*, **153**, (1), 139-140.

Kushner, M G., Abrams, K. & Borchardt, C. (2000) The Relationship between Anxiety Disorders and Alcohol Use Disorders: A review of Major Perspectives and Findings. *Clinical Psychology Review*, **20,** (2), 149-171.

Lin, C., Bai, Y., Hu, P. & Yeh, H. (1998) Substance Use Disorders among Inpatients with Bipolar Disorder and Major Depressive Disorder in a General Hospital. *General Hospital Psychiatry*, **20**, 98-101.

Luborsky, L., McLellan, A. T., Woody, G. E. & O'Brien, C. P. (1985) Therapist success and its determinants. *Archives of General Psychiatry*, **42**, 602-611.

McLelland, A. T., Luborsky, L., Woody, G. E. et al (1986). Predicting response to alcohol and drug abuse treatments. *Archives of General Psychiatry*, **40**, 620-625.

Merikangas, K. A., Stevens, D., & Fenton, B. (1996) Comorbidity of alcoholism and anxiety disorders. *Alcohol Health and Research World*, **20**, 100-105.

Mooney, D. K., Fromme, K., Kivlahan, D. R. & Marlatt, G. A. (1987) Correlates of alcohol consumption: sex, age, and expectancies relate differentially to quantity and frequency, *Addictive Behaviours*, **12**, 235-240.

Mullaney, J. A. & Trippet, C. J. (1979) Alcohol Dependence and Phobic Anxiety States - Clinical Description and Relevance. *British Journal of Psychiatry*, **135**, 656-673.

Petersson, H. & Lader, M. H. (1981). Benzodiazapine dependence. *British Journal of Addiction*, **76**, 133-145.

Powell, B. J., Penick, E. C., Othmer, E., Bingham, S. F. & Rice, A. S. (1982) Prevalence of Additional Psychiatric Syndromes Among Male Alcoholics. *Journal of Clinical Psychiatry*, **43**, (10), 404-407.

Pozzi, G., Bacigalupi, M. & Tempesta, E. (1997) Co-morbidity of drug dependence and other mental disorders: a two-phase study of prevalence at outpatient treatment centre in Italy. *Drug and Alcohol Dependence*, **46**, 69-77.

Quitken, F. M., Rifkin, A., Kaplan, J. & Klein, D. F. (1972) Phobic anxiety syndrome complicated by drug dependence and addiction. *Archives of General Psychiatry*, **27**, 159-162.

Regier, D.A., Farmer, M. E., Rae, D. S., Locke, B. Z., Keith, S. J., Judd, L. L. & Goodwin, F. K. (1990) Co-morbidity of mental disorders with alcohol and other drug abuse: results from the epidemiologic catchment area (ECA) study. *Journal of the American Medical Association*, **264**, 2511-2518.

Ross, E., Glaser, F. B. & Germanson, T (1988) The prevalence of Psychiatric Disorders in Patients with drug and alcohol problems. *Archives of. General. Psychiatry*, **45**, 1023-1031.

Schuckit, M. A. & Monteiro, M. G. (1988) Alcoholism, Anxiety and Depression. *British Journal of Addiction*, **83**, 1373-1380.

Schuckit, M. A. & Hesselbrock, V. (1994) Alcohol Dependence and Anxiety Disorders: What is the Relationship? *American Journal of Psychiatry*, **151**, (2), 1723-1734.

Schuckit, M. A., Tipp, J. E., Bucholz, K. K., Nurnberger, J. I., Hesselbrock, V. M., Crowe, R. R. & Kramer, J. (1997) The life-time rates of three major mood disorders and four major anxiety disorders in alcoholics and controls. *Addiction*, **92,** (10), 1289-1304.

Smail, P., Stockwell, T., Canter, S. Hodgson, R. (1984). Alcohol dependence and phobic anxiety states I. A prevalence study. *British Journal of Psychiatry*, **144**, 53-57.

Stockwell, T., Hodgson, R. & Rankin, H. (1982) Tension reduction and the effects of prolonged alcohol consumption. *British Journal of Addiction*, **77**, 65-73.

Stockwell, T., Smail, P., Hodgson, R. & Canter, S. (1984) Alcohol dependence and phobic anxiety states II. A retrospective study. *British Journal of Psychiatry*, **144**, 58-63.

Swendsen, J. D. Merikangas, K. R., Canino, G. J., Kessler, R. C., Rubio-Stipec, M. & Angst, J. (1998) The Comorbidity of Alcoholism With Anxiety and Depressive Disorders in Four Geographic Communities. *Comprehensive Psychiatry,* **39**, (4), 176-184.

Thyer, B. A. & Curtis, G. C. (1984) The effects of ethanol intoxication on phobic anxiety. *Behaviour Research and Therapy*, **22**, 599-610.

Thyer, B. A., Parrish, R. T., Himle, J., Cameron, O. G., Curtis, G. C. & Nesse, R. A. (1986) Alcohol Abuse among clinically anxious patients, *Behavioural Research and Therapy*, **24**, 357-359.

Tunis, S. I., Delucchi, K. L., Schwartz, K., Banys, P. & Sees, K. L. (1995) The relationship of counsellor and peer alliance to drug use and HIV risk behaviours in a six-month methadone detoxification program. *Addictive Behaviour*, **20**, 395-405.

Verheul, R., Kranzler, H. R., Poling, J., Tennen, H., Ball, S. & Rounsaville, B. J. (2000) Co-occurrence of Axis I and Axis II disorders in substance abusers. *Acta. Psychiatr. Scand.*, **101**, 110-118.

Watson, L. (2000). A survey of the Effects of Deprivation Category on GP referral Rates and Problem Type to a Clinical Psychology Service. Submitted in partial fulfilment of the degree of Doctorate in Clinical Psychology, University of Glasgow, Scotland.

Table 1: Studies Investigating People with Anxiety and Affective Disorders

Study	*N*	Sample	Diagnostic Method and Criteria for Alcohol/ drug problems	Psychiatric Disorder	Current Co-morbidity (%)	Lifetime Co-morbidity (%)
Hasin et al., 1985	835	Affective Disorder (Bipolar I/ Bipolar II/ Unipolar)	Schedule for Affective Disorders and Schizophrenia (SADS)	Alcohol (3+ on SADS) Drugs (3+ on SADS)	24 9	- -
Bibb & Chambless 1986	254	Outpatients with Agoraphobia with Panic Disorder	Michigan Alcohol Screening Test (MAST)	Alcohol Dependence (5+ on MAST) Alcohol Dependence (DSM-III) Alcohol Abuse (DSM-III)	21 12 10	- - -
Thyer et al., 1986	156	Agoraphobia with Panic Disorder Panic Disorder GAD	Michigan Alcohol Screening Test (MAST)	Alcohol co-morbidity in: Agoraphobia with Panic Disorder Panic Disorder GAD	 27 8 10	 - - -
Lin et al., 1998	69	Major Depressive Disorder	Structured Clinical Interview for (DSM-III-R) (SCID)	Substance abuse/dependence Alcohol	43 7	- -
Abraham & Fava 1999	375	Major Depressive Episode	Structured Clinical Interview for (DSM-III-R) (SCID)	Poly drug (Dependence/ Abuse) Alcohol (Dependence/ Abuse)	- -	14 10

Table 2: Studies Investigating People with Alcohol Disorders

Study	*N*	Sample	Diagnostic Method and Criteria for Alcohol/ drug problems	Psychiatric Disorder	Current Co-morbidity (%)	Lifetime Co-morbidity (%)
Mullaney & Trippet 1979	102	Alcohol Dependent	Self-report/ criteria not specified	Phobias: Full	32	-
				Borderline	36	-
Powell et al., 1982	565	Alcohol Dependent	Structure Psychiatric Diagnostic Interview Schedule (PDI)/ criteria not specified	Phobias	-	10
				Panic Attacks	-	13
				Depression	-	42
Bowen et al., 1984	48	Alcohol Dependent	(Schedule for Affective Disorders and Schizophrenia – Lifetime Version (SADS-L)/ Research Diagnostic Criteria	Phobias:	29	33
				Panic Disorder	-	21
				GAD	-	23
				Major Depression	-	45
Smail et al., 1984	60	Alcohol Dependent	Self-report/ criteria not specified	Severe Phobia	18	-
				Mild Phobia	35	-
Hesselbrock et al., 1985	321	Alcohol Dependent	Diagnostic Interview Schedule (DIS)/ criteria not specified	Phobias	27	-
				Panic Attacks	10	-
				Depression	38	-
Herz et al., 1990	74	Alcohol Treatment Unit	Diagnostic Interview Schedule (DIS)/ DSM-III	Phobia	24	-
				Depression	21	-
				Dysthymia	11	-
Schuckit et al., 1997	2731	Alcohol Dependent	Structured Clinical Interview for DSM-III-R (SCID)/DSM-III-R Criteria	Any Anxiety	-	10
				Major Depression	-	12

Table 3: Studies Investigating People with Substance Use Disorders

Study	*N*	Sample	Diagnostic Method and Criteria for Alcohol/ drug problems	Psychiatric Disorder	Current Co-morbidity (%)	Lifetime Co-morbidity (%)
Dorus et al., 1980	432	Opiate Dependence Multiple Substance Abuse	Self-report/criteria not specified	Depression (high BDI Score)		
				Long Term Opiod Use	15	-
				Short Term Opiod Use	23	-
				Non Opioid Multiple Drug Use	29	-
Ross et al., 1988	501	Alcohol or other Drug Abuse or Dependence	Diagnostic Interview Schedule (DIS)/ Criteria not specified	Agoraphobia	19	25
				Social Phobia	13	18
				Panic	9	10
				GAD	26	52
				Major Depression	20	24
Pozzi et al., 1997	317	Substance Dependent (excluding Alcohol)	Composite International Diagnostic Interview (CIDI)/ DSM-III-R Criteria	Anxiety	-	43
				Major Depression	-	14
Compton et al., 2000	425	Drug dependence	Diagnostic Interview Schedule (DIS)/ DSM-III-R Criteria	Phobic Disorders	-	39
				GAD	-	10
				Major Depression	-	24
Verheul et al., 2000	370	Substance Abuse/ Dependence	Structured Clinical Interview for DSM-I II-R (SCID)/DSM-III-R Criteria	Phobia	13.6	-
				Major Depression	16.5	-

CHAPTER 3. MAJOR RESEARCH PROJECT PROPOSAL

Substance Use among Psychology Outpatients With Anxiety or Depression.

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Prepared in accordance with Guidelines (Appendix 3.1)

SUMMARY

A high level of co-morbidity between substance misuse and mental health problems, such as anxiety and depression is well-established (eg Stockwell & Bolderston, 1987). This study aims to investigate the prevalence of drug and alcohol use and abuse among a population of Psychology Outpatients with anxiety or depression and determine if there is a relationship between the severity of psychological symptoms and degree of substance use.

The study will examine the relationship between the severity of substance misuse and response to treatment (including therapeutic relationship and changes in level of functioning). In addition the relationship between the extent to which participants believe substances help them cope and problematic drinking and drug use will be examined.

A sample of psychology outpatients with anxiety or depression will be interviewed using a semi-structured interview and various self-report measures.

Data collection will take place at the Clinical Psychology Primary Care Departments in Glasgow, and data collation and analysis at the Department of Psychological Medicine, Gartnavel Royal Hospital, Glasgow.

INTRODUCTION

A high prevalence of co-morbid substance abuse with mental health problems such as anxiety and depression is well-established (eg Stockwell & Bolderston, 1987; Bibb & Chambless, 1986; Abraham & Fava, 1999).

In their review, Stockwell & Bolderston (1987) conclude that, 23% to 53% of people who abuse alcohol have anxiety problems or phobias. Similarly, they conclude that 17% to 24% of anxious or phobic patients are alcohol dependent. Alcohol problems in the general population are estimated to be between 4% and 14% (Hasin et al., 1985). It is clear, therefore, that there is a higher prevalence of co-morbid alcohol disorders in people with anxiety disorders compared to the general population.

Substance use and depression are also frequently found co-morbidly. Hasin et al., (1985) screened for alcohol and drug abuse in people with affective syndromes. Twenty-four percent were found to abuse alcohol. Similarly, Abraham & Fava (1999) investigated substance misuse in people suffering from major depressive disorder. They found that 14% of their sample had polysubstance dependence, 10% had alcohol dependence and 4% had abused hallucinogens.

Two main reasons for these strong associations have been proposed.

- Substance abuse may follow the onset of anxiety and depression and may be a form of self-medication.
- Substance misuse may precede and cause these mental health problems.

The self-medication hypothesis argues that patients use high doses of substances, such as alcohol, to relieve pre-existing symptoms of mental or physical disorders (Raimo

& Schuckit, 1998). The hypothesis reasons that an organism in a state of, for example, tension, drinks or uses drugs to relieve that unpleasant state, and that the subsequent relief reinforces further drinking or drug use (Conger, 1956). The hypothesis is derived from learning theory, and postulates that alcohol and drug abuse are learned behaviour patterns maintained by antecedent cues, consequent reinforcers and expectancies.

There are two components to the self-medication theory:

- Alcohol or drugs reduce tension/elevate mood.
- They are used for these effects.

Research suggests that self-medication is relatively common in anxiety disorders. In their review, Cox et al., (1990) report that a large percentage of participants with alcohol dependence and anxiety report that their anxiety preceded their alcohol abuse. For phobic anxiety, 42% said that their phobia came before their alcohol dependence and for panic related anxiety, 50% reported that panic attacks preceded alcohol abuse. Similar findings have been reported for depression (Abraham and Fava, 1999).

Evidence for the efficacy of self-medication, however, is less clear. In fact, it has been suggested that alcoholism or drug use may create or exacerbate phobic anxiety (Stockwell et al., 1984). Schuckit and Monteiro (1988) point out that the symptoms of physical withdrawal from alcohol include tremors, feelings of tension and anxiety, restlessness and poor sleep. These symptoms might be easily confused with anxiety or depressive disorders (Kushner et al., 1990). Furthermore, there is a consistent finding that prolonged alcohol consumption increases levels of tension and lowers mood (Stockwell & Bolderston, 1987). Finally, the social, physical, and interpersonal difficulties, which are

often developed by heavy drinkers, may lead to realistic anxiety or depression (Schuckit and Monteiro, 1988).

Many patients may not be aware of the negative consequences of self-medication, and thus, they may use alcohol and drugs for their perceived benefits in coping with mental health difficulties. Cox et al., (1989) found that 83% of participants report using alcohol to self-medicate, and 72% of these believed it to be effective.

Frequent use of a CNS depressant, such as alcohol, would reduce the effectiveness of behavioural interventions (Bibb & Chambless, 1986). Alcohol use may also fuel a disorder such as anxiety, and interventions while an individual is drinking heavily, would therefore be futile (Stockwell et al., 1984). Furthermore, alcohol dependence and level of alcohol involvement have been found to be predictive of a poorer therapeutic relationship (Conners et al., 2000), which is associated with a negative therapy outcome (Horvath & Symonds, 1991). Clearly a lack of awareness of substance abuse in patients could affect treatment at worst rendering it ineffective. There is, however, a paucity of research specifically examining the impact of co-morbid substance abuse on the treatment alliance and outcome of affective and anxiety disorders.

AIMS AND HYPOTHESES

This study aims to look at the prevalence of substance misuse in patients attending a Clinical Psychologist, and suffering from anxiety and depression and to determine if the severity of psychological problems is related to the severity of substance use problems

The study aims to look at the effect of co-morbid substance use disorders on treatment and therapeutic relationship. Previous research suggests there would be a detrimental effect on some interventions (particularly behaviour interventions) (Bibb & Chambless, 1986) and a negative effect on therapeutic relationship (Conners et al., 2000).

It is also aimed to determine if there is an association between beliefs that alcohol and drugs are effective in coping with anxiety and depression, and substance use problems.

The research hypotheses are therefore:

1. A proportion of Clinical Psychology Primary Care patients with Anxiety and Depression will have co-morbid substance misuse and dependence.
2. There will be a negative association between degree of substance misuse problems, and both improvements in levels of functioning and therapeutic relationship.
3. There will be a positive association between severity of anxiety and depression symptoms and degree of substance use problems.
4. There will be a positive association between the belief that alcohol or drugs (illicit) reduce tension and other psychological symptoms and the severity of substance use problems.

PLAN OF INVESTIGATION

Participants

Participants will be patients who have been referred to and have seen a Clinical Psychologist in one of four Clinical Psychology Primary Care Departments in Glasgow. They will be commencing treatment for anxiety or depression. The study aims to recruit anyone with anxiety or depression, regardless of whether they have substance use problems.

Inclusion Criteria

Aged between 18-64

Referred and commencing treatment for anxiety and depression

Willingness to provide informed consent

Exclusion Criteria

Organic Brain Damage

Bipolar Disorder

Psychosis

Bibb & Chambless, (1986) report a medium effect size between depression scores on the BDI-II and alcohol problems. Based on this, it is estimated that, to achieve 80% power to detect a statistically significant result at the 5% level of significance, a minimum sample size of 64 participants is required (G*Power).

Measures

Demographic information

Demographic information will be collected including sex, age, marital status, postcode, employment status, and units of alcohol consumed in a typical week.

Diagnosis of Anxiety or Depressive Disorder and Substance Use Disorder

Structured Clinical Interview for DSM-IV Axis I Disorders-Clinical Version (SCID-I; First, Spitzer, Gibbon, & Williams, 1994)

The Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I) is a semi-structured interview for making DSM-IV Axis I diagnoses (American Psychiatric Association 1994). The interview indicates for each disorder, whether the participant meets DSM-IV criteria. The purpose of using this interview is so that the sample can be properly defined; therefore only the sections corresponding to Anxiety Disorders, Depressive Disorder, and Alcohol and Drug Disorders will be used. Participants do not need to meet DSM-IV criteria for inclusion in the study. Four practice interviews will be audiotaped and ratings will be checked by an independent rater to ensure this measure is being reliably employed.

