

RESEARCH PORTFOLIO

**RE -EXPERIENCING PHENOMENA
IN PTSD**

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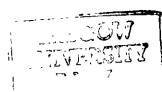
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CHAPTER 1

SMALL SCALE SERVICE RELATED PROJECT

Standard setting within the Lomond Healthcare NHS Trust

Clinical Psychology Service.

Written for submission to *Clinical Psychology Forum*.
Appendix 1:1 contains notes for contributors.

Abstract

This article reports the findings of an audit carried out by Lomond Healthcare NHS Trust Clinical Psychology department to determine whether local General Practitioners are satisfied with the service provided . This question is considered within the context of the audit cycle with a focus on the standard setting stage.

Keywords : audit cycle, Clinical Psychology, GP satisfaction

INTRODUCTION

The Audit Cycle (Crombie et. al. 1993) defines a process of selecting a topic for audit, setting standards, measuring existing practice against these standards and changing the practice if the standards are not being met. In good audit this cycle is then repeated, to demonstrate that implemented changes actually do improve standards as expected. Clinical Psychology audit literature to date, shows little evidence of the key standard setting stage and few studies describe action being implemented arising from audit findings (Cape 1995).

This article reports the findings of an audit carried out by Lomond Healthcare Trust Clinical Psychology Department to determine whether local G.P.s are satisfied with the service provided. It considers this question in the context of the audit cycle, looking especially at the standard setting stage. One of the dictionary definitions of 'standard' is "...ordinary procedure.." (The Concise Oxford Dictionary, 6th ed., 1977) and since ordinary procedure provided our only measurable criterion in the first instance we carried out a G.P. satisfaction survey to find out whether our 'standards' i.e. ordinary procedures , were satisfactory. An initial G.P. satisfaction survey was carried out between November and December 1994 and on the basis of its' findings certain changes to service provision were implemented in February 1995. 18 months later, between May and July 1996, local G.P.s were once again asked to complete the same satisfaction questionnaire.

The findings of both surveys were then compared to see whether or not these changes had been effective in improving the service.

It is the aim of this study to show that service has been improved over the last 18

months and to begin to set some standards against which future service provision can be audited. Stages in this process were:

- 1) To ascertain if local G.P.s, who refer over 80% of our department's referrals, were satisfied with the service as provided, and if not, to find out what standards they expect - (1994 audit).
- 2) To implement changes to service provision as appropriate (based on stage1).
- 3) To evaluate the effect of these changes on satisfaction with the service 18 months later - (1996 audit).
- 4) To devise appropriate standards against which the service can be judged in the future.

METHOD

An initial audit was carried out between November and December 1994 and subsequent changes to service provision were implemented in February 1995. Between May and July 1996 this audit was repeated .

INITIAL AUDIT(1994)

Method

At the end of 1994 13/15 G.P. practices in the Lomond Trust Area were visited by Clinical Psychologists and every G.P. in the district was asked to complete a satisfaction questionnaire designed by the Clinical Psychology department. Response rate was 78% (51/65) which was very good (Stallard and Chadwick 1991, Blakey 1996) possibly due to the salience of the task in the light of a personal visit.

Results

The main problems identified were:-

- 1) Long waiting list
- 2) No system for urgent referrals
- 3) Lack of confidence about appropriateness of referral.
- 4) Lack of choice of psychologist.

92% (43/47) of G.P.s indicated that they would like to refer more patients to the Clinical Psychology service but did not because of the above reasons. G.P.s were generally satisfied with communication with the department with over 80% indicating that they prefer brief reports to long, detailed ones.

At the end of 1994 only 44% (21/48) of G.P.s who answered the question, regarded the service positively, 8% (4/48) regarded it negatively and 48% (23/48) reported mixed feelings. This indicated that there was room for improvement before standards were set.

Action

Subsequent to these findings the following changes were implemented :-

- 1) Waiting list eradicated. Aim to see most non-urgent referrals within 4-6 weeks.
- 2) Introduction of an urgent referrals system. Aim to see most urgent referrals within 1-2 weeks.
- 3) An information leaflet on making appropriate referrals given to every G.P.
- 4) Increasingly brief letters and reports sent, except when a detailed one is relevant.
- 5) G.P.s encouraged to telephone psychologists directly if they have any concerns about making referrals.

REPEAT AUDIT (1996)

Method

Between March- July 1996 Clinical Psychologists revisited 11/15 G.P. practices to further discuss service provision. It was not possible to arrange meetings with the four remaining practices but they were invited to respond to the Satisfaction Survey. All G.P.s in the area (n = 63) were asked to complete a questionnaire, the same questionnaire that they were asked to complete in 1994, but with one additional question about locality of service (see appendix 1:2). Response rate was 81% (51/63) which is consistent with the response rate for the initial audit and therefore allows a valid comparison of results. This is a high response rate towards which the following factors may have contributed :-

- ~ Short, clear questionnaire on 1 piece of A4 paper.
- ~ Self addressed envelope provided for return via internal mail.
- ~ Questionnaires distributed by Clinical Psychologists at time of meeting with each practice to discuss service provision.
- ~ Duplicate questionnaire sent to non-responders via practice manager with a request to return within 2 weeks, this was an important stage since 43% of all the returns were received after the reminder.

Aims

The specific aims of the 1996 audit were:-

- 1) To evaluate the effect of service changes introduced in February 1995.
- 2) To examine current G.P. referral patterns and satisfaction with the Clinical Psychology service with a view to further service development.
- 3) To set standards to serve as the basis for future audit.

Results

60% (30/50) of G.P.s indicated that they would still like to refer more people to the Clinical Psychology service (compared with 92% (43/47) in the 1994 audit). Main reasons for this are listed in Table 1.

Table 1 **Factors preventing referral**

PERCEIVED PROBLEM	G.P.RESPONSE (%) 1996	G.P.RESPONSE(%) 1994
Waiting time too long	45	92
Lack of capacity for urgent referrals	27	47
Unsure if referral is appropriate	25	35
Patient unwilling to attend	22	12
Not enough psychology sessions	16	0
No choice of psychologist	0	27

Waiting Times

In 1994 over 90% of G.P.s perceived waiting time as a major problem with the service, this was halved in 1996 after a system was introduced enabling most non urgent referrals to be seen within 4-6 weeks. In both audits more than 80% of G.P.s indicated satisfaction with waiting times of less than 6 weeks for non urgent patients. In the period March 94 - March 95 the average waiting time for non-urgent referrals was 8.3 weeks (range 1-36 weeks). In the period March 95 - March 96 it was 5.66 weeks (range 1-14 weeks).

In 1994 47% of G.P.s perceived the lack of capacity for urgent referrals as a major problem. This was also almost halved in 1996, to 27% (14/51), after a system to accommodate urgent referrals was introduced.

In both the 1994 and 1996 audits more than 50% of G.P.s indicated that they expect urgent referrals to be seen within 1 week (i.e 7days) and more than 90% expect them to be seen within 2 weeks. In the period March 95 - March 96 only 18

people were referred to the service urgently and of these 28% (5/18) were seen within 1 week and 56% (10/18) were seen within 2 weeks. The longest waiting time was 5 weeks.

Appropriateness of Referral

In 1994 35% of respondents reported a lack of confidence about making appropriate referrals. In 1996 25% are still not confident despite having been issued with an information leaflet about referring and having been encouraged to telephone the department directly if they are unsure.

Written Communication

In both audits G.P.s are generally satisfied with the information they receive and therefore with the pre-existing standard of written communication (see Table 2) There was a resounding preference for brief reports (>90%) rather than long, detailed ones.

Table 2 Satisfaction with written communication

SUBJECT OF COMMUNICATION	Satisfaction (%) 1996	Satisfaction(%) 1994
Waiting Time	75	67
Initial assessment, formulation & treatment plan	96	90
Progress of treatment	79	79
Termination & Discharge	92	98
None attendance by patients	98	94

General Perception of Clinical Psychology Service

The changes to the service implemented in 1995 appear to have been effective. This is evident in the swing towards a more positive regard for the service (see Table 3) and an increase in the number of referrals from 244 (Mar 94 -Mar 95) to 408 (Mar 95-Mar 96) aided by the appointment of an extra Clinical

Psychologist (1.0 w.t.e.)

Table 3 **Perception of Clinical Psychology service**

REGARD FOR SERVICE	G.P.Response (%) 1996	G.P.Response (%) 1994
Positive	76	44
Negative	2	8
Mixed Feelings	22	48

Content analysis of comments made also shows a shift. In 1994 62 % (13/21) of all comments involved concern about long waiting times and the inaccessibility of the service. In 1996 only 13% (3/23) of all comments pertained to waiting times or inaccessibility, however 43% (10/23) raised the issue of the lack of Child and Adolescent services in this area. A new grade B post has been created , but the vacancy has not yet been filled.

In the light of comments received in the 1994 audit regarding the inaccessibility of the service an additional question was added to the 1996 audit, which asked whether service provision was sufficiently local. 92% (45/49) of G.P.s were satisfied that it was. This was achieved by doubling clinical sessions from 6 to 12, for Adult Direct Access patients, and basing them in three different localities, Helensburgh, Alexandria, and Dumbarton.

Summary of Main Findings of 1996 Audit

- 1) 45% of G.P.s still perceive waiting times as too long and an impediment to making referrals, even though waiting times have actually reduced from a mean waiting time of 8.03 weeks to 5.66 weeks.
- 2) 27% of G.P.s still perceive a lack of capacity for urgent referrals even though a system has been in place for over a year.

- 3) 25% of G.P.s are still unsure about the appropriateness of their referrals.
- 4) 90% of G.P.s are happy with the standards of written communication.
- 5) 76% of G.P.s regard the service positively, 2% regard it negatively and 22% report mixed feelings about it.

DISCUSSION

Comparison of the results from the ‘94 and ‘96 audits shows that implemented changes to service provision have been effective in shifting G.P s satisfaction with the Clinical Psychology service in a positive direction and has allowed us to begin to set some standards.This is reflected in the increase in the number of referrals which has tripled in the last three years (see Table 4).

Table 4 **Number of referrals to Clinical Psychology**

YEAR	NO. OF REFERRALS
Apr 93 -94	122
Apr 94 -95	244
Apr 95 -96	408

It is interesting to note, however, that even though waiting times have reduced markedly, almost half of G.P.s still perceive waiting times as being too long and over a quarter still think there is no capacity for urgent referrals.This demonstrates that even when a standard is set and maintained, its’ positive effect can be outweighed by negative attitudes based on historical experience and inaccurate information regarding the current state of play. To try and redress this imbalance it might be beneficial for the department to further encourage open communication by publishing annual statistics for each practice, for example, then accurate

information can be shared and improvements planned, based on facts rather than fallacies. Hopefully, this will reinforce positive changes and highlight negative changes, as areas for further investigation.

It is encouraging that the number of G.P.s viewing the service positively has almost doubled over the last 18 months and that the number expressing mixed feelings has halved. However, 24% still express reservations concerning their Clinical Psychology service. We would prefer this not to be the case and through the continued use of a dynamic audit cycle of change and evaluation and continued consultation with our service users, we aim to develop the service to its' full potential.

CONCLUSIONS

- 1) Changes made to service provision in February 1995 have been effective in improving the service.
- 2) The audit cycle cannot be completed without standards being set. As demonstrated in this study, the process of standard setting is dynamic with standards continually evolving through the audit process.
- 3) On the basis of the findings from this study the following standards can be set :-
 - Waiting time for non-urgent referrals will ideally be less than 6 weeks.
 - Waiting times for urgent referrals will ideally be less than 2 weeks.
 - Written communication will be in the form of brief letters where possible with information given about assessment, progress, discharge and non-attendance as appropriate.
 - Services will be provided locally where possible.

In this study G.P.s are the major referrers to the Lomond Healthcare Trust Clinical Psychology services and therefore were the first group consulted in the standard setting process. However, the needs of the other referrers, patients, government and clinical psychologists themselves must also contribute to the evolution of these standards. An interesting consideration is whether or not, within the context of the audit cycle, one has different 'sets' of standards depending on which aspect of the service is being audited, or one set of hybrid, flexible standards against which any aspect of the service can be evaluated e.g 'acceptable' time between referral and 1st appointment might vary between 1 week and 9 weeks, depending on which viewpoint is taken, so where does one set the standard ?

On the basis of this study it is suggested that the following changes to service provision be implemented :-

- Each G.P. practice to be issued with annual statistics of referral rates and waiting times for both urgent and non-urgent referrals.
- As soon as the vacant Child Psychologist post is filled the local service will be developed.
- Further liaison with G.P.s to increase confidence in appropriate referral.

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REFERENCES

BLAKEY, R. (1996) Some thoughts on maximizing GP response rates to clinical psychology research. **Clinical Psychology Forum, 91, 31-32**

CAPE, J. (1995) Clinical audit in the NHS. **Clinical Psychology Forum, 86, 12-16**

CROMBIE, I.K., DAVIES, H.T.O, ABRAHAM, S.C.S., and FLOREY, C.B.V.

(1993) *The Audit Handbook : Improving healthcare through clinical audit*. Chichester : Wiley

STALLARD, P. and CHADWICK, R. (1991) Consumer Evaluation: A Cautionary Note. **Clinical Psychology Forum, 34, 2-4**

The Concise Oxford Dictionary 6th ed. (1977) Oxford University Press

Moving To Audit: An Educational Package (1995) University of Dundee Centre for Medical Education in collaboration with Clinical Resource and Audit Group.

CHAPTER 2

MAJOR RESEARCH PROJECT LITERATURE REVIEW

Re - experiencing Phenomena in PTSD

Written for submission to *Behaviour Research and Therapy*
Appendix 2: 1 contains notes for contributors.

ABSTRACT

Re-experiencing aspects of a trauma via recurrent and distressing imagery is a fundamental criterion of PTSD. Such imagery is also frequently utilised in PTSD treatment protocols based on exposure paradigms. Despite this, however, the phenomenology of re-experiencing symptoms, is not well understood. There is a paucity of descriptive literature and definitions of different types of intrusive imagery are unclear.

This paper will review the literature with a view to clarifying current understanding of re-experiencing phenomenology. The role of re-experiencing symptoms in cognitive processing models of PTSD will also be reviewed.

Keywords :- Post traumatic stress disorder, imagery, flashback.