Assessment of Anxiety and Depression Symptoms

1. *Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith 1983)*

The HADS is a 14 item self-report measure. The items on the scale alternately measure anxiety and depression. It yields two scores, one for depression, and one for anxiety.

2. *Beck Depression Inventory – II (BDI-II; Beck 1996)*

The BDI-II is a self-report scale that was developed to provide a quantitative assessment of the severity of depression. It has 21 multiple-choice items.

Assessment of Alcohol Problems

1. *Alcohol Use Disorders Identification Test (AUDIT; Saunders et al., 1993)*

The AUDIT is a 10 item self-report questionnaire that assesses alcohol consumption, drinking behaviour, adverse reactions, and alcohol related problems. Each question is scored from 0-4 and the range of possible scores is from 0-40, providing a quantitative assessment of problem drinking. A score of 8 or more indicates a strong likelihood of hazardous or harmful alcohol consumption.

2. *Severity of Alcohol Dependence Questionnaire (SADQ; Stockwell, Murphy & Hodgson 1983)*

The SADQ is a 20 item multiple-choice scale relating to the alcohol dependence syndrome. There are 5 sections pertaining to physical symptoms of withdrawal, affective symptoms of withdrawal, craving and relief drinking, typical daily alcohol consumption, and reinstatement of symptoms following a period of abstinence. This questionnaire will only be administered to participants who score 8 or above on the AUDIT.

Assessment of Drug Problems

Drug Abuse Screening Test (DAST-20; Skinner 1982)

The DAST-20 is a 20 item self-report measure that investigates drug use and problems. It is intended to cover the use of prescription drugs in excess of directions and any non-

medical use of drugs. The total score yields a quantitative index of problem severity. There is no diagnostic cut-off, but the author suggests that a score exceeding 5 may be useful for case finding.

In addition to this the particular drug(s) (whether illicit or overuse of prescription drugs) being used will be identified.

Measure of Beliefs about Alcohol and Drugs

1. *Visual Analogue Scale*

Participants will be asked:

i. How helpful are drugs/alcohol in overcoming your psychological symptoms?

ii. To what extent do you deliberately use drugs/alcohol to help you cope with your psychological symptoms?

Separate scales for 'drugs' and 'alcohol' will be used.

2. *Alcohol Expectancy Questionnaire (AEQ; Brown et al., 1987)*

The revised 64-item likert version as used by Jones & McMahon (1996) will be used. The scale was designed to assess positive beliefs (expectancies) regarding alcohol on six subscales measuring positive global changes, sexual enhancement, social and physical pleasure, assertiveness, relaxation and tension reduction and arousal levels. The total score and the relaxation and tension reduction subscale will be of particular interest.

Treatment Outcome Measures

1. *Global Assessment of Functioning (GAF) (Axis V, DSM-IV)*

Global Assessment of Functioning Scale (GAF) is a Clinician rated estimate of overall level of functioning considering psychological, social and occupational functioning, and can be useful in tracking clinical progress. Ratings range from 1-100. The treating Psychologist will be asked to provide three ratings of participants at different points in treatment.

2. *Working Alliance Inventory (WAI; Horvath & Greenberg, 1989)*

The therapist version of this scale will be used. It is a 12-item 7-point likert scale providing a quantitative measure of the therapeutic relationship.

It will also be noted whether the participant is still in treatment, has been routinely discharged or has defaulted from treatment at three months.

Design and Procedure

This exploratory study will use a correlational design to examine associations of the variables across the full spectrum of problem drinking and drug use, rather than dichotomising these variables. It has been suggested that dichotomising continuous variables results in a reduction in statistical power (Maxwell & Delaney, 1993), and the loss of potentially important information.

Consecutive referrals for anxiety or depression to the Glasgow Adult Clinical Psychology Primary Care Services will be considered as potential participants.

Patients who have been referred for anxiety or depression to the Clinical Psychology Primary Care Service in Glasgow will be recruited. Potential participants will be given a

letter and information sheet (Appendix 3.2) informing them of the project by their Psychologist following their first appointment. If they consent, the researcher will arrange an appointment to interview them. The interview schedule will comprise of the rating scales and questionnaires described above. In addition, they will be asked to sign a consent form (Appendix 3.3). The interview is expected to take approximately 50 minutes.

The participants' Psychologists will be asked to give a 'Global Assessment of Functioning' (GAF) rating after there first appointment, at one month into treatment, and at 3 months. If a participant defaults from treatment, the Psychologist will be asked for a GAF score at this time. Similarly, the Psychologist will be asked for a GAF score at the time of discharge, if this is prior to 1 or 3 months after the first appointment.

Setting and Equipment

Primary Care patients from the four Clinical Psychology Adult Mental Health Departments in Glasgow who are experiencing anxiety or depression will be recruited. The interviews will be conducted in the clinic most convenient for the participants.

Data Analysis

Collation and analysis of the data will take place at the Department of Psychological Medicine, Gartnavel Royal Hospital, Glasgow.

Hypothesis 1: The term substance misuse will be broken down into the two categories, alcohol and other drug use. Descriptive statistics will be used on this data. The percentage that drink or use drugs 'problematically' (score 8 or above on the AUDIT,

or 5 or above on the DAST-20), and the percentage that meet criteria for abuse or dependence will be calculated.

Hypothesis 2: The association between severity of anxiety and depression symptoms and degree of substance misuse problems will be examined by comparing BDI-II and HADS scores with scores on the AUDIT, DAST-20 and SADQ, using Pearson's Product Moment Coefficient or Spearman's Rho, depending on the distribution of the data.

Hypothesis 3: The relationship between problematic substance misuse and change in functioning measured by GAF score, and the relationship between problematic substance misuse and therapeutic alliance will be examined using Chi-squared and Pearson's Product Moment Coefficient or Spearman's Rho, depending on the distribution of the data.

Hypothesis 4: The association between beliefs about alcohol and drugs (measured on the visual analogue scales and the Alcohol Expectancy Questionnaire) and degree of alcohol or drug problems (measured on the AUDIT or DAST-20) will be examined using Pearson's Product Moment Coefficient or Spearman's Rho, depending on the distribution of the data.

PRACTICAL APPLICATIONS

It would be useful to examine the prevalence of co-morbid substance abuse and mental health problems in the Clinical Psychology caseload as such information would provide Psychologists with greater knowledge of the likelihood of substance abuse in their patients. Knowledge regarding the effects of substance abuse on treatment outcome and

the therapeutic relationship might also inform treatment. Finally, knowledge of patients' beliefs regarding the use of alcohol and drugs as coping mechanisms might also have treatment implications.

TIMESCALE

Target	Date
Ethics Application	April 2000
Literature Review	September 2000
Main Study (Participant Interviews)	October – March 2000
Treatment Outcome Data	November – June 2001
Data Analysis	June 2001
Penultimate Draft	June 2001
Final Draft	July 2001

ETHICAL APPROVAL

Ethical approval was obtained from Greater Glasgow Primary Care NHS Trust Ethics Committee (see Appendix 3.4).

REFERENCES

Abraham, H. D. & Fava, M. (1999). Order of onset of Substance Abuse and Depression in a Sample of Depressed Outpatients, *Comprehensive Psychiatry*, **40** (1), 44-50.

Beck, A. (1996). *Beck Depression Inventory*. New York: Psychological Corporation.

Bibb J. L. & Chambless, D. L. (1986). Alcohol use and abuse among diagnosed agoraphobics. *Behaviour Research & Therapy*, **24** (1), 49-58.

Brown, S. A., Christiansen, B. A. & Goldman, M. S. (1987). The Alcohol Expectancy Questionnaire: An instrument for the assessment of adolescent and adult alcohol expectancies. *Journal of Studies on Alcohol,* **48** 483-491.

Conger, J. J. (1956). Alcoholism: Theory, Problem and Challenge. Reinforcement Theory and the Dynamics of Alcoholism. *Quarterly Journal Studies on Alcohol*, **17** 296-305.

Conners, G. J., DiClemente, C.C., Derman, K. H., Kadden, R., Carroll, K. M. & Frone, M. R. (2000). Predicting the therapeutic alliance in alcoholism treatment. *Journal of Studies on Alcohol*, **61** (1), 139-149.

Cox, B. J., Norton, G. R., Dorward, J. & Fergusson, P. A. (1989). The Relationship between panic attacks and chemical dependencies. *Addictive Behaviours*, **14** 53-60.

Cox, B. J., Norton, G. R., Swinson, R. P. & Endler, N. S. (1990). Substance abuse and panic-related anxiety: A critical review. *Behaviour Research and Therapy*, **28** (5) 383-393.

First, M. B., Spitzer, R. L., Gibbon, M. & Williams, J. B. W. Structured clinical interview for DSM-IV Axis I Disorders – Clinical Version (SCID-I). Washington, DC, American Psychiatric Press, 1994.

Hasin, D. Endicott, J. & Lewis, C. (1985). Alcohol and Drug Abuse in Patients with Affective Syndromes, *Comprehensive Psychiatry*, **26** (3), 283-295

Horvath, A. O. & Greenberg, L. S. (1989). Development and Validation of the Working Alliance Inventory. *Journal of Counseling Psychology*, **36** (2), 223-233.

Horvath, A. O. & Symonds, B. D. (1991). Relation between working alliance and outcome in psychotherapy: A meta-analysis. *Journal of Counselling Psychology*, **38** (2), 139-149.

Jones, B. T. & McMahon, J. (1996). A comparison of positive and negative alcohol expectancy and value and their multiplicative composite as predictors of post-treatment abstinence survivorship, *Addiction*, **91** (1), 89-99.

Kushner, M. G., Sher, K. J. & Beitman, B. D. (1990). The relation between alcohol problems and the anxiety disorders. *American Journal of Psychiatry*, **147** (6), 685-695.

Maxwell, S. E. & Delaney H. D. (1993). Bivariate Median Splits and Spurious Statistical Significance, *Psychological Bulletin*, **113** (1), 181-190.

Stockwell, T., Smail, P., Hodgson, R. & Canter, S. (1984). Alcohol dependence and phobic anxiety states II. A retrospective study. *British Journal of Psychiatry*, **144**, 58-63.

Raimo, E. B. & Schuckit, M. A. (1998). Alcohol Dependence and Mood Disorders. *Addictive Behaviours*, **23** (6), 933-946

Saunders, J. B., Assland, O. G., Babor, T. F., De La Fuente, J. R. & Grant, M. (1993). Development of the Alcohol Use Disorders Identification Test (AUDIT): WHO Collaborative Project on Early Detection of Persons with Harmful Alcohol Consumption – II. *Addiction*, **88**, 791-804.

Skinner, H. A. (1982). The Drug Abuse Screening Test. *Addictive Behaviours*, **7**, 363-371.

Smail, P., Stockwell, T., Canter, S. Hodgson, R. (1984). Alcohol dependence and phobic anxiety states I. A prevalence study. *British Journal of Psychiatry*, **144**, 53-57.

Stockwell, T., Murphy, D. & Hodgson, R. (1983). The Severity of Alcohol Dependence Questionnaire: Its Use, Reliability and Validity. *British Journal of Addiction*, **78**, 145-155.

Stockwell, T., Smail, P., Hodgson, R. & Canter, S. (1984). Alcohol dependence and phobic anxiety states II. A retrospective study. *British Journal of Psychiatry*, **144**, 58-63.

Stockwell, T. & Bolderston, H. (1987). Alcohol and Phobias, *British Journal of Addiction,* **82**, 971-979

Schuckit, M. A. & Monteiro, M. G. (1988). Alcoholism, Anxiety and Depression. *British Journal of Addiction*, **83**, 1373-1380.

Zigmond & Snaith (1983). Hospital Anxiety and Depression Scale. *Acta. Psychiatr. Scand.* **67**, 361-370.

CHAPTER 4. MAJOR RESEARCH PAPER

Substance Use among Psychology Outpatients with Anxiety or Depression.

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Prepared in accordance with the guidelines for submission to

Alcohol and Alcoholism (Appendix 4.1)

Substance Use among Psychology Outpatients with Anxiety or Depression.

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Running Head: Substance Use in Anxiety and Depression

Key Words: Alcohol, Anxiety, Depression, Expectancies, Substance use, Therapeutic Alliance

ABSTRACT

Sixty patients receiving treatment for anxiety or depression in Clinical Psychology Primary Care Departments in Glasgow were interviewed about their symptoms, their current alcohol and drug use and any associated problems, and their beliefs about the usefulness of alcohol and drugs in coping. Clinical Psychologists were asked for information about treatment outcome and therapeutic alliance.

Twenty-two percent met criteria for alcohol abuse or dependence, and 43% were drinking problematically. Only 2% met criteria for drug abuse or dependence. No association was found between problematic drinking and severity of anxiety or depression symptoms, although a positive association was found between beliefs about the tension reducing effects of alcohol and problematic drinking. No relationship was found between problematic drinking and improvements in functioning or treatment default rate. It was found, however, that the greater the degree of problematic drinking, the poorer the therapeutic relationship.

These findings highlight the need for awareness of problem drinking and alcohol disorders in people with anxiety and depression by Clinical Psychologists working in the Primary Care setting and indicate that those patients who are drinking problematically may be more likely to have a poor therapeutic relationship. Awareness of co-morbid alcohol problems may affect the treatment offered. Cognitive re-structuring regarding expectancies of alcohol might be appropriate amongst problem drinkers.

INTRODUCTION

There has long been a research interest in co-morbidity, defined as the co-occurrence of two or more disorders at the same time in the same individual. Co-morbidity of substance abuse and dependence has been studied in a wide variety of disorders including schizophrenia, personality disorders, affective disorders and anxiety disorders (Regier et al., 1990). The review will focus specifically on anxiety and depression.

The issue of co-morbidity is of interest to both clinicians and researchers. Clinically, co-morbidity may impact on the therapeutic alliance between therapist and patient and has also been found to be associated with poorer treatment outcomes (Kessler, 1995). Individual's beliefs or 'expectancies' about the positive and negative consequences of drug consumption have been identified as significant in the alcohol literature (Brown, Christiansen & Goldman, 1987). It is suggested that this may be an important treatment target for individuals with co-morbid disorders.

Three hypotheses are debated in the literature to explain the association between substance abuse with anxiety and depression. Firstly, it is asserted that drug use precedes and may cause anxiety and depression (eg Allan 1995, Schuckit & Hesselbrock 1994, Schuckit & Monteiro 1988). A second hypothesis suggests that drug use follows the onset of anxiety and depression and may be a form of self-medication (Quitken et al., 1972). Finally, it has been suggested that a third aetiological factor may be responsible for both substance use and mental health problems (Merikangas et al., 1996).

Studies on people with anxiety and depression have found a range of prevalence rates of co-morbid substance misuse. In people with depression, reported rates of alcohol disorders range from 8% to 21% (eg Hasin et al., 1985; Lin et al., 1998) and rates of drug

abuse and dependence range from 9% to 43% (Hasin et al., 1985; Lin et al., 1998). In samples of people with anxiety, reported rates of alcohol abuse/dependence range from 8% to 24% (eg Thyer et al., 1986; Bibb & Chambless, 1986). The prevalence of drug abuse or dependence has not previously been examined in people with anxiety. Epidemiological studies report that approximately one third of people with psychiatric disorders had co-morbid substance misuse (Regier et al., 1990; Kessler et al., 1997).

Studies of the general population estimate the lifetime prevalence of alcohol abuse and dependence at 13.5%, and other drug abuse or dependence at 6.1% (Regier et al., 1990). Due to variability in reported co-morbidity rates, it is difficult to conclude whether rates of substance misuse are elevated in clinical populations relative to the general population.

The level of co-morbidity in clinical populations in unclear, particularly in relation to drugs of abuse other than alcohol. Given the likely association, it is important for staff in mental health services to be aware that those patients with anxiety and affective disorders may have, or be at risk of developing, substance use disorders. However, a recent audit found that levels of alcohol and drug use are under-estimated in Primary Care Services (Watson, 2000). It is unclear whether this is due to a failure to detect substance abuse in this vulnerable population or to a lower rate of substance misuse in primary care populations than is found in the psychiatric samples used in most studies.

Most research on the relationship between anxiety and depression and substance use disorders has used categorical definitions of these disorders (eg Abraham & Fava, 1999; Bibb & Chambless, 1986), including participants who meet criteria for abuse or dependence. Little is known about the continua of alcohol and drug problems, from

abstinence, through problematic drinking, to abuse and dependence, in people with anxiety and depression or symptoms of anxiety and depression over the range of alcohol problems. Kushner (1996) suggests that, 'alcohol and anxiety symptoms have the potential to interact reciprocally before the point at which diagnostic thresholds are met'. The same might be suggested for other drugs of abuse and for symptoms of depression. This has not previously been empirically investigated.

This paper will assess the prevalence of co-morbid alcohol or drug abuse and dependence in people with anxiety and depression in a Primary Care Service. The prevalence of alcohol or drug abuse and problems that do not meet criteria for dependence will also be examined and the relationship between symptoms of anxiety and depression across the full range of alcohol consumption will be explored.

Impact of Co-morbidity on Treatment Outcome

Clinical interest in the prevalence of co-morbidity has arisen from evidence that co-morbidity is indicative of poorer treatment outcome. Co-morbid conditions are more likely to follow a severe and persistent course and are less responsive to treatment (Kessler, 1995). The effects of drugs and alcohol and the symptoms of withdrawal, which might include anxiety, restlessness, sleep impairment and emotional instability (Schuckit & Monteiro, 1988), may mimic anxiety and depressive disorders. This may lead to a treatment aimed at anxiety or depression being adopted if the underlying substance misuse is undetected. In addition, undetected use of CNS depressants such as alcohol may decrease the effectiveness of desensitisation programmes in the treatment of phobias (Chambless et al., 1979; Thyer & Curtis, 1984; Cameron et al., 1987). In these

circumstances this intervention is unlikely to be effective. The effect of alcohol and other drugs of abuse on the treatment of a range of anxiety disorders and depression using both behavioural and cognitive treatments has not previously been examined.