INTRODUCTION

Post traumatic stress disorder (PTSD) is a reaction of normal individuals to extreme trauma (Horowitz 1986, Lifton 1988). Re- experiencing the trauma via intrusive imagery is a core, yet poorly understood, feature of PTSD.

Prevalence rates for PTSD vary enormously. Community based studies suggest a lifetime prevalence ranging from 1% - 14% with variability related to differences in diagnostic methods, resulting from poorly defined criteria thus allowing for variable interpretation, and different populations sampled. Studies of 'at risk' individuals have yielded hugely varying prevalence rates, ranging from 3% - 58% (DSM IV, APA 1994). Because prevalence rates for PTSD itself are so variable, it is difficult to assess the prevalence of different types of re-experiencing symptomatology within PTSD.

Hodgkinson and Stewart (1989), however, have attempted to review the frequency of re-experiencing phenomena for a variety of groups of survivors. They found that 'intrusive imagery' occurred with a frequency of between 46% - 88%, and 'nightmares' occurred with a frequency of between 34% - 69% . 'As if' reliving experiences were not described in all groups. They were reportedly absent in survivors of terrorism with PTSD, but occurred with a frequency of 57% in " general traumatic stress patients ".

The meaning of such inconsistencies is difficult to establish since the methodology differs between studies. Data concerning re-experiencing phenomena, where it does exist, is predominantly secondary to other aspects of PTSD research, thus the reliability of such data may also be doubtful.

Ullman (1995) assessed the relationship between the type of traumatic event reported and symptom reports. Re-experiencing was found to be most common in victims of

combat and victims of physical or sexual assault, whereas victims of natural disasters and accidents reported less re-experiencing symptomatology. This might suggest that repeated traumatic experiences are associated more closely with re-experiencing phenomena than unitary traumatic experiences. However, since most of the PTSD literature is based on work done with combat veteran populations, it would seem premature to accept this assumption before more data is available from studies of PTSD in other populations.

HISTORY OF CRITERION DEVELOPMENT FOR PTSD

Although severe reactions to trauma have been described in the psychological literature for over 100 years, it was not until the publication of DSM III (APA 1980) that PTSD was first established as a specific diagnostic category. The original diagnostic criteria were updated in the revised version of DSM III (DSM-III-R, APA 1987) and again with the publication of DSM IV (APA 1994). It is perhaps not surprising then, that there is still much work to be done with respect to studying, describing, and clarifying definitions of PTSD symptomatology, including re-experiencing.

The core symptoms of PTSD include autonomic hyperarousal, avoidance of stimuli associated with the trauma and re-experiencing of the traumatic event via intrusive imagery. The symptom of ‘ physiological reactivity in response to reminders of the trauma’, appeared in the hyperarousal section in earlier versions of DSM. It appears in the re-experiencing section for the first time in DSM IV. The reason for this change however, is unclear.

Although re-experiencing phenomena are central to a diagnosis of PTSD relatively little work has been published clarifying phenomenology (Brett and Ostroff, 1985, Reynolds and Tarrier, 1996).

DEFINITIONS OF RE-EXPERIENCING

DSM IV criteria , even though they are agreed upon by a clinical committee, rather than based upon empirical evidence, probably provide the best starting point for discussion of the definition of re-experiencing phenomena, especially since they provide the diagnostic basis for many modern research projects.

DSM IV (criterion B)

Re-experiencing phenomena occupy a broad spectrum. DSM IV defines re-experiencing of a traumatic event in section 309.81, criterion B. This criterion is met if a person re-experiences the traumatic event in at least one of the following ways :-

- 1) Recurrent intrusive recollections of the event, including images , thoughts or perceptions.
- 2) Recurrent, distressing dreams of the traumatic event.
- 3) Acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations, and dissociative flashback episodes including those that occur on awakening or whilst intoxicated).
- 4) Intense psychological distress at exposure to internal or external cues that symbolise or resemble an aspect of the traumatic event.
- 5) Physiological reactivity on exposure to internal or external cues that symbolise or resemble an aspect of the traumatic event (DSM IV, APA 1994).

There is a potential for under or over diagnosing of PTSD, based upon the decision of whether a particular symptom is present to a sufficient degree or not. Explicit guidelines for when to count a symptom, which is a normal response to trauma, as present to a pathological degree, are not provided in DSM IV. There is a need for the distinguishing features between 'reliving' and 'remembering' experiences to be clearly identified. The boundaries between them are confused under the umbrella of re-experiencing phenomena.

It is also unclear why DSM IV finds it necessary to describe five categories of re-experiencing, when only one is required, in addition to aetiology, avoidance and hyper arousal criteria, for diagnosis. Consider the following example from the clinical literature (Charney et al., 1993, p.294) :-

" .. there was a bolt of cracking thunder, I awoke instantly, frozen in fear. I am right back in Vietnam, in the middle of the monsoon season at my guard post. I am sure I will get hit in the next volley and convinced I will die. My hands are freezing, yet sweat pours from my entire body. I feel each hair on the back of my neck standing on end. I can't catch my breath and my heart is pounding. I smell a damp sulfur smell. Suddenly I see what's left of my buddy,...his head on a bamboo platter, sent back to our camp by the Viet Cong. Propaganda messages are stuffed between his clenched teeth. The next bolt of lightening and clap of thunder makes me jump so much that I fall to the floor..."

The external trigger for this intrusive imagery is the noise of the thunder bolt. This results in physiological (eg sweat, hair standing on end, pounding heart), and psychological (eg. fear, believes self to be in Vietnam, convinced he is about to die)

responses , thus meeting criteria B4 and B5. Any one of these symptoms themselves could also be interpreted as a cue 'symbolising or resembling an aspect of the trauma'. However, these symptoms occur within the context of 'reliving', 'I *am* right back in Vietnam..... I smell a damp sulfur smell,..... I see what 's left of my buddy' thus also meeting criteria B3. To complicate matters further this imagery occurs upon waking from sleep. It is not clear whether the narrator is fully conscious when this experience occurs, or is in fact dreaming. 'I awoke instantly' would suggest the former, but this is clarified by '....frozen in fear', which could have been perceived in either the waking or dream state. It is unclear then, whether criterion B2 is met or not. This example highlights the complexity of 're-experiencing' and shows how criteria B3, B4, B5 and possibly B2, can be met simultaneously, thus suggesting the criteria are not mutually exclusive and are therefore of limited usefulness.

Reliving experiences and 'Flashbacks'

The definition of 'flashback', which is used both commonly and clinically to describe reliving type experiences, is particularly confusing. In their 1985 review Mellman and Davis concluded that it was not entirely clear what constituted a 'flashback'. Over a decade later this is still the case, even though in general PTSD research has flourished. DSM IV defines a 'flashback' as " .. a recurrence of a memory, feeling or perceptual experience from the past." (Glossary p.766, DSM IV, APA 1994). This definition suggests that a 'flashback' is a remembering rather than a reliving experience. However, in criterion B, the term 'flashback' is used only in the description of criterion B3, ie acting or feeling as if the event were recurring, in the context of 'dissociative

flashback'.

This suggests that a dissociative flashback is a reliving experience. This issue is confused further by descriptions of 'reliving' experiences, termed 'flashbacks', which are reported in the clinical literature. A fundamental aspect to these descriptions is a sensation as if elements of the trauma were actually happening ie being perceptually and emotionally re-experienced in present time.