Research suggests that alcohol involvement and severity of dependence may also impact on treatment outcome indirectly via therapeutic alliance. Therapeutic alliance is defined as a collaborative relationship between client and therapist, which consists of an emotional bond and shared attitudes regarding the tasks and goals of treatment (Bordin, 1979). This alliance has consistently predicted client response to psychological interventions in a variety of clinical settings and across different therapies (Horvath & Symonds, 1991), including in people in treatment for drug dependence (Luborsky et al., 1985; Tunis et al., 1995). However, alcohol involvement has been found to have a negative impact on therapeutic alliance. Conners et al., (2000) found that level of alcohol involvement, severity of alcohol dependence and consequences of alcohol use predicted therapeutic alliance in a sample of people with alcohol dependence. Given the above research it is reasonable to expect that co-morbid substance abuse among anxious and depressed patients may have a negative impact therapeutic alliance and treatment outcome.

The present study will examine the association between alcohol and drug use, abuse and dependence, therapeutic alliance and improvements in functioning, in people with anxiety and depression.

Alcohol and Drug Expectancies

Alcohol and drugs are widely believed to improve mood and reduce tension. For example, alcohol is often referred to as 'the cup that cheers' or the provider of 'Dutch courage'. Research on beliefs about the effects of drugs focuses on alcohol and is embodied in Alcohol Expectancy Theory. In this model alcohol consumption is related to 'alcohol outcome expectancies' that is, beliefs about the consequences of drinking alcohol. It has been repeatedly demonstrated that positive alcohol expectancies are significantly and positively associated with self-reported drinking behaviour in adults (Brown, Christiansen & Goldman, 1987; Fromme, Stroot & Kaplan, 1993), adolescents (Christiansen & Goldman, 1983; Fromme & D'Amico, 2000) and people with alcohol dependence (Christiansen et al., 1989; Kilbey et al., 1998).

Given that positive beliefs about alcohol predict drinking behaviour in these populations, it might be expected that in people with anxiety and depression, positive beliefs regarding alcohol, particularly beliefs that alcohol reduces tension and elevates mood are likely to be associated with problematic drinking. Smail et al., (1984) is the only study known to the author to examine this issue to date. This study found that 12 out of 17 participants with agoraphobia or social phobia attributed tension-reducing properties to alcohol and reported that alcohol was helpful in coping with feared situations. However, this study only has a small sample (N=17), and does not utilise a reliable and valid measure to question about beliefs about alcohol. The effect of expectancies about drugs on drug use also remains to be empirically investigated. This study aims to examine beliefs regarding substance use in participants with anxiety and depressive disorders.

Understanding participants' expectancies and misconceptions regarding alcohol and drugs is an important and clinically relevant issue that may aid future treatment.

In summary, this study will consider the following hypotheses:

1. A proportion of Clinical Psychology Primary Care patients with Anxiety and Depression will have co-morbid substance misuse and dependence.
2. There will be a negative association between degree of substance misuse problems, and both improvements in levels of functioning and therapeutic relationship.
3. There will be a positive association between severity of anxiety and depression symptoms and degree of substance use problems.
4. There will be a positive association between the belief that alcohol or drugs (illicit) reduce tension and other psychological symptoms and the severity of substance use problems.

METHODS

Participants

People (aged 18-65) currently receiving treatment for anxiety or depression in one of four Clinical Psychology Primary Care Departments in Glasgow, were recruited. Patients with bipolar disorder, psychosis or organic damage, as diagnosed by their Psychologist, were excluded. The sampling strategy was to obtain a consecutive sample of new patients commencing treatment. Accordingly Clinical Psychologists working in Primary Care Services in Glasgow were asked to identify potential participants and approach them

regarding participation at the end of their assessment interview. In reality the majority of participants were obtained from one department.

An *a priori* power calculation based on previously reported effect sizes between depression (measured on the Beck Depression Inventory, Beck et al., 1983) and alcohol problems (measured using DSM-III-R, American Psychiatric Association) (Bibb & Chambless, 1986) estimated that, to achieve 80% power to detect a statistically significant result at the 5% level of significance, a minimum sample size of 64 participants would be required.

Seventy-three people agreed to participate in the research. Of these, 60 completed the interview, and 13 either cancelled or failed to attend the research interview. Reasons provided for this included work commitments, bereavement or no longer wishing to participate. Data on those who declined to participate is unavailable.

Design

A correlational design was used.

Procedure

Participants were provided with an opportunity to ask questions and were assured of confidentiality. Once written consent was obtained, the measures below were administered during one session with the researcher. The interview lasted approximately one hour.

Ethical approval was obtained from Greater Glasgow Primary Care NHS Trust Ethics Committee.

Measures

Demographic Information

Information was obtained on gender, age, marital status, postcode (which was later transformed into deprivation category score, Carstairs & Morris, 1991), employment status, and units of alcohol consumed in a typical week (Appendix 4.2).

Diagnosis of Anxiety or Depressive Disorder and Substance Use Disorder

Structured Clinical Interview for DSM-IV Axis I Disorders–Clinical Version (SCID-I; First, Spitzer, Gibbon, & Williams, 1994)

Sections A, E & F (Mood Episodes, Anxiety and other Disorders and Alcohol and other Substance Use disorders) were used to assess whether participants met DSM-IV criteria (American Psychiatric Association, 1994). Four practice interviews were audio-taped and checked by an independent rater to ensure the SCID-I was reliably employed. As the SCID-CV is not a fully structured interview and requires the clinical judgement of the interviewer, the reliability of the SCID-CV is a function of the particular circumstances in which it is being used. However internal consistency reliability has been found to range from .70 to 1.0 (Segal et al., 1995). Criterion validity has been estimated to be .93 (Kranzler et al., 1995).

Assessment of Anxiety and Depression Symptoms

1. *Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983)*

This is a 14-item scale providing scores for depression and anxiety. It has internal consistency ranging from r =.30 to .76 and concurrent validity for both depression (r =.70, p<.001) and anxiety (r =.74, p<.001) subscales (Zigmond & Snaith, 1983).

2. *Beck Depression Inventory–II (BDI-II; Beck et al., 1996)*

This is a 21-item scale providing a quantitative assessment of the severity of depression. The internal consistency is .92, test-retest reliability is .93, and construct validity is .93 (Beck et al., 1996).

Assessment of Alcohol Problems

1. *Alcohol Use Disorders Identification Test (AUDIT; Saunders et al., 1993)*

The AUDIT is a 10 item self-report questionnaire that assesses alcohol consumption, drinking behaviour, adverse reactions, and alcohol related problems. The instrument has been used extensively for early detection of harmful alcohol use in the primary healthcare setting (Conigrave et al., 1995), and has been used as a continuous measure of drinking problems (Rodgers et al., 2000). Scores range from 0-40. A score of 8 or more can be used as a cut-off and indicates a strong likelihood of hazardous or harmful alcohol consumption. The internal consistency is .93, the sensitivity is .92 and the specificity is .94 (Saunders et al., 1993; Appendix 4.3).

2. *Severity of Alcohol Dependence Questionnaire (SADQ; Stockwell et al., 1983)*

In order to assess severity of alcohol dependence this 20-item questionnaire was administered on participants who were drinking problematically (defined as a score of 8 or

above on the AUDIT). The test-retest reliability is r =.85 (p<.001) and construct validity is r = .81 (p<.05) (Stockwell et al. 1983; Appendix 4.4).

Assessment of Drug Problems

Drug Abuse Screening Test (DAST-20; Skinner, 1982)

A 20-item true/false scale providing a quantitative index of drug problem severity. The author suggests that a score exceeding 5 may be useful for case finding. The internal consistency reliability is .95 (Skinner, 1982; Appendix 4.5).

Measures of Beliefs about Alcohol and Drugs

1. *Visual Analogue Scale*

This measure was modified from Smail et al., (1984). Responses to the following questions were gathered on a visual analogue scale rather than yes/no responses used by Smail et al., (1984).

Participants were asked:

i. How helpful are drugs/alcohol in overcoming your psychological symptoms?

ii. To what extent do you deliberately use drugs/alcohol to help you cope with your psychological symptoms?

There were separate scales for alcohol and other drugs (Appendix 4.6).

2. *Alcohol Expectancy Questionnaire (AEQ; Brown et al., 1987)*

The revised 64-item likert version as used by Jones & McMahon (1996) was used. The scale was designed to assess positive beliefs (expectancies) regarding alcohol on six subscales. Scores range from 64 to 320. The total score and the relaxation and tension

reduction subscales were of interest in the present study. Internal consistency is .84, test-retest reliability is .66, and predictive validity ranges from r =.71 to r =.53 (Brown et al., 1987; Appendix 4.7)

Treatment Outcome Measures

1. *Global Assessment of Functioning (GAF; Axis V, DSM-IV, American Psychiatric Association, 1994)*

Global Assessment of Functioning Scale (GAF) is a Clinician rated estimate of overall level of functioning considering psychological, social and occupational functioning. Ratings range from 1-100. Psychologists were asked for a GAF score at the beginning of participants' treatment, after one month in treatment, and after three months, or when they defaulted. Inter-rater reliability was .72. Criterion validity was measured using support needs as the criterion. This was estimated as .59 (Jones et al., 1995).

2. *Working Alliance Inventory (WAI; Horvath & Greenberg, 1989)*

A 12-item 7-point likert scale providing a quantitative measure of the therapeutic relationship, as rated by the treating Psychologist. The reliability of this version is .87, and concurrent validity of r =.78. (Horvath & Greenberg, 1989, Appendix 4.8).

3. *Length of Treatment*

It was noted whether the participant was still in treatment, had been routinely discharged or had defaulted from treatment at three months.

RESULTS

Demographics

Table 1 shows the demographic characteristics of the sample. The sample was 40% male (*N*=24) and 60% female (*N*=36), and the mean age was 38 years (SD 12.6). Forty-five percent of the sample was single, 35% were married or co-habiting and 20% were divorced or separated. In terms of employment, 57% were employed, 38% were unemployed and 5% were retired. Fifteen percent of the sample lived in the least deprived postcode areas (1 and 2), 40% lived in deprivation categories 3 to 5, and 45% lived in the most deprived categories (6 and 7).

Insert Table 1 about here

The demographics of the sample were compared to the demographics of a year of referrals to a Glasgow Primary Care service (Boyle, 2001) in order to examine whether the sample was representative. There were no significant differences on gender, age or deprivation category between the two samples.

Clinical Characteristics

Seven percent of the sample met criteria for a depressive disorder, 52% met criteria for an anxiety disorder, 32% met criteria for both an anxiety and a depressive disorder and 9%

had symptoms but did not fulfil criteria for an anxiety or depressive disorder according to DSM-IV (SCID-I).

The mean score on the BDI-II fell within the moderate range (*M* 25, SD 13), the mean score on the HADS-A (anxiety) fell within the moderate range (*M* 13, SD 4), and the mean score on the HADS-D (depression) fell within the mild range (*M* 9, SD 5).

Fifty percent (*N*=30) of the sample were still in treatment at 3 months, 30% (*N*=18) had been routinely discharged and 20% (*N*=12) had defaulted. The mean GAF score at the beginning of treatment was 59.4 (SD 9.7, *N*=60), at one month was 63 (SD 11, *N*=57), and at 3 months was 70 (SD 13, *N*=48). The GAF score at discharge was used for those who had been routinely discharged before three months. GAF scores were unavailable for those who had defaulted before three months. There was a significant difference between GAF scores at the beginning of treatment and GAF scores at three months (t (47) = -9.23, $p<.001$, two-tailed). The mean score for the sample on the Working Alliance Inventory (WAI) was 62.7 (SD 10.5).

AEQ total score and the subscale score relating to beliefs about the tension reducing properties of alcohol (AEQ relax) were examined. The mean score on the AEQ (total) was 162 (SD 51) (maximum score 320). The mean for the AEQ (relax) score was 36 (SD 12) (maximum score, 70).

Prevalence of Alcohol and Drug Problems

Alcohol

Table 2 summarises the descriptive statistics on alcohol and drug problems. It shows that 43% of the sample scored 8 or above on the AUDIT which is indicative of problematic

drinking. The mean score was 7 (SD 6). Of the problem drinkers, 22% of the sample met criteria for alcohol abuse or dependence (15% for abuse and 7% for dependence), according to the SCID-I. On the Severity of Alcohol Dependence Questionnaire (SADQ), 5% scored over 30, meeting criteria for severe dependence.

The mean amount of alcohol consumed per week was 17 units (SD 24). Fifteen percent of the sample were abstinent, 53% consumed within government weekly recommendations (21 units per week for men and 14 units for women), and 32% consumed in excess of the weekly government guidelines.

Insert Table 2 about here

Men scored higher on the AUDIT and consumed more units of alcohol than women. There was a difference between mean scores of men and women on the SADQ, but this difference did not reach statistical significance (Table 3).

Insert Table 3 about here

There was also an age effect. The sample was divided around the mean age into 'young' and 'old' age groups. Younger women scored higher on the AUDIT (t (34)

=3.10, $p<.01$, two-tailed) although there was no difference between younger and older women in the reported amount of alcohol consumed per week. There were no differences between younger and older men on the AUDIT or amount of alcohol consumed.

Drugs

Two percent ($N=1$) of the sample met criteria for current substance dependence, according to DSM-IV, 20% reported using drugs but did not meet criteria for associated problems according to the DAST-20, and 78% of the sample reported no drug use (Table 2).

Men scored higher than women on the DAST-20 (Table 3), and there was a significant age effect for both men ($U=31$, $N_1=11$, $N_2=13$, $p<.01$, two-tailed) and women ($U=120$, $N_1=20$, $N_2=16$, $p<.05$, two-tailed), with younger people scoring higher.

As a result of the low rate of reported drug problems, drug use was not analysed in the rest of the hypotheses.

Relationship between Degree of Alcohol Problems and Improvements in Overall Levels of Functioning and Therapeutic Alliance

The percentage change in GAF score was calculated by dividing the change in score between baseline and three months by the baseline score and multiplying by 100. Due to the default rate, data for this analysis was available for 48 participants. Percentage change was divided into high and low change around the mean (18%, SD 17.4). A chi-squared showed no significant difference in problematic drinking between people with high and low percentage change.

Using a chi-squared no significant difference was found in default rate from treatment between problematic and non-problematic drinkers measured on the AUDIT, or between people who did and did not meet criteria for abuse or dependence on alcohol.

A significant negative correlation was found between AUDIT and Working Alliance Inventory (WAI) scores (r = -.38, N=60, p<.005). However, men scored significantly lower than women on the WAI (t (58) = -2.95, p<.01) and significantly higher on the AUDIT. It was therefore not possible to tell from correlation tests whether problematic drinking per se was correlated with therapeutic relationship, or whether gender accounted for this association.

In order to examine the relative predictive value of gender and problematic drinking on working alliance, a hierarchical multiple regression was performed. Entering gender and AUDIT scores in separate blocks, a significant model emerged (F (2,56), F=7.58, p<.005). Both AUDIT scores (β= -0.31, p<.05) and gender (β=0.27, p<.05) were significant variables. Adjusted R^2 increased from .109 to .185 when AUDIT scores were included in the model, indicating that AUDIT scores and gender were independently predictive of working alliance.

Relationship between the Severity of Anxiety and Depression Symptoms and Degree of Alcohol Misuse Problems

This relationship was examined first by looking at AUDIT scores measuring degree of problematic drinking in the whole sample, and then SADQ scores measuring severity of dependence, in those who were drinking problematically (N=26).

With regard to depression symptoms, there was a significant correlation between BDI-II scores and AUDIT scores (r = .24, N=60, p<.05), but not HADS-D.

In order to control for gender and age, both of which affected AUDIT score, the above relationships were examined separately for men and women, using partial correlations to control for age. For men, significant correlations were found between the BDI-II and the AUDIT (r =.43, N=24, p<0.05) but not the HADS-D. For women no significant correlations were found.

There was no significant correlation between severity of anxiety symptoms, measured on the HADS-A, and alcohol problems measured on the AUDIT. Using partial correlations for men and women separately controlling for age, no significant correlation was found.

The relationship between severity of dependence and depression and anxiety symptoms was examined by looking at associations between scores on the SADQ, the BDI-II, HADS-D and HADS-A. This analysis only included the 26 participants who completed the SADQ. There were no differences between men and women on this measure, and no age differences. They were therefore examined as one group. A significant correlation was found between the SADQ and the anxiety measure (HADS-A) (r =.48, N=26, p<.01), but not between the SADQ and the depression measures.

Relationship between Alcohol Expectancies and Degree of Alcohol Misuse

There were significant positive correlations between alcohol problems (AUDIT) and general positive beliefs about alcohol (AEQ total) (r =.37, N=60, p<.01), AUDIT scores and beliefs about the tension reducing effects of alcohol (AEQ relax) (r =.45, N=60,

$p<.001$) and AUDIT scores and the visual analogue scale measuring beliefs about alcohol ($r_s = .39$, $N=60$, $p<.005$). There was also a positive correlation between AUDIT scores and the extent to which participants rated that they deliberately used alcohol to reduce their psychological symptoms ($r_s = .73$, $N=60$, $p<.001$).

Due to the gender and age differences on AUDIT scores, partial correlations were performed separately for men and women controlling for age. For women significant positive correlations were found between the AUDIT and the AEQ (total) ($r = .39$, $N=36$, $p<.05$) and AUDIT and AEQ (relax) ($r = .30$, $N=36$, $p<.05$). For men there was a significant positive association between AEQ (relax) and AUDIT scores ($r = .47$, $N=24$, $p<.05$), but not for AUDIT and AEQ (total).