Flashbacks in the literature are defined variously as :-

".. revisualisations of a traumatic scene that occurs with realistic intensity in the presence of a clear sensorium.." (p.374, Burstein 1985)

"..the victim feels as if he or she is reliving the traumatic experience.." (p.644, Turner 1991)

".. a sudden re-experiencing of a stressful situation.." (p.381, Mellman and Davis, 1985)

".. memories so vivid that they are perceived as a reliving of the past in the present.." (p.383, Kline and Rausch, 1985)

".. a posttraumatic flashback is a perceptual re-experience of a specific traumatic event..... flashbacks are characterised by extreme emotional and physiological arousal during which the person may feel immobilised and unaware of immediate surroundings..almost any stimulus associated with the trauma can trigger flashbacks, even when its' connection to the trauma goes unrecognised.." (p.49, Calhoun and Resick, 1993).

This last definition in particular, highlights the potential for confusion between DSM IV criteria B3, B4 and B5.

To add to the confusion, reports of 'pseudoflashbacks' and 'pseudomemories' also appear in the literature. These are trauma related, intrusive, recurrent, vivid images in which the actual content of the image has not been previously experienced ie it is not a memory of a physically perceived traumatic event, but of an imagined traumatic event.

Burstein (1985) describes the case of a woman who experienced distressing visualisations of an accident that her husband had experienced, but which she did not herself witness. Bryant (1996) describes intrusive imagery in people who have sustained a head injury as the result of a road accident yet who remain amnesic for the actual traumatic event. Intrusions are of images of the accident based not on their own memory of it but on information learned since the trauma. Such imagery is termed 'pseudomemory' and is phenomenologically similar to 'flashbacks' in PTSD. Bryant identifies the need to distinguish between involuntary recollections of a recalled event, pseudomemories of events which are not recalled, and imagery which involves a sense of re-experiencing a previous traumatic event. Briggs (1993) describes a fascinating case of delayed onset PTSD following a road accident in which 'organic memories' of the original accident , in the form of a previously healed, bleeding scar, appear to have been relived.

Appropriate definition of the different types of imagery experienced is important for both consistent clinical diagnosis of PTSD and theoretical understanding of the complexity of cognitive responses to trauma.

THE ROLE OF RE-EXPERIENCING IN PTSD

The role of re-experiencing in the development and maintenance of PTSD is not fully

understood. Re-experiencing phenomena support the suggestion that cognitive representations of traumatic experiences reside in a primed or partially activated state in memory (McNally et al, 1987) resulting in recurrent, involuntary retrieval of disturbing, trauma linked memories, until they can be fully integrated. These intrusions have been identified as a link between the original traumatic experience and the development of PTSD.

Various theories suggest that exposure to a traumatic event results in traumatic conditioning (Brown and Kulik, 1977), leading to the acquisition of conditioned autonomic and emotional responses (Kolb and Mutalipassi, 1982). Through stimulus generalisation other stimuli, and the memories themselves, become associated and form the basis of intrusions and flashbacks (Kilpatrick et al, 1985), which are then avoided. Oscillating states of re-experiencing and avoidance, together with hyperarousal thus form the basis of PTSD (Horowitz, 1976, 1986). However, people can often experience intense and distressing intrusions as an immediate response to a trauma, without developing PTSD (McFarlane, 1992, Shalev, 1992) suggesting a more complex aetiological and maintaining system.

The Developing Role of Re-experiencing in Theoretical Models Of PTSD

Over 100 years ago Pierre Janet (1889) taught that overwhelming experiences are accompanied by 'vehement emotions', which interfere with information processing and consequent appropriate action. He thought that this hyperarousal caused the memory disturbances which he observed to accompany traumatisation, by interfering with information processing. He postulated that hyperarousal caused memories to split off

from consciousness and to be stored as 'visceral memories' ie visual images or bodily sensations. Fragments of these memories returned later as physiological reactions, emotional states, nightmares and behavioural enactments (Van der Kolk et al. 1989) Since Janet a variety of theoretical models have been proposed in attempts to organise observed patterns of reaction in PTSD, all stressing various aspects of the traumatic experience as core. Brett and Ostroff (1985) in a comprehensive review of theories of PTSD, contend that there has been a general failure to appreciate the central role of re-experiencing via imagery in clinical theories and empirical investigation of PTSD. Models of PTSD are generally criticised for their failure to provide explicit descriptions of the many ways in which imagery can develop, being limited predominantly to the narrow band of traumatic imagery occurring primarily in nightmares. The work of Horowitz (1970, 1976, 1979) is identified as an exception. This work has focused most clearly and thoroughly on the role of imagery in stress disorders. This work has recently been reconceptualised by Creamer et al (1992, 1993) and is complimented by Van der Kolk and Fisler (1995) who conceptualise traumatic memories in terms of fragmentation and narrative development. These theories will be considered below.

Horowitz

Horowitz (1976,1980,1986) proposed a highly influential information processing model of PTSD. Intrusions are viewed as predictable, initial responses to a traumatic event, which, because of their painful nature, are avoided. PTSD develops as a consequence of the need for an individual to either integrate the traumatic memories within pre-existing schemata, or to develop new schemata to accommodate them. The

precipitating traumatic event is usually sudden, intense, unanticipated and important. The process of integration and revision of the memory of it, however, is slow (Horowitz 1980). Perceptions of the event and representations of any immediate associations to it are recorded in active memory which Horowitz hypothesises has the intrinsic property of repeated representation. This results in intrusive thoughts and images about the trauma which are accompanied by intense emotion. Traumatic memories are held in active memory, out of conscious awareness, and the mechanisms of avoidance and emotional numbing are employed to keep the individual from being overwhelmed.

The process of integration is set in motion by each representation, with completion being reached when traumatic memories can be interpreted to fit inner schema models. The traumatic event then becomes part of long term memory processes and new expectancy schemata and intrusive repetition is no longer necessary. Until such completion occurs however, episodic representation occurs during both sleep and waking states. Horowitz postulates an oscillating process between re-experience and avoidance until such completion is reached. Anxiety is dissipated as the individuals cognitive system becomes integrated and viable as a means for understanding and responding to their perceptions of the world.

Although Horowitz presents a comprehensive theory, it is limited in its' ability to address the critical issue of why some individuals develop PTSD when others who have been exposed to the same trauma do not, and to account for delayed onset PTSD. It is also challenged by the observation that the frequency and intensity of re-experiencing phenomena immediately following a traumatic event are not predictive

of PTSD development (McFarlane 1992).

Creamer

Following from Horowitz's seminal work, cognitive processing models propose that people enter situations with pre-existing schemata containing information about their past experiences, beliefs, assumptions and expectations (Hollon and Kriss 1984).

Following trauma, people are confronted with information which is inconsistent with that contained in existing safety and invulnerability schemata in particular. Creamer et al (1992) propose a five stage model of response to traumatic stress based upon a feedback loop between intrusion, avoidance, and other symptom levels. The successful processing and integration of the total trauma experience is central to recovery.

Stage 1 - Objective Exposure

The individual is faced with a traumatic experience, the initial response to which will be influenced by their subjective perceptions of the event as well as the severity of the traumatic stressor (Horowitz 1986, Foa et al 1989).

Stage 2 - Network Formation

Building on the work of Lang (1977) and Foa et al (1989) a network formation stage is formulated. If an incident is not perceived as frightening or threatening then the trauma related memories will not be perceived as threatening either, eg rape victims who perceived their assault to be life threatening were more likely to develop PTSD than those who did not (Kilpatrick et al 1989). The case is described of a rape victim who did not develop symptoms of PTSD until some months after the rape when she

learned that her attacker had actually killed his next rape victim (Kilpatrick 1986). Only with this new information did she re-interpret the rape situation as life threatening and only then did it become cognitively represented in memory as a fear structure (Lang 1977). Formation of the traumatic memory network then, is determined primarily by characteristics of the traumatic experience itself, including stimulus, response and meaning propositions. Other factors such as pre-trauma personality, prior experience and culture will also contribute.

Stage 3 - Intrusion / Network Resolution

Before recovery can occur the traumatic memory networks must be accessed and modified ie the network resolution process. Activation occurs when information is presented which matches stimulus, response or meaning information in the memory network (Lang 1977). Since both stimulus and response information is contained within the same network, activation results not only in intrusive recollections of the trauma but also in the accompanying aversive response elements. This exposure to traumatic information held within the fear structure, outwith the context of the traumatic experience, allows stimulus-response connections to be weakened and prompts modification of the meaning associated with the traumatic stimulus. Intrusive experiences may be functional and associated with symptom reduction over time as the fear network is gradually modified, as the models of Horowitz, Foa et al, and Creamer suggest. However, they may also be dysfunctional, resulting in very high arousal and prompting effective avoidance strategies. Hunt (1997) has observed that many World War two veterans have used avoidance strategies so efficiently, that only upon commencing retirement, do re-experiencing phenomena emerge. This suggests

that perceptions of trauma can remain unchanged and unaccessed in a memory system for over 50 years, unaffected by normal processes of forgetting.

Stage 4 - Avoidance

Creamer et al (1992) argue that intrusion precedes avoidance with the latter conceptualised as a coping strategy in response to the discomfort caused by intrusive thoughts. Although avoidance strategies, such as blocking out traumatic memories and avoiding reminders of the trauma, may reduce immediate distress, they also reduce the chances of activating the fear network. For recovery to occur the network must be activated for periods of time which are long enough to allow for effective processing there is however, no optimal time specified within the theory.

Stage 5 - Outcome

Recovery is achieved through the network resolution process. Activation and modification of the memory network, as evidenced by re-experiencing phenomena, results in symptom levels which are initially high but which reduce over time. This model is limited in that it cannot account for the clinical observation that many PTSD sufferers, eg war veterans, have experienced intrusive symptoms for decades without change occurring. (Crocq et al 1993, Hunt 1997). Neither does it account for those WW2 veterans who have successfully avoided re-experiencing phenomena for decades until retirement. Creamer's theory would suggest that they have nevertheless carried latent unprocessed experiences. Within the theory, the re-emergence of intrusive imagery would be seen as a positive step in the trauma resolution process. The veterans, however, may disagree.

TRAUMATIC MEMORIES AND THE DEVELOPMENT OF NARRATIVE

Van der Kolk and Fisler (1995) have postulated a theory of *how* traumatic memories might be processed and modified, using a model of implicit and explicit memory (Squire 1994). They suggest that the original traumatic experience is input into implicit memory via rapid classical conditioning . This is not under conscious control but is rapidly accessible via stimulus cues. They suggest that traumatic memories are first retrieved in the form of dissociated mental imprints of sensory and affective elements of the traumatic experience ie 'intrusions' from implicit memory. Over time these intrusive memories are processed into a 'story'. A personal narrative of the trauma gradually emerges ie from explicit memory. At first traumatic memories are experienced as actual reliving events, but eventually, through continued modification, these memories are translated into a story which develops over time with new elements of the traumatic experience being involuntarily re-experienced, voluntarily recalled, and incorporated into the story at different times. Within this model an individual copes with intrusive memories by avoidance, in which case the information remains in implicit memory and continues to be intrusive; or by processing the memories into a story. This story is then stored in explicit memory which is under conscious control.

Support is provided for this model by Pennebaker (1993). He has observed that when individuals are asked to write about personally upsetting experiences, significant improvements in physical health occur. It seems that the construction of a coherent story, together with the expression of negative emotion, work together in therapeutic narrative. He suggests that the movement towards the development of a narrative is

more predictive of health than having a coherent story per se. Consistent with this, a recent pilot study investigating the effect of self monitoring , using written diaries, of the frequency and duration of intrusions over a two month period, associated self monitoring with a reduction in overall PTSD symptomatology (Reynolds and Tarrier 1996). The therapeutic implications of encouraging story construction in the treatment of PTSD needs to be investigated empirically.

THE USE OF IMAGERY IN THE TREATMENT OF PTSD

The use of symptoms of re-experiencing, eg intrusive imagery, albeit poorly defined and understood, is common in the treatment of PTSD.

Direct therapeutic exposure to memories of trauma is a treatment technique commonly used across different models of PTSD, although the precise elements of imagery used may differ (Fairbank and Nicholson, 1987, Grigsby, 1987, Shapiro, 1989, Richards and Rose, 1991, Vaughan and Tarrier, 1992, and Thompson, 1995). Recent innovations in PTSD treatment (reviewed by Walsh 1997) include Thought Field Therapy, Visual Kinesthetic Dissociation , Eye Movement Desensitisation and Reprocessing and Traumatic Incident Reduction techniques. All of these involve working with an individuals traumatic imagery in various ways. They claim to be fast and efficient but remain to be evaluated.

CONCLUSION

There is a need for a deeper understanding of the whole spectrum of re-experiencing symptoms in order :-

- 1) to inform psychological theory about the development, maintenance and treatment of PTSD
- 2) to inform clinical decisions about whether or not imagery should be a focus for treatment
- 3) to inform decisions regarding which types of image, which specific images and which particular aspects of these images will be most amenable to change.

There is also a need for an understanding of how re-experiencing phenomena change over time and how this relates, if at all, to the recovery process. The challenge to clinicians is to be able to help an individual to use their own distressing imagery as a therapeutic tool as gently as possible, without re-traumatising them during treatment. (Horowitz, 1986, Solomon, 1992).

REFERENCES

American Psychiatric Association. (1994). *Diagnostic and Statistical Manual for Mental Disorders*, 4th edition. Washington DC: APA.

Brett, E. A., & Ostroff, R. (1985). Imagery and posttraumatic stress disorder : An overview. *American Journal of Psychiatry*, 142, 417-424.

Briggs, A. (1993). A case of delayed post-traumatic stress disorder with 'organic memories' accompanying therapy. *British Journal of Psychiatry*, 163, 828-830.

Brown, R., & Kulik, J. (1977). Flashbulb memories. *Cognition*, 5, 73-99.

Bryant, R.A. (1996). Posttraumatic stress disorder, flashbacks, and pseudomemories in closed head injury. *Journal of Traumatic Stress*, 9, 621-629.

Bryant, R.A., & Harvey, A.G. (1996). Visual imagery in posttraumatic stress disorder. *Journal of Traumatic Stress*, 9, 613-619.