It was not possible to control for age using partial correlations when examining the visual analogue scales, as the data were not normally distributed. However, Spearman's rho was used to look at the correlations for men and women separately. Significant correlations were found for men and women between the AUDIT and visual analogue scale measuring beliefs about alcohol (Men; $r_s=.44$, $N=24$, $p<.05$; Women; $r_s=.56$, $N=36$, $p<.001$). Significant correlations were also found for men and women between the AUDIT and extent to which they rated that they deliberately used alcohol to reduce their psychological symptoms (Men; $r_s=.73$, $N=24$, $p<.001$; Women; $r_s=.67$, $N=36$, $p<.001$).

DISCUSSION

Prevalence of Alcohol and Drug Problems

Twenty-two percent of participants met criteria for alcohol abuse and/or dependence. This is in accordance with findings from previous research reporting high rates of alcohol abuse and dependence in people with anxiety (Bibb & Chambless, 1986; Thyer et al., 1986) and depression (Hasin et al., 1985; Abraham & Fava, 1999), and appears to be higher than the rate found in general population surveys (eg 13.5%; Regier et al., 1990). In addition, 43% of participants were drinking problematically, although not necessarily meeting criteria for abuse or dependence.

This finding suggests that alcohol disorders and problem drinking are highly prevalent amongst Clinical Psychology populations. According to the results of the present study, one in five patients with anxiety or depression on the Clinical Psychology caseload are likely to have a co-morbid alcohol disorder. If the more inclusive 'problematic drinking' is considered, Psychologists might expect this figure to rise to two in five of anxious or depressed patients. These findings highlight the need for awareness of alcohol problems and disorders in people with anxiety and depression by Clinical Psychologists working in the Primary Care setting.

Significantly more men than women were drinking problematically, and amongst women, younger women were more likely to be drinking problematically. Clinicians should therefore be aware of alcohol problems in these subgroups of their caseload.

The rate of other drug abuse/dependence found in this sample (2%) was lower than that found in other samples of anxious and depressed people. Other studies have reported

rates of 6% to 17% (Abraham & Fava, 1999; Regier et al., 1990) in anxious, depressed and non-clinical samples. Abuse and dependence on drugs other than alcohol therefore did not have a high prevalence rate in this sample.

It is interesting to speculate why this was. The study relied on self-report and it is possible that participants were reluctant to admit to use of illegal substances. However, the SCID-I is a reliable and valid measure for detecting such difficulties (First et al., 1994), and participants were assured of confidentiality. It is also possible that drug use is not highly prevalent in this population. This may be because the population of people attending Clinical Psychologists in this setting is older and drug use and problems are typically more common amongst younger people (Burke et al., 1994).

Association between Problematic Drinking and Improvements in Functioning and Quality of Therapeutic Relationship

It was predicted that the higher the degree of substance misuse, the smaller the overall improvements in functioning, and the poorer the therapeutic relationship. The results indicated that there were no differences between problematic and non-problematic drinkers on default rate, or on percentage improvement, over three months of treatment. However, the measure of improvement (therapists' ratings of Global Assessment of Functioning) may not necessarily be detecting improvements in their anxiety and depression symptoms. Future research could examine treatment outcome between people with and without problematic drinking by measuring their specific psychological symptoms at the beginning and end of treatment. It may also be necessary to control for

confounding variables such as therapist characteristics, the quality of the therapeutic relationship and gender.

Problematic drinking was negatively correlated with therapeutic alliance, suggesting that the higher the degree of problematic drinking, the poorer the quality of therapist rated therapeutic alliance. Problematic drinking was further found to predict therapeutic relationship over and above the predictive value of gender. The hypothesis that greater alcohol misuse is associated with poorer therapeutic relationship is therefore accepted. Therapists should be aware that patients with alcohol problems might be more likely to have a poor therapeutic relationship.

These results must be interpreted with caution. Firstly, alcohol misuse problems accounted for only a small percentage (9.5%) of the variance in therapeutic relationship, and much of the variance in therapeutic relationship was not accounted for by the model. However, to control for all predictors of therapeutic relationship was beyond the scope of this research. Secondly, while there is an association between therapeutic relationship and problematic drinking, this does not imply that problematic drinking causes poorer therapeutic alliance. A third factor, such as therapist characteristics, could be co-varying with both variables. Thirdly, this study examines therapeutic relationship as defined by the therapist. Further research examining client rated alliance would extend these findings.

Association between Problematic Drinking and Anxiety and Depression Symptoms

It was predicted that the higher the severity of anxiety and depression symptoms, the higher the degree of substance misuse problems. For men, weak positive correlations

were found between problematic drinking and depression symptoms on one of the depression measures (BDI-II) but not the other (HADS-D). No significant correlations were found for women.

In view of these non-significant findings, a post hoc power analysis was conducted. This revealed that there was sufficient power to detect a relationship between AUDIT and HADS-D (power = 1.00). The non-significant result is not attributable to insufficient power suggesting that depression measured by HADS-D is not related to problematic drinking. This is in contrast to the significant relationship found between depression as measured on the BDI-II and problematic drinking. This may be due to measurement error or may be attributable to the fact that the BDI-II includes items about the physical consequences of depression. These items may have been endorsed by people with problematic drinking, whose symptoms were due to withdrawal from alcohol, rather than an independent depression. This might explain the different findings between these measures. The significant association found with the BDI-II may therefore be confounded by somatic symptoms.

No association was found between anxiety symptoms and degree of problematic drinking, for the whole sample, or for men or women separately. Post hoc power analysis revealed that there was insufficient power to answer this hypothesis (power = 0.19). Due to the fact that the effect size is small, in order to achieve a reasonable level of power, a sample size of 602 would have been required. However, given that the effect size is small, it may not be clinically relevant.

This contradicts evidence of a strong association between anxiety and depression and alcohol problems in the literature (Bibb & Chambless, 1986; Hasin et al., 1986).

However, previous literature considers dichotomous categories of abuse/ dependence and no abuse/ dependence, whereas the present study examined the continua of drinking. It may be that the association between psychological distress and problem drinking is only present at the severe end of the drinking continuum.

Supporting this assertion, it was found in the present study that when those who were drinking problematically were considered alone, an association was found between severity of dependence and anxiety.

A recent paper (Rodgers et al, 2000), published since the commencement of the present study, reported a U-shaped relationship between scores on the AUDIT and symptoms of anxiety and depression in a general population sample. Moderate drinkers had lower levels of anxiety and depression, while abstainers and heavy drinkers had higher levels of these psychological symptoms. This might explain why the present study failed to find a linear relationship between these variables. A cursory glance at the data did not indicate the presence of a U-shaped relationship, the current sample, however, was different from that used by Rodgers et al., (2000). Future research investigating the relationship between anxiety and depression might consider U-shaped and linear relationships.

Association between Positive Beliefs Alcohol and Problematic Drinking

It was predicted that the stronger the belief that alcohol and drugs will reduce tension and other psychological symptoms, the higher the severity of substance problems. Due to the low rate of drug use problems in this sample, this hypothesis was only examined for alcohol beliefs and problems.

Both general positive beliefs about alcohol and beliefs that alcohol reduces tension and other psychological symptoms were positively correlated with degree of problematic drinking. Thus the stronger the favourable beliefs about alcohol and its positive effects in reducing psychological symptoms and tension, the higher the degree of problematic drinking. Problematic drinking was also positively correlated with the degree to which participants stated that they deliberately used alcohol for reducing psychological symptoms.

Due to differences between men and women in drinking patterns, the relationship between beliefs about alcohol and problem drinking was examined separately for men and women. Beliefs that alcohol reduces tension and other psychological symptoms were positively correlated with problem drinking in both men and women. General positive beliefs about alcohol were only correlated with problem drinking in women. Problem drinking was positively correlated with the degree to which both men and women stated that they deliberately used alcohol for reducing psychological symptoms. The correlations found were moderate.

It is important to note that a history of heavy drinking and associated problems was not considered in the present study. Any such history may have affected beliefs about alcohol and the correlation may have been stronger had people with a history of alcohol problems been excluded. The hypothesis is therefore supported.

These findings show that the perception that alcohol has a tension reducing effect and is helpful in coping with anxiety and depression was correlated with problematic drinking. Cognitive restructuring interventions addressing alcohol expectancies might therefore be appropriate in this population. Overly positive views regarding the benefits of

alcohol in coping with anxiety and dysphoric feelings could be counter-balanced by greater appreciation for alcohol's long-term negative consequences. Future research might evaluate the effectiveness of such interventions.

Methodological Limitations

This study has several limitations and the results must be interpreted in the context of these.

The present study is restricted to a single geographical location and culture. This limits the interpretation of the results, and replication of this study across different geographical locations and cultures is required in order to generalise findings.

The study has also examined all anxiety disorders together as one group when examining co-morbidity. While this provides an estimate of co-morbidity in Primary Care patients with anxiety, the study does not inform on the prevalence of co-morbidity in individual anxiety disorders. Furthermore, other researchers have noted varying rates of co-morbidity depending on the disorder being investigated (Thyer et al., 1986). The inclusion of people with a variety of disorders may therefore have confounded the results of this study.

The recruitment strategy used in this study relied on Psychologists approaching potential participants and requesting their participation. This may have introduced some bias into the sample. It is possible that Psychologists may have been more likely to approach patients with whom they felt they had a better relationship or who they felt were more likely to agree to participation. One potential consequence is that a more positive therapeutic alliance may have been found in the sample achieved. This may have

influenced the results investigating improvements in functioning, default rate and therapeutic alliance.

It may have been beneficial to examine improvements in functioning over the full course of treatment rather than just looking at improvements over the first three months of treatment. Future research might also assess change in psychological symptoms perhaps by re-administering the HADS and BDI-II, rather than relying on changes in global functioning, which provide a very general and somewhat insensitive measure.

Finally, the exploration of therapeutic alliance only examined the relationship as rated by the therapist. An examination of client rated alliance would extend these findings.

Conclusions

Accepting these limitations, this investigation indicates that there is a high prevalence of alcohol abuse and dependence in Clinical Psychology Primary Care patients with anxiety and depression. When the more inclusive category 'problematic drinking' is considered, the prevalence rate is even higher. These findings highlight the need for awareness of alcohol problems and disorders in this population. In addition, Clinical Psychologists should be aware that patients with problematic drinking might be more likely to have a poor therapeutic relationship. Psycho-education and cognitive restructuring interventions addressing alcohol expectancies might also be appropriate in this population. Avenues for further research have been highlighted.

REFERENCES

Abraham, H. D. & Fava, M. (1999) Order of onset of Substance Abuse and Depression in a Sample of Depressed Outpatients, *Comprehensive Psychiatry*, **40** (1), 44-50.

Allan C. A. (1995). Alcohol Problems and Anxiety Disorders – A critical review. *Alcohol and Alcoholism*, **30** (2), 145-151.

American Psychiatric Association (1994) *Diagnostic and Statistical manual of Mental Disorders (Fourth Edition),* American Psychiatric Association: Washington D.C.

Beck, A. T., Steer, R. A. & Brown, G. K. (1996). BDI-II Manual, Psychological Manual, Psychological Corporation, Harcourt Brace & Company, San Antonio

Bibb J. L. & Chambless, D. L. (1986). Alcohol use and abuse among diagnosed agoraphobics. *Behaviour Research & Therapy*, **24** (1) 49-58.

Bordin, E. S. (1979) The generalisability of the psychoanalytic concept of the working alliance. *Psychotherapy, Theory, Research and Practice*, **16**, 252-260.

Boyle, S. (2001). A description and analysis of one years discharge data from a Clinical Psychology direct access service. Submitted in partial fulfilment of the degree of Doctorate in Clinical Psychology, University of Glasgow, Scotland.

Brown, S. A., Christiansen, B. A. & Goldman, M. S. (1987). The Alcohol Expectancy Questionnaire: an instrument for the assessment of adolescent and adult expectancies, *Journal of Studies on Alcohol*, **48**, 483-491.

Burke, J. D., Burke, K. C. & Rae, D. S. (1994). Increased rates of Drug Abuse in Adolescence. *Hospital and Community Psychiatry,* **45** (5), 451-455.

Carstairs, V., & Morris, R. Deprivations and Health in Scotland. Aberdeen University Press. 1991.

Chambless, D. L., Foa, E. B., Groves, G. A. & Goldstein, A. J. (1979) Brevital in flooding with agoraphobics. *Behaviour Research and Therapy*, **17**, 243-251.

Cameron, O. G., Liepman, M. R., Curtis, G. C. & Thyer, B. A. (1987) Ethanol retards desensitisation of simple phobias in non-alcoholics. *British Journal of Psychiatry*, **150**, 845-849.

Christiansen, B. A. & Goldman, M. S. (1983) Alcohol-related expectancies versus demographic/background variables in the prediction of adolescent drinking, *Journal of Consulting and Clinical Psychology*, **51**, 249-257.

Christiansen, B. A., Smith, G. T., Roehling, P. V. & Goldman, M. S. (1989) Using alcohol expectancies to predict adolescent drinking behaviour after one year. *Journal of Consulting and Clinical Psychology*, **57**, 93-99.

Conigrave, K. M., Hall, W. D. & Saunders, J B. (1995). The AUDIT questionnaire: choosing a cut-off score. *Addiction*, **90**, 1349-1356.

Conners, G.J., DiClemente, C.C., Derman, K. H., Kadden, R., Carroll, K. M. & Frone, M. R. (2000). Predicting the therapeutic alliance in alcoholism treatment. *Journal of Studies on Alcohol*, **61** (1), 139-149.

Cox, B. J., Norton, G. R., Dorward, J. & Fergusson, P. A. (1989). The Relationship between panic attacks and chemical dependencies. *Addictive Behaviours*, **14**, 53-60.

Diagnostic and Statistical Manual of Mental Disorders. Fourth Edition. American Psychiatric Association, 1995.

First, M. B., Spitzer, R. L., Gibbon, M. & Williams, J. B. W. Structured clinical interview for DSM-IV Axis I Disorders – Clinical Version (SCID-I). Washington, DC, American Psychiatric Press, 1994.

Fromme, K., Stroot, E. A. & Kaplan, D. (1993) Comprehensive effects of alcohol: development ad psychometric assessment of a new expectancy questionnaire, *Psychological Assessment*, **5**, 19-26.

Fromme, K. & D'Amico, E. J. (2000) Measuring adolescent alcohol outcome expectancies, *Psychology of Addictive Behaviours*, **14**, 206-212

Hasin, D. Endicott, J. & Lewis, C. (1985). Alcohol and Drug Abuse in Patients with Affective Syndromes, *Comprehensive Psychiatry*, **26** (3), 283-295

Horvath, A. O. & Greenberg, L. S. (1989). Development and Validation of the Working Alliance Inventory. *Journal of Counselling Psychology*, **36**, 223-233.

Horvath, A. O. & Symonds, B. D. (1991). Relation between working alliance and outcome in psychotherapy: A meta-analysis. *Journal of Counselling Psychology*. **38** (2), 139-149.

Jones, S. H., Thornicroft, G., Dunn, G. & Coffey, M. (1995) A Brief Mental Health Outcome Scale: Reliability and Validity of the Global Assessment of Functioning (GAF). *The British Journal of Psychiatry*, **166** (5), 654-659.

Jones, B. T. & McMahon J. (1996). A comparison of positive and negative alcohol expectancy and value and their multiplicative composite as predictors of post-treatment abstinence survivorship, *Addiction*, **91** (1), 89-99.

Kessler, R.C., McGonagle, K. A., Zhoa, S. (1994). Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States. *Archive of General Psychiatry*. **51**, 8-19.

Kessler R. (1995). The National Co-morbidity Survey: Preliminary results and future directions. *International Journal of Methods in Psychiatric Research*, **5**, 139-151.

Kessler R. C., Crum, R. M., Warner, L. A., Nelson, C. B., Schulenberg, J. & Anthony, J. C. (1997) Lifetime Co-occurrence of DSM-III-R Alcohol Abuse and Dependence with other Psychiatric Disorders in the National Co-morbidity Survey. *Archives of General Psychiatry*, **54**, 313-321.

Kilbey, M. M., Downey, K. & Breslau, N. (1998) Predicting the emergence and persistence of alcohol dependence in young adults: the role of expectancy and other risk factors. *Experimental and Clinical Psychopharmacology*, **6**, 149-156.

Kranzler, H. R., Ronlad, M. N., Burleson, J. A. et al (1995) Validity of psychiatric diagnoses in patients with substance use disorders: is the interview more important than the interviewer, *Comprehensive Psychiatry*, **36**, 278-288.

Kushner, M. G. (1996) Relationship between Alcohol Problems and Anxiety Disorders. *American Journal of Psychiatry*, **153**, (1), 139-140.

Kushner, M G., Abrams, K. & Borchardt, C. (2000) The Relationship between Anxiety Disorders and Alcohol Use Disorders: A review of Major Perspectives and Findings. *Clinical Psychology Review*, **20,** (2), 149-171.

Lin, C., Bai, Y., Hu, P. & Yeh, H. (1998) Substance Use Disorders among Inpatients with Bipolar Disorder and Major Depressive Disorder in a General Hospital. *General Hospital Psychiatry*, **20**, 98-101.

Luborsky, L., McLellan, A. T., Woody, G. E. & O'Brien, C. P. (1985) Therapist success and its determinants. *Archives of General Psychiatry*, **42**, 602-611.

Merikangas, K. A., Stevens, D., & Fenton, B. (1996) Comorbidity of alcoholism and anxiety disorders. *Alcohol Health and Research World*, **20**, 100-105.

Quitken, F. M., Rifkin, A., Kaplan, J. & Klein, D. F. (1972) Phobic anxiety syndrome complicated by drug dependence and addiction. *Archives of General Psychiatry*, **27**, 159-162.

Regier, D.A., Farmer, M.E., Rae, D. S., Locke, B. Z., Keith, S. J., Judd, L. L. & Goodwin, F. K. (1990). Co-morbidity of mental disorders with alcohol and other drug abuse: results form the epidemiologic catchment area (ECA) study. *Journal of the American Medical Association*, **264**, 2511-2518.