Burstein, A. (1985). Posttraumatic flashbacks, dream disturbances and mental imagery. *Journal of Clinical Psychiatry*, 46, 374-378.

Burstein, A. (1986). Two cases of lifelike visualisations based on imagination in posttraumatic stress disorder. *American Journal of Psychiatry*, 143, 939.

Burstein, A. (1989). Intrusion and avoidance symptoms in PTSD. *American Journal of Psychiatry*, 146, 1518.

Calhoun, K.S., & Resick, P.A. (1993). Posttraumatic stress disorder. In *Handbook of*

Psychological Disorders. 2nd edition (ed.David Barlow).

Charney, D., Deutch, A., Krystal, J., Southwick, S., & Davis, M. (1993). Psychological mechanisms of posttraumatic stress disorder. *Archives of General Psychiatry*, 50, 294-305.

Creamer, M., Burgess, P. & Pattison, P. (1992). Reaction to trauma: A cognitive processing approach. *Journal of Abnormal Psychology*, 101, 452-459.

Creamer, M. (1993). Recent developments in posttraumatic stress disorder. *Behaviour Change*, 10, 219-227.

Crocq, M.A., Macher, J.P., Beck, J.B., Rosenberg, S.J., & Duval, F. (1993). Prisoners of war from Alsace - Lorraine. In *International Handbook of Traumatic Stress Syndromes*. (eds.John P.Wilson & Beverley Raphael). Wiley. New York.

Davidson, J.,Swartz, M., Storck, M., Krishnan, R.R., & Hammett, E. (1985). A diagnostic and family study of posttraumatic stress disorder. *American Journal of Psychiatry*, 142, 90-93.

Fairbank, J.A., & Nicholson, R.A. (1987). Theoretical and empirical issues in the treatment of post-traumatic stress disorder in Vietnam veterans. *Journal of Clinical Psychology*, 43, 44-55.

Foa, E., Steketee, G., & Rothbaum, B.O. (1989). Behavioural / cognitive conceptualisations of posttraumatic stress disorder. *Behaviour Therapy*, 20, 155-176.

- Grigsby, J. (1987). The use of imagery in the treatment of posttraumatic stress disorder. *The Journal of Nervous and Mental Diseases*, 175, 55-59.
- Haas, A.P., & Hendin, H. (1986). What is the Role of Traumatic Imagery ? *American Journal of Psychiatry*, 143, 124.
- Hampson, P.J., Marks, D.F., & Richardson, J.T.E. (eds.) (1990). *Imagery - Current Developments*. Routledge.London.
- Hendin, H., Haas, A.P., Singer, P., Houghton, W., Schwartz, M., & Wallen, V. (1984). The reliving experience in Vietnam veterans with posttraumatic stress disorder. *Comprehensive Psychiatry*, 25, 165-173.
- Hollon, S.D., & Kriss, M.R. (1984). Cognitive factors in clinical research and practice. *Clinical Psychology Review*, 4, 35-76.
- Horowitz, M.J., & Wilner, N. (1976). Stress films, emotions and cognitive response. *Archives of General Psychiatry*, 30, 1339-1344.
- Horowitz, M.J., Wilner, N., & Alvarez, W. (1979). Impact of events scale: A measure of subjective stress. *Psychosomatic Medicine*, 41, 209-218.
- Horowitz, M.J., Wilner, N., Kaltreider, N., & Alvarez, W. (1980). Signs and symptoms of posttraumatic stress disorder. *Archives of General Psychiatry*, 37, 85-92.
- Horowitz, M.J. (1986). *Stress Response Syndromes*. 2nd edition. New York. Jason Aronson.

Hunt, N. (1997). Trauma of war. *The Psychologist*, 10, 357-360.

Inman, D.J., Silver, S.M., & Doghramji, K. (1990). Sleep disturbance in posttraumatic stress disorder: A comparison with non-PTSD insomnia. *Journal of Traumatic Stress*, 3, 429-437.

Kilpatrick, D.G., Veronen, L.J., & Best, C.L. (1985). Factors predicting psychological distress in rape victims. In *Trauma and its Wake* (ed C.Figley) pp. 113-141. New York. Brunner / Mazel.

Kilpatrick, D.G., Saunders, B., Best, C.L., Veronen, L.J., & Resnick, H. (1989). Victim and crime factors associated with the development of posttraumatic stress disorder. *Behaviour Therapy*, 20, 199-214

Kilpatrick, D.G. (1992). The DSM IV field trials. Paper presented at the First World Conference of the International Society for Traumatic Stress Studies, Amsterdam.

Kline N.A., & Rausch, J.L. (1985). Olfactory precipitants of flashbacks in posttraumatic stress disorder: Case reports. *Journal of Clinical Psychiatry*, 46, 383-384.

Kolb, L.C., & Mutalipassi, L.R. (1982). The conditioned emotional response : A subclass of the chronic and delayed posttraumatic stress disorder. *Psychiatric Annals*, 12, 979-987.

Lang, P.J. (1977). Imagery in therapy: An information processing analysis of fear. *Behaviour Therapy*, 8, 862-886.

Lansky, M.R., & Bley, C.R. (1995). Flashback as screen memory. In *Posttraumatic Nightmares*. pp.55-61. Analytic Press.

Lifton R.J. (1988). Understanding the traumatised self. Imagery, symbolisation and transformation. In *Human Adaptation to Extreme Stress: From the Holocaust to Vietnam*. Wilson, J.P., Harel, H. & Kahana, B (eds.) Plenum Press. New York.

McFarlane, A.C. (1986). Posttraumatic morbidity of a disaster : A study of cases presenting for psychiatric treatment. *Journal of Nervous and Mental Diseases*, 174, 4 -14.

McFarlane, A.C. (1989). The aetiology of posttraumatic morbidity : Predisposing, precipitating and perpetuating factors. *British Journal of Psychiatry*, 154, 221-228.

McFarlane, A.C. (1989). The treatment of posttraumatic stress disorder. *British Journal of Medical Psychology*, 62, 81-90.

McNally, R. J., Kaspi, S.P., Riemann, B.C., & Zeitlin, S.R. (1990). Selective processing of threat cues in posttraumatic stress disorder. *Journal of Abnormal Psychology*, 99, 398-402.

Mellman, T.A., & Davis, G.C. (1985). Combat related flashbacks in posttraumatic stress disorder : Phenomenology and similarity to panic attacks. *Journal of Clinical Psychiatry*, 46, 379-382.

Parkes, C.M. (1970). The first year of bereavement. A longitudinal study of reaction

of London widows to the death of their husbands. *Psychiatry*, 33, 444-467.

Pennebaker, J.W. (1993). Putting stress into words : Health, linguistic and therapeutic implications. *Behaviour Research and Therapy*, 31, 539-548.

Reynolds, M., & Tarrier, N. (1996). Monitoring of intrusions in posttraumatic stress disorder : A report of single case studies. *British Journal of Medical Psychology*, 69, 371-379.

Richards, D.A., & Rose, J. A. (1991). Exposure therapy for posttraumatic stress disorder. Four case studies. *British Journal of Psychiatry*, 158, 836-840.

Shapiro, F. (1989). Efficacy of eye movement desensitisation procedure in the treatment of traumatic memories. *Journal of Traumatic Stress*, 2, 199-223.