Rodgers, B., Korten, A. E., Jorm, A. F., Jacomb, P. A., Christensen, H. & Henderson, A. S. (2000). Non-linear relationships in associations of depression and anxiety with alcohol use. Psychological Medicine, **30**, 421-432.

Saunders, J. B., Assland, O. G., Babor, T. F., De La Fuente, J. R. & Grant, M. (1993). Development of the Alcohol Use Disorders Identification Test (AUDIT): WHO Collaborative Project on Early Detection of Persons with Harmful Alcohol Consumption – II. *Addiction*, **88**, 791-804.

Schuckit, M. A. & Hesselbrock, V. (1994). Alcohol Dependence and Anxiety Disorders: What is the Relationship? *American Journal of Psychiatry*, **151**(12), 1723-1734.

Schuckit, M. A. & Monteiro, M. G. (1988). Alcoholism, Anxiety and Depression. *British Journal of Addiction*, **83**, 1373-1380.

Segal, D. L., Kabacoff, M., Hersen, M., et al. (1995) Update on the reliability of diagnosis in older psychiatric outpatients using the Structured Clinical Interview for DSM-IV. *Journal of Clinical Geropsychology*, **1**, 313-321.

Skinner, H. A. (1982). The Drug Abuse Screening Test. *Addictive Behaviours*, **7**, 363-371.

Smail, P., Stockwell, T., Canter, S. Hodgson, R. (1984). Alcohol dependence and phobic anxiety states I. A prevalence study. *British Journal of Psychiatry*, **144**, 53-57.

Stockwell, T, Murphy, D. & Hodgson, R. (1983). The Severity of Alcohol Dependence Questionnaire: Its Use, Reliability and Validity. *British Journal of Addiction*, **78**, 145-155.

Thyer, B. A. & Curtis, G. C. (1984) The effects of ethanol intoxication on phobic anxiety. *Behaviour Research and Therapy*, **22**, 599-610.

Thyer, B. A., Parrish, R. T., Himle, J., Cameron, O. G., Curtis, G. C. & Nesse, R. A. (1986). Alcohol Abuse among clinically anxious patients, *Behavioural Research and Therapy*, **24**, 357-359.

Tunis, S. I., Delucchi, K. L., Schwartz, K., Banys, P. & Sees, K. L. (1995) The relationship of counsellor and peer alliance to drug use and HIV risk behaviours in a six-month methadone detoxification program. *Addictive Behaviour*, **20**, 395-405.

Watson, L. (2000). A survey of the Effects of Deprivation Category on GP referral Rates and Problem Type to a Clinical Psychology Service. Submitted in partial fulfilment of the degree of Doctorate in Clinical Psychology, University of Glasgow, Scotland.

Zigmond & Snaith (1983). Hospital Anxiety and Depression Scale. *Acta. Psychiatr. Scand.* 67, 361-370.

Table 1: Demographics of the Sample

Demographic Characteristic	*N* (%)
Gender	
Male	24 (40)
Female	36 (60)
Martial Status	
Single	27 (45)
Married/ Cohabiting	21 (35)
Divorced/ Separated	12 (20)
Employment Category	
Employed	34 (57)
Unemployed	23 (38)
Retired	3 (5)
Deprivation Category	
1&2	9 (15)
3-5	24 (40)
6&7	27 (45)

Table 2: Alcohol and Drug Use and Problems

	Measure	Whole Sample (*N*=60)
Alcohol	**AUDIT Score**	
	Mean (SD)	7 (6)
	Score 8 or above (*N*)	26
	Weekly Alcohol Consumption	
	Mean (SD)	17 (24)
	Abstinent (*N*)	9
	Drinking (*N*)	32
	Heavy Drinking (*N*)	19
	SADQ Score	
	Mean (SD)	11 (9)
	Score 30 or above (*N*)	3
	Alcohol Abuse or Dependence	
	Abuse (DSM-IV) (*N*)	9
	Dependence (DSM-IV) (*N*)	4
Other Drugs	**DAST-20 Score**	
	Mean (SD)	0.6 (1.3)
	Problem Use (Score 5 or above) (*N*)	1
	Drug Abuse or Dependence	
	Dependence (DSM-IV) (*N*)	1

Table 3: Alcohol and Drug Use and Problems in Men and Women

	Measure	Men (*N*=24)	Women (*N*=36)	Statistic	Significance
Alcohol	**AUDIT Score**				
	Mean (SD)	9 (7)	5 (5)	$t(58) = 2.241$	$p<.05$
	Score 8 or above (*N*)	15	11		
	Weekly Alcohol Consumption				
	Mean (SD)	27 (31)	11 (15)	$U = 277.5$	$p<.05$
	Abstinent (*N*)	2	7		
	Drinking (*N*)	10	22		
	Heavy Drinking (*N*)	12	7		
	SADQ Score				
	Mean (SD)	14 (11)	8 (6)	$t(24) = 2.025$	$p=.054$
	Score 30 or above (*N*)	3	0		
	Alcohol Abuse or Dependence				
	Abuse (DSM-IV) (*N*)	4	5	N/A	N/A
	Dependence (DSM-IV) (*N*)	4	0		
Other Drugs	**DAST-20 Score**				
	Mean (SD)	1 (1.7)	0.3 (0.8)	$U = 326.0$	$p<.05$
	Problem Use (Score 5 or above) (*N*)	1	0		
	Drug Abuse or Dependence				
	Dependence (DSM-IV) (*N*)	1	0	N/A	N/A

N/A = non applicable

CHAPTER 5. SINGLE SUBJECT RESEARCH STUDY

Stereotypic Eye-poking in a Six-year-old Girl with Congenital Blindness.

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ABSTRACT

Blind children exhibit a variety of stereotyped behaviours, the most prevalent of which is eye-poking (Troster, Brambring & Beelman, 1991). There is some evidence that eye-poking occurs more frequently in situations of under-stimulation and boredom (Troster et al., 1991; Fazzi et al., 1999). It has been suggested that eye-poking is prevalent among blind children because it provides cortical stimulation (Jan et al., 1983). Reinforcement and punishment have been found to reduce eye-poking (Blasch, 1978).

This paper investigates severe eye-poking in a six-year-old child with congenital blindness, using single subject methodology. In an analog assessment, conducted over five sessions, the participant was videoed in setting conditions involving varying levels of stimulation and parental response. The duration and frequency of eye-poking was monitored throughout. It was hypothesised that if stimulation exerted an influence on eye-poking, eye-poking would decrease during conditions of increased stimulation. It was further hypothesised that if social contingencies influenced eye-poking, eye-poking would decrease with positive reinforcement for non-occurrence of eye-poking and punishment for occurrence of eye-poking.

Results indicated that increased stimulation led to a decrease in eye-poking behaviour. Positive social reinforcement was also found to be effective. Implications are discussed.

Keywords: Stereotyped behaviour, eye-poking, congenital blindness, child, single subject methodology.

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Appendix 1. Small Scale Service Evaluation Project

Appendix 1.1

Notes for Contributors

Papers, articles and other contributions should be sent to the Editor, *Health Bulletin*, Scottish Office Department of Health, Room 143, St Andrew's House, Edinburgh EH1 3DE. They must be submitted exclusively for *Health Bulletin*. Acceptance is on the understanding that editorial revision may be necessary. All papers are reviewed by the Editor and by peer review, referees being drawn from a panel of appropriate professionals. No correspondence can be entered into in relation to articles found to be unsuitable and returned to authors.

Material submitted for publication must be typewritten on one side of the paper only, in double spacing and with adequate margins, and each page should be numbered. The top typed copy should be submitted, with four other copies. All papers should be prefaced by a structured Abstract, of about 250 words in length. It should normally contain six clearly headed sections entitled Objective, Design, Setting, Subjects, Results and Conclusion. The name, appointment and place of work of the authors should be supplied on a separate title page. This same page should include the full postal address of one author, to whom correspondence and reprints will be directed. There should be adequate references to any relevant previous work on the subject; these references should appear at the end of the material on a separate page or pages, using the Vancouver style, which in the case of papers in journals includes:

Surname and initials of author(s)
Title of paper
Full name of journal
Year published
Volume number
Opening and closing page numbers

Reference to books should similarly include author's name and initials, full title, edition (if necessary), place of publication, publisher's name, year and, if required, volume number, chapter number or page number.

Short Communications. *Health Bulletin* publishes short communications (not exceeding three pages in length) as a separate section, and we aim to offer speedier publication for these. Material intended for this section should be submitted in the above form, and the covering letter should state the intention.

Proofs

Contributors will receive one set of proofs. This should be read carefully for printer's errors, and any tables, figures and legends should be checked. Alterations should be kept to a minimum, and the proofs should be returned promptly.

Reprints

One hundred reprints will be supplied free of charge. A limited extra number (for which a charge will be made) may be ordered from the Editor when the proofs are returned.

Appendix 1.2

Departmental Categorisation of Disorders

ANXIETY/ STRESS RELATED PROBLEM
- Generalised anxiety
- Panic/ anxiety attacks
- Social anxiety
- Work anxiety
- Tension
- Hyperarousal
- Hyperventilation
- Other anxiety

SPECIFIC PHOBIAS
- Animal phobias
- Agoraphobia
- Other phobia
- Claustrophobia
- Height phobia
- Dental phobia

POST TRAUMATIC STRESS
- PTSD rape (victim)
- PTSD rape (witness)
- PTSD rape (friend/ relation)
- PTSD rape (other)
- PTSD sexual abuse (victim)
- PTSD sexual abuse (witness)
- PTSD sexual abuse (friend/ relation)
- PTSD sexual abuse (other)
- PTSD assault (victim)
- PTSD assault (witness)
- PTSD assault (friend/ relation)
- PTSD assault (other)
- PTSD other crime (victim)
- PTSD other crime (witness)
- PTSD other crime (friend/ relation)
- PTSD other crime (other)
- PTSD physical injury (victim)
- PTSD physical injury (witness)
- PTSD physical injury (friend/ relation)
- PTSD physical injury (other)
- PTSD other (victim)
- PTSD other (witness)
- PTSD other (friend/ relation)
- PTSD other (other)
- Acute psychological shock

AFFECTIVE DISORDERS

- Depression
  - Reactive depression
  - Endogenous depression
  - Seasonal affective disorder
  - Perinatal mood disorder
  - Miscellaneous depression
- Mania/ hypomania
- Cyclothymia
- Emotional lability
- Intrapsychic mood problem

PSYCHOSIS
- Schizophrenia
- Other psychosis
  - Paranoia

OBSESSIONS/ COMPULSIONS
- Ruminations
- Rituals
- Hypochondria
- Other obsessions/ compulsions
- Jealousy

PERSONALITY DISORDERS
- Psychopathy

MISCELLANEOUS PERSONAL PROBLEMS
- Low self-esteem
- Guilt
- Loneliness/ social isolation
- Low frustration tolerance
- Poor coping skills

MISCELLANEOUS MENTAL HEALTH PROBLEMS
- Autonomic habit problem
  - Blushing

HABIT PROBLEM
- Eating/ ingestion
  - Anorexia
  - Bulimia
  - Obesity
  - Polydipsia
  - Other ingestion habit problem
- Sleep habit problem
  - Insomnia
  - Sleepwalking/ automatism
  - Nightmares
  - Other sleep habit problem
- Muscular habit problem
  - Tics
  - Writers cramp

- Torticollis
- Bruxism
- Swallowing difficulty
- Other muscular habit problem
- Self damage habit problem
- Nail biting
- Hair pulling
- Scratching
- Speech habit problem
- Stutter etc.
- Aphonia
- Other speech habit problem
- Miscellaneous habit problem
- Other self-damage habit problem

SEXUAL BEHAVIOUR PROBLEM

- Exhibitionism
- Fetishism
- Transvestitism
- Gender dysphoria
- Sexual orientation problem
- Paedophilia
- Sexual violence
- Other inappropriate sexual behaviour

OTHER BEHAVIOUR PROBLEM

- Aggression/ temper control
- Self-injurious behaviour
- Socially inappropriate behaviour
- Disinhibition
- Kleptomania
- Compulsive lying
- Attention seeking
- Hyperactivity

DRUG BASED PROBLEM (INC. ADDICTION)

- Alcohol
- Smoking
- Other social drug
- Caffeine
- Prescribed drug
- Illicit drug
- Solvent
- Other addictive behaviour
- Gambling
- Arcade games
- Miscellaneous addictive behaviour

SKILLS DEFICT

- Social skills, general

- Assertiveness problem
- Public speaking difficulty
- Difficulty making friends
- Self care deficit
- Education deficit
- Study problems
- Reading problems

ADJUSTMENT TO LOSS
- Bereavement
- Miscarriage, termination, stillbirth
- Marital breakdown
- Loss of job
- Loss of physical function
- Financial loss
- Loss of home
- Miscellaneous

RELATIONSHIP PROBLEMS
- Marital problem
- Other family problem
- Work problem
- Other relationship problem

VOCATIONAL PROBLEM

COGNITIVE PROBLEM
- Memory problem
- Concentration problem
- Perceptual problem
- Language problem
- Thinking problem
- Orientation problem
- Other cognitive problem
- Post concussion syndrome
- Frontal lobe syndrome

CNS DISORDER
- Space occupying lesion
- Hydrocephalus
- CNS Trauma
- Closed Head injury
- Penetrating HI
- Cerebral anoxia
- Poisoning, CNS
- Spinal injury
- Other CNS trauma
- Cerebrovascular
- Cerebral infarct
- Cerebral haemorrhage
- Cerebral aneurysm

- Other CNS vascular disorder
- CNS Degenerative disorder
  - Multiple sclerosis
  - Motor neurone disease
- CNS infectious disorder
  - Meningitis/ encephalitis
- AIDS dementia
  - Other CNS infection
- Dementing disorder
  - Alcoholic dementia
  - Alzheimer's
  - Other dementing disorder
- Epilepsy
- Miscellaneous CNS disorder
  - Bells palsy

PHYSICAL HANDICAP

- Loss of motor function
  - Paraplegia
  - Quadriplegia
  - Hemiplegia
  - Poor motor control
  - Poor balance
- Physical deformity
  - Amputation, leg
  - Amputation, arm
- Dsymorphophobia
- Sensory loss
  - Visual impairment
  - Hearing impairment
  - Olfactory impairment
  - Gustatory impairment
  - Somatosensory
  - Kinaesthetic impairment

PAIN

- Head/ face pain
  - Tension headache
  - Cluster headache
  - Migraine
  - Non-specific headache
  - Burning tongue
  - Other head/ face pain
- Neck/ throat pain
  - Neck tension pain
  - Spondylosis
  - Throat pain
- Chest pain, general

- Upper alimentary tract
- Breast pain
- Post herpetic pain
- Back pain
- Low back pain
- Abdominal pain
- Intestinal/ bowel pain
- Anal/ rectal pain
- Gynaecological pain
- Urogenital pain
- Urogenital pain, male
- Urogenital pain, female
- Limb pain
- Upper limb pain
- Lower limb pain
- Phantom limb pain
- Multiple pain
- Miscellaneous

SEXUAL DYSFUNCTION

- Erectile failure
- Premature ejaculation
- Delayed ejaculation
- Anorgasmia (male)
- Anorgasmia (female)
- Dyspareunia (male)
- Dyspareunia (female)
- Dyspareunia (both partners)
- Low libido (male)
- Low libido (female)
- Low libido (both partners)
- Vaginismus
- Poor sexual knowledge (male)
- Poor sexual knowledge (female)
- Poor sexual knowledge (both partners)
- Other sexual dysfunction (male)
- Other sexual dysfunction (female)
- Other sexual dysfunction (both partners)

GENERAL MEDICINE

- Cardiovascular
- Angina
- Respiratory
- Asthma
- Digestive
- Irritable bowel
- Faecal incontinence
- Other bowel

Ulcer
Endocrine/ metabolic
Diabetes
Thyroid dysfunction
Dermatological
Eczema
Psoriasis
Burns
Urological
Urinary incontinence/ urgency/ frequency
Kidney disorder
Male genital disorder
Male infertility
Gynaecological/ obstetric
Premenstrual syndrome
Menstruation disorder
Menopause
Genital infection
Female infertility
Musculoskeletal
Immune system
Haematological
E.N.T.
Geriatric problem
Infectious disorder
ME/ PVS
Nutritional disorder
Oncological
Miscellaneous physical disorder
Electrolyte imbalance
Physical health miscellaneous
Compliance with treatment
Adjustment to physical illness
NO PROBLEM IDENTIFIED

Appendix 2. Major Research Project Literature Review

Appendix 2.1

ALCOHOL AND ALCOHOLISM

OXFORD Journals *online*

The International Journal of the Medical Council on Alcoholism

and

The Journal of the European Society for Biomedical Research on Alcoholism

AIMS AND SCOPE

Alcohol and Alcoholism publishes papers in English on biomedical, psychological and sociological aspects of alcoholism and alcohol research, provided that they make a new and significant contribution to knowledge in the field and areas thereof concerned. Papers may include new results obtained experimentally, descriptions of new experimental (including clinical) methods of importance to the field of alcohol research and treatment, or new interpretations of existing results. Theoretical contributions will be considered equally with papers dealing with experimental work provided that such theoretical contributions are not of a largely speculative or philosophical nature.

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Contributors should submit FOUR copies of their typescripts to either Chief Editor (Dr A. A.-B. Badawy or Professor G. L. Gessa) at the following Editorial Office addresses: Biomedical Research Laboratory, Whitchurch Hospital, Cardiff CF14 7XB, UK OR B. B. Brodie Department of Neuroscience, University of Cagliari, Via Porcell 4, I-09124 Cagliari, Italy. All submissions will be subjected to peer review and must be prepared in accordance with the following Instructions to Authors.

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Organization

The following items will be included in the Journal:

1. *Full-length papers* These should be written in the style described below, their length being the minimum required for precision in describing the experiments and clarity in interpreting them. A concise well-written paper tends to be published more rapidly.

To meet increased demand on pages because of continually rising submissions, the journal is now published in a larger (A4) format. The Editors, however, strongly urge authors to be concise and to submit their work to occupy the smallest possible space. The shorter the papers are, the more that could be accommodated in an issue and the quicker they could be published in this bi-monthly journal. Authors should ensure that no data are presented in both tabular and graphical forms and that the content of a small table could easily be described in the text, without loss of clarity, especially when there are many other Tables and/or Figures in the paper. Methods should not be described in detail if previously published and the 'Discussion' section should have the minimum of speculation and not be excessively long, ideally occupying no more than 25% of the length of the text excluding the references.

2. *Rapid communications*

All appropriate papers describing important novel, unusual and/or exciting findings, and which can be accommodated in up to five pages (including Figures and/or Tables) will be treated as Rapid Communications. They will receive priority treatment and it is hoped that they will be published within 12–16 weeks from date of receipt, provided they do not require major revision. Criteria for acceptance

and method of preparation of Rapid Communications will, however, be the same as for full-length papers. Thus Rapid Communications are not regarded as preliminary communications but as complete and final accounts. Authors are discouraged from attempting to take advantage of this rapid handling procedure to divide a substantial piece of work into smaller submissions.

The Abstract of a Rapid Communication must not exceed 60 words. The total size of the text (excluding the title, authors, addresses and Abstract) should not exceed 4000 words, which should include references and any Figures and/or Tables. Figures and Tables must be of reproducible quality and not require redrawing since this will delay publication. Authors should therefore assess the approximate space required for Figures and/or Tables and reduce the size of the text accordingly. Papers exceeding these specifications (and therefore likely to occupy more than five printed pages of the Journal) will not be given priority handling but will be treated as full-length submissions.

To expedite the publication of Rapid Communications, authors should, if possible, submit their Rapid Communications by e-mail. If not, then a disc must accompany the initial submission and MUST also accompany the final revised version. Proofs will be faxed to authors, who will be given 48 hours to fax back their corrected proofs.

3. *Letters to the Editors*

These are intended to provide an opportunity to discuss or expand particular points made in published work, to comment on or criticize work previously published in *Alcohol and Alcoholism*, or to present a new hypothesis. They should not contain extensive new data (which would best be placed in a regular paper), nor be used as a vehicle for publication of preliminary results. If a letter is polemical in nature, a reply may be solicited from other interested parties before publication.

4. *Reviews*

Review articles will usually be solicited, although unsolicited reviews will be considered for publication. However, prospective writers of reviews should first consult the Chief Editors of the Journal.

5. *Commentaries*

These now replace Editorials and Annotations, which were important features of the journal before volume 18. Commentaries should provide succinct, comprehensive and up-to-date accounts of topical issues in alcohol and alcoholism research and treatment, where either rapid progress is being made or the need for a brief review is both timely and warranted. Another important aim of a Commentary is stimulation of debate. A Commentary may or may not be solicited and can be between 1000 and 4000 words (occupying no more than five printed pages). As with unsolicited Reviews, prospective writers of Commentaries should first consult the Chief Editors.

6. *Book Reviews*

Publishers, agents and other distributors of books are urged to send review copies direct to the Book Review Editor, Dr Brian D. Hore, at the following address: 22 Handforth Road, Wilmslow, Cheshire SK9 2LU, UK. Books are reviewed by experts in their fields and a copy of the review is sent to the publisher/distributor soon after its appearance.

Editors, Advisors and Independent Referees

Normally a paper is read by the handling Editor and two other persons, who may be Editorial Advisors independent referees or both. The main task of the advisors and referees is to make recommendations on the acceptability of a paper. If rejection of a paper is recommended, or if there is any serious disagreement between those who have read the paper, the final decision is made by the Editor or Editors. Normally each paper is handled throughout by an Editor who will, if the paper is acceptable, make amendments and will request revision or shortening. Once the Editor(s) is satisfied, the paper is then prepared for press by an in-house sub-editor. In this final process, attention is paid to grammar an the detailed conventions of the Journal.

Submission of papers

Submission of a paper implies that it has been approved by all the named authors (who should all sign

Appendix 2.1

statement to this effect), and that it reports unpublished work, that it is not under consideration for publication in whole or in part elsewhere, and that if accepted by *Alcohol and Alcoholism* it will not be published elsewhere in the same form, either in English or in any other language, without the consent of the Editors.

Papers that are scientifically acceptable but need revision because they are not clear and concise or do not conform sufficiently to the conventions of *Alcohol and Alcoholism* will be returned to the authors for amendment.

Electronic Submission

Authors are encouraged to send a computer disc (3.5" HD disc) containing the final revised version of the paper along with the final typescript to the Handling Editor. Follow the Guide for authors preparing electronic documents printed in each issue of the journal.

Please observe the following criteria: (1) Send only hard copy when first submitting your paper. (2) When your paper has been refereed, revised if necessary and accepted, send a disc containing the final version with the final hard copy. **Make sure that the disc and hard copy match exactly.** (3) Specify what software was used, including which release, e.g. Word 97 (4) Specify what computer was used (either IBM-compatible PC or Apple Macintosh). (5) Include the text file and separate Table and illustration files. (6) The file should follow the general instructions on style/arrangement and, in particular, the reference style of this journal as given in the Instructions to Authors. (7) The file should be single-spaced and should use the wrap-around end-of-line feature, i.e. no returns at the end of each line. All textual elements should begin flush left; no paragraph indents. Place two returns after every element such as title, headings, paragraphs, Figure and Table call-outs. (8) Keep a back-up disc for reference and safety.

Reprints and permissions

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Quotations of personal communications When such a quotation is made the authors should provide written evidence of permission from the person(s) concerned to be quoted. Such reference to personal communications should be made only in the text, not in the list of references.

Copies of submitted papers

The original typescript plus three copies should be submitted to either Chief Editor together with a letter signed by all the authors giving consent for publication in the Journal including the following statement: 'This paper has not been, nor will be, published in whole or in part by any other journal'. The senior author may, for reasons of convenience, submit a written and signed authorization by another co-author(s) for him(her) to sign on his(her) behalf, if such a co-author(s) is likely to be absent during the week of submission. In submitting illustrations or photographs, only one original is required four photocopies should be enclosed with the four copies of the paper. The original manuscript and figures will be discarded one month after publication unless the Publisher is requested to return original material to the author(s).

Title page

The title of the paper should be given in full, together with the name(s) of the author(s), address(es) of the Laboratory or Unit(s) in which the work was performed, the address, telephone, fax and e-mail numbers of the author to whom correspondence concerning the handling of the paper should be sent. A running title for the paper and a list of no more than six key words should also be provided. A copy of the journal should be consulted for the journal style.

Abstract

An Abstract of between 3 and 5% of the total length of the paper (60 words for Rapid

Appendix 2.1

Communications) should precede the text. The Abstract must include a brief summary of the work done and the conclusions reached. It must not include any introductory material nor description of methods used or statistical comparisons of results.

Style of papers

Typing should be on one side of white paper of uniform size, no smaller than quarto, double-spaced and with wide margins on either side of the typed text.

Spelling should conform to that of the *Oxford English Dictionary*. Full stops are not allowed in contractions or abbreviations; ATP,11 g/dl, etc.

Tables

Each Table should be typed on a separate sheet and should be supplied with a heading and an explanatory legend. The heading and legend should make the general meaning comprehensible without reference to the text. The heading, which should precede the Table details, must be short but informative, and must not include any details of any kind. Conditions specific to the particular experiment should be stated in the legend, which should be placed at the bottom of the Table. Reference to the text for general experimental methods is permissible provided that there is no ambiguity. Footnotes should be as few as possible. The units in which the results are expressed, e.g. g/dl, should be given at the top of each column, and not repeated on each line of the Table. Words or numerals should be repeated on successive lines; 'ditto' or " are not to be used. The approximate positions of the Tables should be indicated in pencil in the margin of the text.

Illustrations

Each illustration should be on a separate sheet and packed flat; each should bear the author's name, the title (abbreviated if necessary) of the paper and the Figure number on the back. All photographs, diagrams and charts (both line and half-tone) should be referred to as Figures, given Arabic numerals numbered consecutively in the order in which they are referred to in the text. The approximate position of each Figure in the text should be indicated in pencil in the margin of the text. Figure legends must be typed on a separate sheet at the end of the paper. Each Figure should be supplied with a heading and legend which should make the general meaning comprehensible without reference to the text. The heading must be short but informative and must not contain any details of any kind nor be merged with the legend. The legend should then be started on a separate line and should include details specific to the particular experiment. Reference to the text for general experimental details is permissible provided that there is no ambiguity.

Illustrations must be of good quality, unmounted, glossy prints (not negatives or transparencies) proportionate to 17 cm wide by 20 cm deep. They should not be smaller than half that size. Line drawings, graphs and charts must be arranged to the same proportionate dimensions and should be drawn in black Indian ink on heavy white paper or card. Line diagrams that are submitted in a form unsuitable for direct reproduction, for any reason, will be redrawn by the Publisher's draughtsman, with consequent delay.

Reproduction of half-tone illustrations (photographs)

Glossy prints are required for these. The magnification, if any, is to be indicated; this is best done by adding a bar representing a stated length. The Editors will accept plates for publication only (a) when they make a significantly important scientific or clinical contribution to the paper, and (b) when the photographs supplied are of a quality that justifies publication in this form. Illustrations are usually reproduced in black and white. Authors wishing to submit colour illustrations will be asked to contribute towards the costs.

Footnotes

These should be avoided as far as possible. When they must be used, as in Tables, reference should be made by the symbols *, **, ***, †, ††, †††, in that order.

Acknowledgements

These must be as short as possible

Appendix 2.1

Animals and their diets
The full binomial Latin names should be included for all experimental animals other than common laboratory animals. The strain, and the source of laboratory animals should be stated. The diet on which the animals are maintained should also be stated together with the address of the source from which it has been obtained.

Ethics of animal experimentation
Animal experiments should be performed in accordance with the legal requirements of the local or national authority. Procedures should be such that animals do not suffer unnecessarily. For example, a study in which procedures lead to deaths of more than 10% of the animals will not be considered. Similarly, a paper using a procedure performed without anaesthetic in which the animals can be assumed to have suffered will not be considered. In short, the Editors will not accept papers where the ethical aspects are, in their opinion, open to doubt and which used procedures that would not be acceptable in the countries of the majority of readers of this journal.

Ethics of human experimentation
The Editors agree with the principles laid down in the Declaration of Helsinki (1964) [*British Medical Journal* (1964) **ii**, 177–178; see also the Report of the Medical Research Council for 1962–63, pp. 21–25]. Authors should ensure that their work complies with these declarations. Papers describing experimental work with humans should include a statement that the Ethics Committee of the Institution in which the work was performed has approved it, and should state that the subjects have given informed consent to the work. If necessary, the Editors may require to see a copy of the ethical approval.

Experimental hazards
Authors should draw attention to any particular chemical or biological hazard that may be involved in carrying out the experiments described. Where appropriate, the safety precautions that were taken should be stated. Alternatively, a statement may be included to indicate that an acceptable code of practice has been followed, with references to the relevant standards.

SI units
Alcohol and Alcoholism uses the recommended SI symbols for units [see *Pure and Applied Chemistry* (1970) **21**, 1–44; IUPAC *Manual of Symbols and Terminology for Physico-chemical Quantities and Units* (1979) Pergamon Press, Oxford].

Other technical information
Details of technical data, e.g. chromatography, enzymes, isotope experiments, and other physical aspects and constants, mathematics and abbreviations of biochemicals are as published in the *Biochemical Journal* (1993) **289**, 1–15.

Statistics The Editors emphasize the importance of correct statistical design, analysis and presentation. Authors are advised to consider all statistical aspects at the stage of planning the project, as badly designed studies may not be salvageable later. Statistical methods should be specified explicitly and referenced if they are non-standard. Estimates presented should be accompanied by indices of precision (e.g. means accompanied by confidence intervals). Authors are advised to consult the following: Altman, D. G., Gore, S. M., Gardner, M. J. and Pocock, S. J. (1983) Statistical guidelines for contributors to medical journals. *British Medical Journal* **286**, 1489–1493.

References This is a modified Harvard style system. In the text, references for papers by three or more authors are given as the first author *et al.*, and the year. When more than one reference is mentioned at a time in the text, the references should be listed chronologically. In the list of references, the references should be typed double-spaced in alphabetical order and entries should be as follows:
(a) *Journal references:* (1) Authors' names; (2) year of publication; (3) title of paper: (4) journal name in full; (5) volume number; (6) first and last page numbers.

Appendix 2.1

Example: Badawy, A. A.-B., Punjani, N. F. and Evans, M. (1981a) The role of liver tryptophan pyrrolase in the opposite effects of chronic administration and subsequent withdrawal of drugs of dependence, on rat brain tryptophan metabolism. *Biochemical Journal* **196**, 171–170.

(b) *Book references*: (1) Authors' names; (2) year of publication; (3) title of article; (4) title of book and volume number, if any; (5) editor(s); (6) first and last page numbers of article; (7) publisher's name; (8) city of publication.

Example:
Alkana, R. L. and Noble, E. P. (1979) Amethystic agents — reversal of acute ethanol intoxication in humans. In *Biochemistry and Pharmacology of Ethanol*, Vol. 2, Majchrowicz, E. and Noble, E. P. eds, pp. 349–374. Plenum Press, New York.

Only papers published or accepted for publication (and therefore in press) can be included in the list of references. Personal communications, unpublished work or work submitted for publication can be quoted only in the text.

Drug and dosage selection
Authors must make every effort to ensure the accuracy of information, particularly with regard to drug selection and dose. However, appropriate information sources should be consulted, especially for new or unfamiliar drugs or procedures. It is the responsibility of every practitioner to evaluate the appropriateness of a particular opinion in the context of actual clinical situations and with due consideration to new developments.

Correction to proofs
Proofs will be sent to the first-named author unless otherwise indicated. Authors are fully responsible for corrections of any typographical errors. Additional alterations may be subject to an extra charge.

Copyright It is a condition of publication in the Journal that authors assign copyright to the Medical Council on Alcoholism. This ensures that requests from third parties to reproduce articles are handled efficiently and consistently and will also allow the article to be as widely disseminated as possible. In assigning copyright, Authors may use their own material in other publications provided that the Journa is acknowledged as the original place of publication, and Oxford University Press is notified in writing and in advance.

Appendix 3. Major Research Project Proposal

Appendix 3.1

Major Research Project Proposal Guidelines from D. Clin. Psy. Course Handbook

The Research Proposal should be laid out according to the format described below. This format is based upon the application for a mini-grant in Health Services Research (SOHHD – Chief Scientist Office). Trainees may find that forms provided by ethical committees are substantially similar to this and this may be an acceptable alternative format.

1.1 Applicants – names and addresses including the names of co-workers and supervisor(s) if known.

1.2 Title – no more than 15 words.

1.3 Summary – no more than 300 words, including a reference to where the study will be carried out.

1.4 Introduction – of less than 600 words summarising previous work in the field, drawing attention to gaps in present knowledge and stating wherever possible how the project will add to knowledge and understanding.

1.5 Aims and Hypothesis to be tested – these should wherever possible be stated as a list of questions to which answers will be sought

1.6 Plan of investigation – consisting of a statement of the practical details of how it is proposed to obtain answers to the questions posed. The proposal should contain information on Research Methods and Design i.e.

1.6.1 Subjects – a brief statement of inclusion and exclusion criteria and anticipated number of participants

1.6.2 Measures – a brief explanation of interviews/observations/rating scales etc. to be employed, including references where appropriate

1.6.3 Design and Procedure – a brief explanation of the overall experimental design with reference to comparisons to be made, control populations, timing of measurements, etc. A summary chart may be helpful to explain the research process.

1.6.4 Settings and equipment – a statement on the location(s) to be used and resources or equipment which will be employed (if any).

1.6.5 Data analysis – a brief explanation of how data will be collated, stored and analysed.

1.7 Practical Applications – the applicants should state the practical use to which the research findings could be put.

1.8 Timescales – the proposed starting date and duration of the project

1.9 Ethical approval – stating whether this is necessary and, if so, whether it has been obtained.

Appendix 3.2

Participant Information Sheet
(09/08/00: Version 2)

Title of Project:

Substance Use among Psychology Outpatients with Anxiety and Depression

You are being invited to take part in a research study. Before you decide it is important for you to understand why the research is being done and what it will involve. I would be grateful if you could take the time to read the following information carefully and discuss it with friends, relatives and your GP if you wish. Ask us if there is anything that is not clear of if you would like more information. Take time to decide whether or not you wish to take part.

Consumers for Ethics in Research (CERES) publish a leaflet entitled 'Medical Research and You'. This leaflet gives more information about medical research and looks at some questions you may want to ask. A copy may be obtained from either myself, or by contacting CERES, PO Box 1365, London N16 0BW.

Thank you for reading this.

What is the purpose of this study?
The purpose of this study is to look at the number of people who attend psychology departments with anxiety or depression. I am interested in how people cope with these difficulties. In particular whether they have found alcohol or drugs helpful in dealing with symptoms. Your views, whether you drink or not are important for the study so I would still like to interview you even if you are teetotal.

Why have I been chosen?
People who are referred for and are commencing treatment for difficulties with anxiety or low mood are being included in the study.

Do I have to take part?
It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. This will not affect the standard of care you receive.

What will happen to me if I decide to take part?
If you decide to take part, you will be interviewed once by the main researcher. This interview will last approximately 1 hour. The interview can take place either after your first appointment with your Psychologist or at another time that is convenient for you. You will be asked questions about how you are feeling, and about drinking alcohol or taking drugs.

Appendix 3.2

What do I have to do?
Attend one interview with the researcher (described above).

What are the possible disadvantages and risks of taking part?
The interview is expected to last 1 hour. Participation in the study would therefore involve giving up an hour of your time.