Solomon, S. D., Gerrity, E. T., & Muff, A.M. (1992). Efficacy of treatments for PTSD. An empirical review. *Journal of the American Medical Association*, 268, 633-638.

Squire, L.R. (1994). Declarative and nondeclarative memory : Multiple brain systems supporting learning and memory. In *Memory Systems* (eds. D.L.Schacter & E.Tulving) pp.203-231. Cambridge,MA: MIT Press.

Thompson, J.A., Charlton, P.F.C., Kerry, R., Lee, D., & Turner, S.W. (1995). An open trial of exposure therapy based on deconditioning for posttraumatic stress disorder. *British Journal of Clinical Psychology*, 34, 407-416.

- Turner, S.W. (1991). Posttraumatic stress disorder. *Hospital Update, August*, 644-648.
- Ullman, S.E. (1995). Adult trauma survivors and posttraumatic stress sequelae : An analysis of re-experiencing, avoidance and arousal criteria. *Journal of Traumatic Stress*, 8, 179-188.
- Van der Kolk, B., Blitz, R., Burr, W., Sherry, S., & Hartmann, E. (1984). Nightmares and trauma : A comparison of nightmares after combat with lifelong nightmares in veterans. *American Journal of Psychiatry*, 141, 187-190.
- Van der Kolk, B., & Van der Hart, O. (1989). Pierre Janet and the breakdown of adaptation in psychological trauma. *American Journal of Psychiatry*, 146, 1530-1540.
- Van der Kolk, B., & Saporta, J. (1991). The biological response to psychic trauma : Mechanisms and treatment of intrusion and numbing. *Anxiety Research*, 4, 199-212.
- Van der Kolk, B., & Fisler, R. (1996). Dissociation and the fragmentary nature of traumatic memories: Overview. *British Journal of Psychotherapy*, 12, 352- 361.
- Vaughan, K., & Tarrier, N. (1992). The use of image habituation training with posttraumatic stress disorders. *British Journal of Psychiatry*, 161, 658-664.
- Walsh, B. (1997). The psychological treatment of posttraumatic stress disorder : A paradigm shift or millenium madness ? *Clinical Psychology Forum*, 99, 17-19.
- Wilson, J.P. (1994). The historical evolution of PTSD criteria : From Freud to DSM IV. *Journal of Traumatic Stress*, 7, 681-698.

CHAPTER 3

MAJOR RESEARCH PROJECT PROPOSAL

Re- experiencing Phenomena in PTSD - A Descriptive

Analysis

Submitted to and approved by Greater Glasgow Community and Mental Health Services NHS Trust Ethics Committee.

SUMMARY

Post traumatic stress syndrome (PTSD) is characterised by distressing re-experiencing phenomena such as recurrent intrusive thoughts and images, dreams and flashbacks relating to a traumatic experience. (DSM IV, APA 1994). There is very little research literature, however, on how these phenomena relate to each other.

A pilot study is proposed which aims to interview 8 - 10 people currently receiving outpatient treatment for PTSD using the current and lifetime diagnostic version of the Clinician Administered PTSD Scale for DSM IV (CAPS-DX, Blake et al 1990, 1996). Qualitative methods will be used to explore and describe subjective accounts of re-experiencing phenomena. This study aims to focus on the types of re-experience reported and the relationship between trauma content and re-experience content.

RE-EXPERIENCING PHENOMENA IN PTSD - A DESCRIPTIVE ANALYSIS

AIM

To explore and describe subjective accounts of different types of re-experiencing phenomena in post traumatic stress syndrome. The phenomenology of 'flashbacks' is of particular interest ie sense of *re-experience* of traumatic stimuli as distinct from *recall* of traumatic memories.

INTRODUCTION

Although intrusive imagery, phenomena such as trauma related dreams, flashbacks, and recurrent daytime recollections associated with an experienced trauma are diagnostic for PTSD (DSM IV, APA 1994) there is relatively little research literature directly examining the role of such imagery in the development, maintenance or treatment of this disorder.

Based on observations of World War 1 veterans, Freud was first to describe trauma reactions as having two main characteristics, re-experiencing through intrusive imagery and avoidance of any stimuli associated with the trauma. Since then, the work of Horowitz (1976,1986) has focused most clearly on the role of imagery in PTSD. Horowitz conceptualises trauma as a stress on an individual's information processing system. Intrusions are viewed as predictable, initial responses to any traumatic event, which, because of the emotional pain attached to them, are actively avoided. This model suggests that PTSD develops as a consequence of the inability of an individual to either integrate the traumatic experience within his pre-existing schemata, or to develop new schemata to accommodate it. It is hypothesised that until this process is

complete, perceptions of the trauma remain in active memory, resulting in intrusive thoughts and images about the trauma, which are accompanied by intense emotion. Two oscillating processes are postulated as being necessary for trauma resolution, an intrusion phase during which repetition of traumatic imagery and affect occur (i.e re-experiencing), and a denial phase, during which a variety of mechanisms are employed to prevent or avoid these repetitions. As these states alternate, symptoms decrease as the representation of the trauma is gradually incorporated into the totality of a person's experience at a schema level, and equilibrium is re-established. Although Horowitz's work has been the basis of the development of many treatment approaches (based on exposure and de-sensitisation), comparatively little work has been documented looking at the actual process of re-experiencing. A notable exception to this is work by Creamer and colleagues (1992, 1995).

There is little work on the definition , classification and relationships between different re-experiencing phenomena such as dreams, flashbacks , and intrusive memories. Literature often refers to 'intrusions' or ' re-experiencing' without being more definitive. DSM IV criteria for PTSD are similarly broad based when describing symptoms of re-experiencing.

The current study aims to look more closely at the relationship between the actual traumatic incident and the resulting re-experiencing phenomena, by asking people to describe their own experiences and reactions since their trauma. 5 categories of re-experiencing will be investigated, corresponding to the 5 DSM IV criteria, using semi-structured interview (CAPS) i.e :-

- 1) recurrent and intrusive distressing recollections of the traumatic event, including images, thoughts and perceptions (Criterion B1).
- 2) recurrent distressing dreams of the traumatic event (Criterion B2).
- 3) acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations and dissociative flashback episodes, including those that occur on awakening or when intoxicated) (Criterion B3).
- 4) intense psychological distress at exposure to internal or external cues that symbolise or resemble an aspect of the traumatic event (Criterion B4).
- 5) physiological reactivity on exposure to internal or external cues that symbolise or resemble an aspect of the traumatic event (Criterion B5).

AIMS AND HYPOTHESES

This proposed pilot study aims to explore the following questions : -

How frequently are criteria B1 -B5 met ?

What are the characteristics of a 'reliving' experience ?

How do the re-experiencing categories relate to each other ?

How closely does the content of the re-experience relate to the content of the original trauma ?

Is intrusion type consistent within individuals, during the course of their PTSD ?