What are the possible benefits of taking part?
The information we get from this study may help us to understand better how people cope with their difficulties, and what percentage of people use alcohol or drugs to cope, and if they find this helpful. This may help us to understand people's difficulties, and to offer a better service.

Will my taking part be kept confidential?
All information that is collected about you during the course of the research will be kept strictly confidential. Any information about you which leaves the clinic will have your name and address removed so that you cannot be recognised from it.

What will happen to the results of the research study?
The results of the study will be analysed, and written up in part fulfilment of the Doctorate Degree in Clinical Psychology. The results may also be published in a scientific journal.

Who has reviewed the study?
The study has been reviewed by two Clinical Psychologists at the Department of Psychological Medicine at the University of Glasgow. It has also been reviewed by the Greater Glasgow Primary Care NHS Trust Ethics Committee.

Contact for further information
For further information contact:

Ms Nicola Baillie
Academic Centre
Department of Psychological Medicine
Gartnavel Royal Hospital
1055 Great Western Road
GLASGOW

Tel: 0141 211 3920

Appendix 3.3

Patient Identification Number for this trial:

CONSENT FORM
(DATE: 26/06/00 VERSION: 1)

Title of Project: Substance Use among Psychology Outpatients with Anxiety and Depression

Name of Researchers: Ms Nicola Baillie, Trainee Clinical Psychologist.
Dr Carole Allan, Clinical Tutor on Doctorate Course in Clinical Psychology

Please initial box

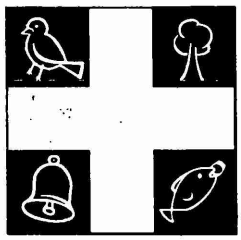
1. I confirm that I have read and understand the information sheet (Dated 26/06/00, version 1) for the above study and have had the opportunity to ask questions. ☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my medical care or legal rights being affected. ☐

3. I agree to take part in the above study. ☐

Name of Patient	Date	Signature
Name of Researcher	Date	Signature

Appendix 3.4



GREATER GLASGOW PRIMARY CARE NHS TRUST

Ref: AmcM/

10 November, 2000

Ms N Baillie
Academic Centre
Gartnavel Royal Hospital
1055 Gt Western Road
Glasgow
G12

Dear Ms Baillie

PROJECT: Substance abuse and abuse among psychology out-patients with anxiety or depression

Thank you for your letter of 9 August 2000 regarding the above named submission. I have now been able to speak with Dr Fleming and I am pleased to be able to tell you that the Committee now has no objections from an ethical point of view, to this project proceeding and ethical approval is formally granted.

Before your project commences you will also require to obtain management approval via the Research & Development Directorate, Gartnavel Royal Hospital.

I would also like to take this opportunity to remind you that you should notify the Committee if there are any changes, or untoward developments, connected with the study – the Committee would then require to further reconsider your application for approval. The Committee expect to receive a brief regular update every 6 months, and then a brief final report on your project when the study reaches its conclusion. (Failure to keep the Committee abreast of the status of the project can eventually lead to ethical approval being withdrawn)

May I wish you every success with your study.

Yours sincerely

A W McMAHON
Administrator – Research Ethics Committee

cc B Rae

Appendix 4. Major Research Project Paper

Appendix 4.1

ALCOHOL AND ALCOHOLISM

OXFORD Journals *online*

HOME HELP FEEDBACK SUBSCRIPTIONS ARCHIVE SEARCH

The International Journal of the Medical Council on Alcoholism

and

The Journal of the European Society for Biomedical Research on Alcoholism

AIMS AND SCOPE

Alcohol and Alcoholism publishes papers in English on biomedical, psychological and sociological aspects of alcoholism and alcohol research, provided that they make a new and significant contribution to knowledge in the field and areas thereof concerned. Papers may include new results obtained experimentally, descriptions of new experimental (including clinical) methods of importance to the field of alcohol research and treatment, or new interpretations of existing results. Theoretical contributions will be considered equally with papers dealing with experimental work provided that such theoretical contributions are not of a largely speculative or philosophical nature.

SUBMISSION OF TYPESCRIPTS

Contributors should submit FOUR copies of their typescripts to either Chief Editor (Dr A. A.-B. Badawy or Professor G. L. Gessa) at the following Editorial Office addresses: Biomedical Research Laboratory, Whitchurch Hospital, Cardiff CF14 7XB, UK OR B. B. Brodie Department of Neuroscience, University of Cagliari, Via Porcell 4, I-09124 Cagliari, Italy. All submissions will be subjected to peer review and must be prepared in accordance with the following Instructions to Authors.

INSTRUCTIONS TO AUTHORS

Organization

The following items will be included in the Journal:

1. *Full-length papers* These should be written in the style described below, their length being the minimum required for precision in describing the experiments and clarity in interpreting them. A concise well-written paper tends to be published more rapidly.

To meet increased demand on pages because of continually rising submissions, the journal is now published in a larger (A4) format. The Editors, however, strongly urge authors to be concise and to submit their work to occupy the smallest possible space. The shorter the papers are, the more that could be accommodated in an issue and the quicker they could be published in this bi-monthly journal. Authors should ensure that no data are presented in both tabular and graphical forms and that the content of a small table could easily be described in the text, without loss of clarity, especially when there are many other Tables and/or Figures in the paper. Methods should not be described in detail if previously published and the 'Discussion' section should have the minimum of speculation and not be excessively long, ideally occupying no more than 25% of the length of the text excluding the references.

2. *Rapid communications*

All appropriate papers describing important novel, unusual and/or exciting findings, and which can be accommodated in up to five pages (including Figures and/or Tables) will be treated as Rapid Communications. They will receive priority treatment and it is hoped that they will be published within 12–16 weeks from date of receipt, provided they do not require major revision. Criteria for acceptance

and method of preparation of Rapid Communications will, however, be the same as for full-length papers. Thus Rapid Communications are not regarded as preliminary communications but as complete and final accounts. Authors are discouraged from attempting to take advantage of this rapid handling procedure to divide a substantial piece of work into smaller submissions.

The Abstract of a Rapid Communication must not exceed 60 words. The total size of the text (excluding the title, authors, addresses and Abstract) should not exceed 4000 words, which should include references and any Figures and/or Tables. Figures and Tables must be of reproducible quality and not require redrawing since this will delay publication. Authors should therefore assess the approximate space required for Figures and/or Tables and reduce the size of the text accordingly. Papers exceeding these specifications (and therefore likely to occupy more than five printed pages of the Journal) will not be given priority handling but will be treated as full-length submissions.

To expedite the publication of Rapid Communications, authors should, if possible, submit their Rapid Communications by e-mail. If not, then a disc must accompany the initial submission and MUST also accompany the final revised version. Proofs will be faxed to authors, who will be given 48 hours to fax back their corrected proofs.

3. *Letters to the Editors*

These are intended to provide an opportunity to discuss or expand particular points made in published work, to comment on or criticize work previously published in *Alcohol and Alcoholism*, or to present a new hypothesis. They should not contain extensive new data (which would best be placed in a regular paper), nor be used as a vehicle for publication of preliminary results. If a letter is polemical in nature, a reply may be solicited from other interested parties before publication.

4. *Reviews*

Review articles will usually be solicited, although unsolicited reviews will be considered for publication. However, prospective writers of reviews should first consult the Chief Editors of the Journal.

5. *Commentaries*

These now replace Editorials and Annotations, which were important features of the journal before volume 18. Commentaries should provide succinct, comprehensive and up-to-date accounts of topical issues in alcohol and alcoholism research and treatment, where either rapid progress is being made or the need for a brief review is both timely and warranted. Another important aim of a Commentary is stimulation of debate. A Commentary may or may not be solicited and can be between 1000 and 4000 words (occupying no more than five printed pages). As with unsolicited Reviews, prospective writers of Commentaries should first consult the Chief Editors.

6. *Book Reviews*

Publishers, agents and other distributors of books are urged to send review copies direct to the Book Review Editor, Dr Brian D. Hore, at the following address: 22 Handforth Road, Wilmslow, Cheshire SK9 2LU, UK. Books are reviewed by experts in their fields and a copy of the review is sent to the publisher/distributor soon after its appearance.

Editors, Advisors and Independent Referees

Normally a paper is read by the handling Editor and two other persons, who may be Editorial Advisors independent referees or both. The main task of the advisors and referees is to make recommendations on the acceptability of a paper. If rejection of a paper is recommended, or if there is any serious disagreement between those who have read the paper, the final decision is made by the Editor or Editors. Normally each paper is handled throughout by an Editor who will, if the paper is acceptable, make amendments and will request revision or shortening. Once the Editor(s) is satisfied, the paper is then prepared for press by an in-house sub-editor. In this final process, attention is paid to grammar an the detailed conventions of the Journal.

Submission of papers

Submission of a paper implies that it has been approved by all the named authors (who should all sign

Appendix 4.1

statement to this effect), and that it reports unpublished work, that it is not under consideration for publication in whole or in part elsewhere, and that if accepted by *Alcohol and Alcoholism* it will not be published elsewhere in the same form, either in English or in any other language, without the consent of the Editors.

Papers that are scientifically acceptable but need revision because they are not clear and concise or do not conform sufficiently to the conventions of *Alcohol and Alcoholism* will be returned to the authors for amendment.

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Please observe the following criteria: (1) Send only hard copy when first submitting your paper. (2) When your paper has been refereed, revised if necessary and accepted, send a disc containing the final version with the final hard copy. **Make sure that the disc and hard copy match exactly**. (3) Specify what software was used, including which release, e.g. Word 97 (4) Specify what computer was used (either IBM-compatible PC or Apple Macintosh). (5) Include the text file and separate Table and illustration files. (6) The file should follow the general instructions on style/arrangement and, in particular, the reference style of this journal as given in the Instructions to Authors. (7) The file should be single-spaced and should use the wrap-around end-of-line feature, i.e. no returns at the end of each line. All textual elements should begin flush left; no paragraph indents. Place two returns after every element such as title, headings, paragraphs, Figure and Table call-outs. (8) Keep a back-up disc for reference and safety.

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Quotations of personal communications When such a quotation is made the authors should provide written evidence of permission from the person(s) concerned to be quoted. Such reference to personal communications should be made only in the text, not in the list of references.

Copies of submitted papers

The original typescript plus three copies should be submitted to either Chief Editor together with a letter signed by all the authors giving consent for publication in the Journal including the following statement: 'This paper has not been, nor will be, published in whole or in part by any other journal'. The senior author may, for reasons of convenience, submit a written and signed authorization by another co-author(s) for him(her) to sign on his(her) behalf, if such a co-author(s) is likely to be absen during the week of submission. In submitting illustrations or photographs, only one original is require four photocopies should be enclosed with the four copies of the paper. The original manuscript and figures will be discarded one month after publication unless the Publisher is requested to return origin material to the author(s).

Title page

The title of the paper should be given in full, together with the name(s) of the author(s), address(es) of the Laboratory or Unit(s) in which the work was performed, the address, telephone, fax and e-mail numbers of the author to whom correspondence concerning the handling of the paper should be sent. A running title for the paper and a list of no more than six key words should also be provided. A copy of the journal should be consulted for the journal style.

Abstract

An Abstract of between 2 and 5% of the total length of the paper (60 words for Rapid

Appendix 4.1

Communications) should precede the text. The Abstract must include a brief summary of the work done and the conclusions reached. It must not include any introductory material nor description of methods used or statistical comparisons of results.

Style of papers

Typing should be on one side of white paper of uniform size, no smaller than quarto, double-spaced and with wide margins on either side of the typed text.

Spelling should conform to that of the *Oxford English Dictionary*. Full stops are not allowed in contractions or abbreviations; ATP,11 g/dl, etc.

Tables

Each Table should be typed on a separate sheet and should be supplied with a heading and an explanatory legend. The heading and legend should make the general meaning comprehensible without reference to the text. The heading, which should precede the Table details, must be short but informative, and must not include any details of any kind. Conditions specific to the particular experiment should be stated in the legend, which should be placed at the bottom of the Table. Reference to the text for general experimental methods is permissible provided that there is no ambiguity. Footnotes should be as few as possible. The units in which the results are expressed, e.g. g/dl, should be given at the top of each column, and not repeated on each line of the Table. Words or numerals should be repeated on successive lines; 'ditto' or " are not to be used. The approximate positions of the Tables should be indicated in pencil in the margin of the text.

Illustrations

Each illustration should be on a separate sheet and packed flat; each should bear the author's name, the title (abbreviated if necessary) of the paper and the Figure number on the back. All photographs, diagrams and charts (both line and half-tone) should be referred to as Figures, given Arabic numerals numbered consecutively in the order in which they are referred to in the text. The approximate position of each Figure in the text should be indicated in pencil in the margin of the text. Figure legends must be typed on a separate sheet at the end of the paper. Each Figure should be supplied with a heading and legend which should make the general meaning comprehensible without reference to the text. The heading must be short but informative and must not contain any details of any kind nor be merged with the legend. The legend should then be started on a separate line and should include details specific to the particular experiment. Reference to the text for general experimental details is permissible provided that there is no ambiguity.

Illustrations must be of good quality, unmounted, glossy prints (not negatives or transparencies) proportionate to 17 cm wide by 20 cm deep. They should not be smaller than half that size. Line drawings, graphs and charts must be arranged to the same proportionate dimensions and should be drawn in black Indian ink on heavy white paper or card. Line diagrams that are submitted in a form unsuitable for direct reproduction, for any reason, will be redrawn by the Publisher's draughtsman, with consequent delay.

Reproduction of half-tone illustrations (photographs)

Glossy prints are required for these. The magnification, if any, is to be indicated; this is best done by adding a bar representing a stated length. The Editors will accept plates for publication only (a) when they make a significantly important scientific or clinical contribution to the paper, and (b) when the photographs supplied are of a quality that justifies publication in this form. Illustrations are usually reproduced in black and white. Authors wishing to submit colour illustrations will be asked to contribute towards the costs.

Footnotes

These should be avoided as far as possible. When they must be used, as in Tables, reference should be made by the symbols *, **, ***, †, ††, †††, in that order.

Acknowledgements

These must be as short as possible.

Appendix 4.1

Animals and their diets

The full binomial Latin names should be included for all experimental animals other than common laboratory animals. The strain, and the source of laboratory animals should be stated. The diet on which the animals are maintained should also be stated together with the address of the source from which it has been obtained.

Ethics of animal experimentation

Animal experiments should be performed in accordance with the legal requirements of the local or national authority. Procedures should be such that animals do not suffer unnecessarily. For example, a study in which procedures lead to deaths of more than 10% of the animals will not be considered. Similarly, a paper using a procedure performed without anaesthetic in which the animals can be assumed to have suffered will not be considered. In short, the Editors will not accept papers where the ethical aspects are, in their opinion, open to doubt and which used procedures that would not be acceptable in the countries of the majority of readers of this journal.

Ethics of human experimentation

The Editors agree with the principles laid down in the Declaration of Helsinki (1964) [*British Medical Journal* (1964) **ii**, 177–178; see also the Report of the Medical Research Council for 1962–63, pp. 21–25]. Authors should ensure that their work complies with these declarations. Papers describing experimental work with humans should include a statement that the Ethics Committee of the Institution in which the work was performed has approved it, and should state that the subjects have given informed consent to the work. If necessary, the Editors may require to see a copy of the ethical approval.

Experimental hazards

Authors should draw attention to any particular chemical or biological hazard that may be involved in carrying out the experiments described. Where appropriate, the safety precautions that were taken should be stated. Alternatively, a statement may be included to indicate that an acceptable code of practice has been followed, with references to the relevant standards.

SI units

Alcohol and Alcoholism uses the recommended SI symbols for units [see *Pure and Applied Chemistry* (1970) **21**, 1–44; IUPAC *Manual of Symbols and Terminology for Physico-chemical Quantities and Units* (1979) Pergamon Press, Oxford].

Other technical information

Details of technical data, e.g. chromatography, enzymes, isotope experiments, and other physical aspects and constants, mathematics and abbreviations of biochemicals are as published in the *Biochemical Journal* (1993) **289**, 1–15.

Statistics The Editors emphasize the importance of correct statistical design, analysis and presentation. Authors are advised to consider all statistical aspects at the stage of planning the project, as badly designed studies may not be salvageable later. Statistical methods should be specified explicitly and referenced if they are non-standard. Estimates presented should be accompanied by indices of precision (e.g. means accompanied by confidence intervals). Authors are advised to consult the following: Altman, D. G., Gore, S. M., Gardner, M. J. and Pocock, S. J. (1983) Statistical guidelines for contributors to medical journals. *British Medical Journal* **286**, 1489–1493.

References This is a modified Harvard style system. In the text, references for papers by three or more authors are given as the first author *et al.*, and the year. When more than one reference is mentioned at a time in the text, the references should be listed chronologically. In the list of references, the references should be typed double-spaced in alphabetical order and entries should be as follows: (a) *Journal references:* (1) Authors' names; (2) year of publication; (3) title of paper: (4) journal name in full; (5) volume number; (6) first and last page numbers.

Appendix 4.1

Example: Badawy, A. A.-B., Punjani, N. F. and Evans, M. (1981a) The role of liver tryptophan pyrrolase in the opposite effects of chronic administration and subsequent withdrawal of drugs of dependence, on rat brain tryptophan metabolism. *Biochemical Journal* **196**, 171–170.

(b) *Book references*: (1) Authors' names; (2) year of publication; (3) title of article; (4) title of book and volume number, if any; (5) editor(s); (6) first and last page numbers of article; (7) publisher's name; (8) city of publication.

Example:
Alkana, R. L. and Noble, E. P. (1979) Amethystic agents — reversal of acute ethanol intoxication in humans. In *Biochemistry and Pharmacology of Ethanol*, Vol. 2, Majchrowicz, E. and Noble, E. P. eds. pp. 349–374. Plenum Press, New York.

Only papers published or accepted for publication (and therefore in press) can be included in the list o references. Personal communications, unpublished work or work submitted for publication can be quoted only in the text.

Drug and dosage selection
Authors must make every effort to ensure the accuracy of information, particularly with regard to drug selection and dose. However, appropriate information sources should be consulted, especially for new or unfamiliar drugs or procedures. It is the responsibility of every practitioner to evaluate the appropriateness of a particular opinion in the context of actual clinical situations and with due consideration to new developments.

Correction to proofs
Proofs will be sent to the first-named author unless otherwise indicated. Authors are fully responsible for corrections of any typographical errors. Additional alterations may be subject to an extra charge.

Copyright It is a condition of publication in the Journal that authors assign copyright to the Medical Council on Alcoholism. This ensures that requests from third parties to reproduce articles are handled efficiently and consistently and will also allow the article to be as widely disseminated as possible. In assigning copyright, Authors may use their own material in other publications provided that the Journa is acknowledged as the original place of publication, and Oxford University Press is notified in writing and in advance.

Appendix 4.2: ***Proforma for Sociodemographic Information***

Patient Identification Number: ____

Sex: M F (Please circle)

Age: _____ (last birthday)

Martial Status: Single

Married/ Cohabiting

Divorced

Widowed

Separated

Employment Status:

_____

_____

Postcode: _____ Depcat Score: _____

Units Alcohol Consumed in a typical week:

_____

_____

Appendix 4.3

AUDIT

Please circle the answer that is correct for you

1. How often do you have a drink containing alcohol?

Never	Monthly or less	Two to four times a month	Two to three times per week	Four or more times a week

2. How many drinks containing alcohol do you have on a typical day when you are drinking?

1 or 2	3 or 4	5 or 6	7 to 9	10 or more

3. How often do you have six or more drinks on one occasion?

Never	Less than monthly	Monthly	Two to three times per week	Four or more times a week

4. How often during the last year have you found that you were not able to stop drinking once you had started?

Never	Less than monthly	Monthly	Two to three times per week	Four or more times a week

5. How often during the last year have you failed to do what was normally expected from you because of drinking?

Never	Less than monthly	Monthly	Two to three times per week	Four or more times a week

6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?

Never	Less than monthly	Monthly	Two to three times per week	Four or more times a week

Appendix 4.3

7. How often during the last year have you had a feeling of guilt or remorse after drinking?

Never	Less than monthly	Monthly	Two to three times per week	Four or more times a week

8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?

Never	Less than monthly	Monthly	Two to three times per week	Four or more times a week

9. Have you or someone else been injured as a result of your drinking?

No	Yes, but not in the last year	Yes, during the last year

10. Has a relative or friend, or a doctor or other health worker been concerned about your drinking or suggested you cut down?

No	Yes, but not in the last year	Yes, during the last year

Appendix 4.4

Severity of Alcohol Dependence Questionnaire (SADQ)

S.A.D.Q.

First of all, we would like you to recall a recent month when you were drinking heavily in a way which, for you, was fairly typical of a heavy drinking period. Please fill in the month and the year.

MONTH . . . . . YEAR . . . . .

We would like to know more about your drinking during this time and during other periods when your drinking was similar. We want to know how often you experienced certain feelings. Please reply to each statement by putting a circle around ALMOST NEVER or SOMETIMES or OFTEN or NEARLY ALWAYS after each question.

First we want to know about the physical symptoms that you have experienced first thing in the morning during these typical periods of heavy drinking.

PLEASE ANSWER EVERY QUESTION

1. During a heavy drinking period, I wake up feeling sweaty.
   ALMOST NEVER SOMETIMES OFTEN NEARLY ALWAYS

2. During a heavy drinking period, my hands shake first thing in the morning.
   ALMOST NEVER SOMETIMES OFTEN NEARLY ALWAYS

3. During a heavy drinking period, my whole body shakes violently first thing in the morning if I don't have a drink.
   ALMOST NEVER SOMETIMES OFTEN NEARLY ALWAYS

4. During a heavy drinking period, I wake up absolutely drenched in sweat.
   ALMOST NEVER SOMETIMES OFTEN NEARLY ALWAYS

The following statements refer to moods and states of mind you may have experienced first thing in the morning during these periods of heavy drinking.

5. When I'm drinking heavily, I dread waking up in the morning.
   ALMOST NEVER SOMETIMES OFTEN NEARLY ALWAYS

6. During a heavy drinking period, I am frightened of meeting people first thing in the morning.
   ALMOST NEVER SOMETIMES OFTEN NEARLY ALWAYS

7. During a heavy drinking period, I feel at the edge of despair when I awake.
   ALMOST NEVER SOMETIMES OFTEN NEARLY ALWAYS

8. During a heavy drinking period I feel very frightened when I awake.
   ALMOST NEVER SOMETIMES OFTEN NEARLY ALWAYS

Appendix 4.4

Severity of Alcohol Dependence Questionnaire (SADQ)

The following statements also refer to the recent period when your drinking was heavy, and to periods like it.

9. During a heavy drinking period, I like to have a morning drink.
   ALMOST NEVER SOMETIMES OFTEN NEARLY ALWAYS

10. During a heavy drinking period, I always gulp my first few morning drinks down as quickly as possible.
   ALMOST NEVER SOMETIMES OFTEN NEARLY ALWAYS

11. During a heavy drinking period, I drink in the morning to get rid of the shakes.
   ALMOST NEVER SOMETIMES OFTEN NEARLY ALWAYS

12. During a heavy drinking period, I have a very strong craving for a drink when I awake.
   ALMOST NEVER SOMETIMES OFTEN NEARLY ALWAYS

Again the statements refer to the recent period of heavy drinking and the periods like it.

13. During a heavy drinking period, I drink more than a quarter of a bottle of spirits per day (4 doubles or 1 bottle of wine or 4 pints of beer).
   ALMOST NEVER SOMETIMES OFTEN NEARLY ALWAYS

14. During a heavy drinking period, I drink more than half a bottle of spirits per day (or 2 bottles of wine or 8 pints of beer).
   ALMOST NEVER SOMETIMES OFTEN NEARLY ALWAYS

15. During a heavy drinking period, I drink more than one bottle of spirits per day (or 4 bottles of wine or 15 pints of beer).
   ALMOST NEVER SOMETIMES OFTEN NEARLY ALWAYS

16. During a heavy drinking period, I drink more than two bottles of spirits per day (or 8 bottles of wine or 30 pints of beer).
   ALMOST NEVER SOMETIMES OFTEN NEARLY ALWAYS

IMAGINE THE FOLLOWING SITUATION:
(1) You have been COMPLETELY OFF DRINK for a FEW WEEKS
(2) You then drink VERY HEAVILY for TWO DAYS

HOW WOULD YOU FEEL THE MORNING AFTER THOSE TWO DAYS OF HEAVY DRINKING?

17. I would start to sweat.
   NOT AT ALL SLIGHTLY MODERATELY QUITE A LOT

18. My hands would shake.
   NOT AT ALL SLIGHTLY MODERATELY QUITE A LOT

19. My body would shake.
   NOT AT ALL SLIGHTLY MODERATELY QUITE A LOT

20. I would be craving for a drink.
   NOT AT ALL SLIGHTLY MODERATELY QUITE A LOT

Appendix 4.5

DRUG USE QUESTIONNAIRE (DAST-20)

The following questions concern information about your potential involvement with drugs not including alcoholic beverages during the past 12 months. Carefully read each statement and decide if your answer is "Yes" or "No". Then, circle the appropriate response beside the question.

In the statements "drug abuse" refers to (1) the use of prescribed or over the counter drugs in excess of the directions and (2) any non-medical use of drugs. The various classes of drugs may include: cannabis (e.g. marijuana, hash), solvents, tranquilizers (e.g. Valium), barbiturates, cocaine, stimulants (e.g. speed), hallucinogens (e.g. LSD) or narcotics (e.g. heroin). Remember that the questions do not include alcoholic beverages.

Please answer every question. If you have difficulty with a statement, then choose the response that is mostly right.

Appendix 4.5

These questions refer to the past 12 months.	Circle Your Response	
1. Have you used drugs other than those required for medical reasons?	Yes	No
2. Have you abused prescription drugs?	Yes	No
3. Do you abuse more than one drug at a time?	Yes	No
4. Can you get through the week without using drugs?	Yes	No
5. Are you always able to stop using drugs when you want to?	Yes	No
6. Have you had "blackouts" or "flashbacks" as a result of drug use?	Yes	No
7. Do you ever feel bad or guilty about your drug use?	Yes	No
8. Does your spouse (or parents) ever complain about your involvement with drugs?	Yes	No
9. Has drug abuse created problems between you and your spouse or your parents?	Yes	No
10. Have you lost friends because of your use of drugs?	Yes	No
11. Have you neglected your family because of your use of drugs?	Yes	No
12. Have you been in trouble at work because of drug abuse?	Yes	No
13. Have you lost a job because of drug abuse?	Yes	No
14. Have you gotten into fights when under the influence of drugs?	Yes	No
15. Have you engaged in illegal activities in order to obtain drugs?	Yes	No
16. Have you been arrested for possession of illegal drugs?	Yes	No
17. Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?	Yes	No
18. Have you had medical problems as a result of your drug use (e.g. memory loss, hepatitis, convulsions, bleeding, etc.)?	Yes	No
19. Have you gone to anyone for help for a drug problem?	Yes	No
20. Have you been involved in a treatment program specifically related to drug use?	Yes	No

Appendix 4.6: ***Visual Analogue Scale Measuring Beliefs about Drugs and Alcohol***

The following questions relate to what people expect to get from alcohol or drugs, and what they actually experience.

Instructions: Place a mark on the line that corresponds to the extent to which you hold a particular belief.

Example:

How helpful is coffee for giving me energy?

_____

Not helpful *Extremely helpful*

---

1. How helpful is alcohol in overcoming your psychological symptoms?

_____

Not helpful Extremely helpful

2. To what extent do you deliberately use alcohol to help you cope with your psychological symptoms?

_____

Do not use deliberately Always use deliberately

3. How helpful are drugs in helping you to overcome your psychological symptoms?

_____

Not helpful Extremely helpful

4. To what extent do you deliberately use drugs to help you cope with your psychological symptoms?

_____

Do not use deliberately Always use deliberately

Appendix 4.7

POSITIVE ALCOHOL EXPECTANCY QUESTIONNAIRE
your expectancies

We want you to read you a number of statements about the effects of alcohol (64 of them, in fact, below)

We want you to respond to each statement with your own personal thoughts, feelings and beliefs that you have RIGHT NOW about alcohol (not last month or yesterday but right now).

We want you to respond by putting a circle around the number that describes best the likelihood that the particular statement would apply to you.

	never		sometimes		always
1. You enjoy the pleasant, cleansing, tingly taste of some alcoholic drinks	1	2	3	4	5
2. You feel that social occasions have a certain warmth when you've been drinking	1	2	3	4	5
3. When you are drinking, it is easier to open up and express your feelings	1	2	3	4	5
4. Time passes quickly when you are drinking	1	2	3	4	5
5. Drinking makes you feel flushed	1	2	3	4	5
6. You feel powerful when you drink, as if you can really influence others to do as you want	1	2	3	4	5
7. Drinking gives you more confidence in yourself	1	2	3	4	5
8. Drinking makes you feel good	1	2	3	4	5
9. You feel more creative after you have been drinking	1	2	3	4	5
10. You enjoy having a few drinks to celebrate social occasions	1	2	3	4	5
11. When you are drinking you feel freer to be your self and do what you want	1	2	3	4	5
12. You can concentrate better on good feelings when you're drink ing	1	2	3	4	5
13. Alcohol allows you to be more assertive	1	2	3	4	5
14. When you feel high from drinking, everything else seems to feel better	1	2	3	4	5
15. Drinking helps you to forget your problems	1	2	3	4	5
16. You find that conversing with members of the opposite sex is easier after you've had a few drinks	1	2	3	4	5
17. You find drinking pleasurable because you enjoy being with people who are enjoying themselves	1	2	3	4	5
18. You like the taste of some alcoholic beverages	1	2	3	4	5
19. If you are feeling restricted in any way, a few drinks makes you feel better	1	2	3	4	5
20. You feel friendlier when you drink	1	2	3	4	5
21. You can discuss or argue a point more forcefully after you've had a drink or two	1	2	3	4	5
22. If you have a couple of drinks, it is easier to express your feelings	1	2	3	4	5
23. Alcohol makes you need less attention from others than you usually do	1	2	3	4	5
24. A drink or two makes the humourous side of you come out	1	2	3	4	5
25. After a few drinks you feel more self-reliant than usual	1	2	3	4	5
26. After a few drinks you don't worry so much about what people think of you	1	2	3	4	5
27. When drinking you do not consider yourself totally accountable or responsible for your behaviour	1	2	3	4	5
28. Alcohol enables you to have a better time at parties	1	2	3	4	5
29. When you're drinking the future seems brighter	1	2	3	4	5
30. You feel sexier after you have had a couple of drinks	1	2	3	4	5
31. You drink when you are feeling mad	1	2	3	4	5
32. Drinking alone or with one other person makes you feel calm and serene	1	2	3	4	5

THERE ARE ANOTHER 32 QUESTIONS ON THE OTHER SIDE, OK?

Appendix 4.7

POSITIVE ALCOHOL EXPECTANCY QUESTIONNAIRE
your expectancies.....continued from the page before

Just to remind you.....we want you to read you a number of statements about the effects of alcohol (64 of them, in fact)
We want you to respond to each statement with your own personal thoughts, feelings and beliefs that you have RIGHT NOW about alcohol (not last month or yesterday but right now).

We want you to respond by putting a circle around the number that describes best the likelihood that the particular statement would apply to you.

	never		sometimes		always	
33. After a few drinks you feel brave and capable of fighting	1	2	3	4	5	
34. Drinking makes you feel more satisfied with yourelf	1	2	3	4	5	
35. Your feelings of isolation and alienation decrease when you drink	1	2	3	4	5	
36. Alcohol makes you sleep better	1	2	3	4	5	
37. Alcohol makes you more outspoken and opinionated	1	2	3	4	5	
38. You are better lover after a few drinks	1	2	3	4	5	
39. When you have muscular tension alcohol helps you relax	1	2	3	4	5	
40. Alcohol makes you worry less	1	2	3	4	5	
41. When you have had a few drinks you find it easier to talk to people	1	2	3	4	5	
42. After a few drinks you are usually in a better mood	1	2	3	4	5	
43. Drinking helps you get out of a depressed mood	1	2	3	4	5	
44. After you have had a couple of drinks, you feel more caring, sharing person..	1	2	3	4	5	
45. Alcohol decreases your feeling of guilt about not working	1	2	3	4	5	
46. You feel more co-ordinated after you drink	1	2	3	4	5	
47. Alcohol makes you more interesting	1	2	3	4	5	
48. A few drinks makes you less shy	1	2	3	4	5	
49. If you are tense or anxious, a few drinks makes you feel better	1	2	3	4	5	
50. Alcohol makes you fall asleep more easily	1	2	3	4	5	
51. If you are feeling afraid, alcohol decreases your fears	1	2	3	4	5	
52. A few drinks makes you more aroused or physiologically excited	1	2	3	4	5	
53. When you are in pain, alcohol can act as an anaesthetic	1	2	3	4	5	
54. You enjoy having sex more if you have had some alcohol	1	2	3	4	5	
55. You are more romantic when you drink	1	2	3	4	5	
56. You feel more masculine/feminine after a few drinks	1	2	3	4	5	
57. Alcohol makes you feel better physically	1	2	3	4	5	
58. When you drink alone or with one other person, it's easy to feel cosy and romantic	1	2	3	4	5	
59. You feel more of a happy-go-lucky person when you drink	1	2	3	4	5	
60. When you are drinking, get-togethers are more fun	1	2	3	4	5	
61. When you have bad feelings alcohol makes you forget them	1	2	3	4	5	
62. After a few drinks you are more sexually responsive	1	2	3	4	5	
63. If you are cold, a few drinks will give you a sense of warmth	1	2	3	4	5	
64. It is easier to act on your feelings after you have had a few drinks	1	2	3	4	5	END

THANKS FOR COMPLETING THIS PART OF THE QUESTIONNAIRE

PLEASE CHECK THIS SHEET AND THE REVERSE SIDE TO SEE IF YOU'VE MISSED OUT ANY QUESTIONS

Working Alliance Inventory

On the following pages there are sentences that describe some of the different ways a person might think or feel about his or her client. As you read the sentences mentally insert the name of your client in place of _____ in the text. Below each statement there is a seven-point scale.

1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always

If the statement describes the way you **always** feel (or think) circle the number 7; if it **never** applies to you circle the number 1. Use the numbers between to describe the variations between these extremes. Wok fast, you first impressions are the ones we would like to see. Please do not forget to respond to every item.

This questionnaire is **confidential**. Thank you for your co-operation.

1. _____ and I agree about the steps to be taken to improve his/her situation.						
1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Often	6 Very often	7 Always
2. My client and I both feel confident about the usefulness of our current activity in therapy.						
1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Often	6 Very often	7 Always
3. I believe _____ likes me.						
1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Often	6 Very often	7 Always
4. I have doubts about what we are trying to accomplish in therapy.						
1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Often	6 Very often	7 Always
5. I am confident in my ability to help _____						
1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Often	6 Very often	7 Always
6. We are working towards mutually agreed upon goals.						
1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Often	6 Very often	7 Always
7. I appreciate _____ as a person.						
1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Often	6 Very often	7 Always
8. We agree on what is important for _____ to work on.						
1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Often	6 Very often	7 Always
9. _____ and I have built a mutual trust.						
1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Often	6 Very often	7 Always
10. _____ and I have different ideas on what his/her real problems are.						
1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Often	6 Very often	7 Always
11. We have established a good understanding between us of the kind of changes that would be good for _____						
1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Often	6 Very often	7 Always
12. _____ believes the way we are working with her/his problem is correct.						
1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Often	6 Very often	7 Always