PLAN OF INVESTIGATION

Participants

N = 8 - 10

Participants will be recruited from Clinical Psychology departments within Greater Glasgow Health Board area. They will currently be receiving outpatient treatment for symptoms of PTSD. They will be identified by primary care, Clinical Psychology outpatient clinics and invited to participate in the study. If they wish to participate they will be given written information and asked to provide written consent (see Appendix 3:1)

Measures

Clinician Administered PTSD Scale for DSM IV (CAPS - DX) (Blake et al 1996)

Impact of Events Scale (IES) (Horowitz et al 1979)

Beck Depression Inventory (BDI) (Beck et al 1961)

State-Trait Anxiety Inventory (STAI) (Spielberger et al 1983)

Design and Procedure

Participants consenting to take part in this study will be given an information sheet and invited to attend for 1 session only. They will be asked to complete all of the above measures. Interviews will be audiotaped to allow for qualitative analysis of verbatim responses to the CAPS. Participants will be encouraged to use free narrative to describe their experiences in as much detail as possible.

Settings and Equipment

It is anticipated that participants will be seen on the same premises as they would normally attend for their out-patient appointments.

Other than copies of the above measures and audiotaping equipment which the researcher will provide, no specialist equipment is required.

Data Analysis

Data will be analysed using qualitative methodology.

PRACTICAL APPLICATIONS

- Description of re-experiencing phenomenology in PTSD.
- Previous PTSD researchers (Brett and Ostroff, 1985, Pollinger, Haas and Hendin, 1986) have suggested that changes in the content of traumatic imagery may be used as a measure of clinical progress and therapeutic improvement. They suggest that changes reflecting greater control by an individual over traumatic events appear to be correlated with clinical improvement and that traumatic imagery is a useful yardstick of this. This cannot be evaluated however, until we use consistent definitions for re-experiencing phenomena and understand how different manifestations of traumatic imagery are related to each other, to the original trauma, and how these change over time. Further, work since 1989 using eye movement desensitisation and reprocessing techniques (EMDR - Shapiro et al 1989,1990), suggests that if traumatic images can be successfully paired with neutral sensory stimuli, they can be quickly extinguished. If this is the case, it would be useful to understand the relationship between different types of traumatic imagery and their development over time. It is possible that some types of traumatic images are more amenable to EMDR. If this is so, it would be useful to be able to identify these early in treatment. The theoretical basis for EMDR, however, is unclear and cannot be fully formulated until re-experiencing phenomena themselves are more fully understood.

TIMESCALES

May 1997 - July 1997 :	Proposal accepted and Ethics approval sought.
July 1997 - Aug 1997 :	Literature review paper completed.
Sept 1997 - Oct 1997 :	Potential participants identified and invited to take part
Oct. 1997 - March 1998 :	Data collection.
March 1998 - July 1998 :	Data analysis and write up completed

ETHICAL APPROVAL

Application submitted to Greater Glasgow Community and Mental Health Services NHS Trust ethics committee.

REFERENCES

- Beck, A.T., Ward, C.H., Mendelson, M., Mock, J. & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry*, 4, 561-571.
- Blake D.D., Weathers, F.W., Nagy, L.M., Kaloupek, D.G., Charney, D.S., & Keane, T.M. (1990). A clinician rating scale for assessing current and lifetime PTSD : The CAPS- 1.
- Blake D.D., Weathers, F.W., Nagy, L.M., Kaloupek, D.G., Charney, D.S., & Keane, T.M. (1996). Clinician Administered PTSD Scale for DSM-IV (CAPS-DX). National Center for Posttraumatic Stress Disorder.
- Brett, E.A., & Ostroff, R. (1985). Imagery and Posttraumatic Stress Disorder : An Overview. *American Journal of Psychiatry*, 142, 417-424.

Calhoun, K.S., & Resick, P.A. (1993). Post-traumatic Stress Disorder. In D.Barlow (ed.) *Handbook of Psychological Disorders*. 2nd ed.

Creamer, M., Burgess, P., & Pattison, P. (1992). Reaction to trauma. A cognitive processing model. *Journal of Abnormal Psychology*, 101, 452 - 459.

Horowitz, M.J. (1976). *Stress Response Syndromes*. New York. Aronson.

Horowitz, M.J., Wilner, N. & Alvarez, W. (1979). The impact of events scale: a measure of subjective stress. *Psychosomatic Medicine*, 41, 209-218.

Horowitz, M.J. (1986). Stress Response Syndromes : A Review of post-traumatic and adjustment disorders. *Hospital and Community Psychiatry*, 37, 241-249.

Pollinger Haas, A., & Hendin, H. (1986) What is the role of traumatic imagery ? *American Journal of Psychiatry*, 143, 124 (letter)

Shapiro, F.(1989). Efficacy of the eye movement desensitisation procedure in the treatment of traumatic memories. *Journal of Traumatic Stress*, 2, 199-223.

Shapiro, F. (1990). Eye movement desensitisation: A new treatment for posttraumatic stress disorder. *Journal of Behaviour Therapy and Experimental Psychiatry*, 20 , 211-217.

Spielberger, C.D., Gorsuch, R.L., Lushene, R., Vagg, P.R. & Jacobs, G.A. (1983). *Manual for the State-Trait Anxiety Inventory*. Consulting Psychology Press.

CHAPTER 4

MAJOR RESEARCH PROJECT

Re-experiencing in Post traumatic stress syndrome

A Descriptive Analysis

Written for submission to *Behaviour Research and Therapy*
Appendix 4:1 contains notes for contributors.

Abstract

Despite the fundamental theoretical role of symptoms of re-experiencing in the aetiology, maintenance and treatment of posttraumatic stress disorder (PTSD), phenomenological studies of what defines 're-experiencing' are rarely reported. This study used grounded theory methodology to explore and describe subjective accounts of re-experiencing symptomatology.

Eight male participants (age range 30 - 60 years), receiving outpatient treatment for PTSD, were individually interviewed, once, using the clinician administered PTSD scale (CAPS). Original trauma type varied to include road traffic accidents (n=4), combat (n=2), assault (n=1) and robbery (n=1).

The characteristics of different types of 're-experiencing' arising from the data are described. Descriptive analysis focuses predominantly on the perceptual content and space/time orientation of re-experiencing phenomena. The Interacting Cognitive Subsystems Model is considered as a suitable theoretical framework, within which to understand the complexities of re-experiencing phenomena in PTSD.

Keywords : re-experiencing , imagery, PTSD.

INTRODUCTION

PTSD, as defined by DSM IV (APA, 1994), is a multisymptomatic disorder which requires varying numbers of symptoms from each of three categories of symptoms for diagnosis:- re-experiencing (1 symptom required), avoidance (3 symptoms required) and hyperarousal (2 symptoms required). Re-experiencing aspects of a traumatic event, by way of intrusive images, thoughts, feelings, perceptions and dreams, is therefore a prerequisite feature of PTSD.

Information processing theories of PTSD (Horowitz 1980, 1986, Creamer et al, 1992) assume that re-experiencing occurs because traumatic memories are not processed and integrated at the time of the trauma because they are too distressing. They cannot be processed because they are incongruent with pre-existing schemata. Such theories postulate that this traumatic information is therefore held in an active memory system, which is not under conscious control, and is recurrently re-experienced and reprocessed until it becomes schema congruent and can then be stored in long term memory systems which are under conscious control. However, because re-experiences of the traumatic memories, which are associated with fear and hyperarousal, are themselves distressing, behavioural avoidance strategies develop to prevent their occurrence. An oscillation between re-experiencing, associated with hyperarousal and avoidance, thus characterises PTSD and continues until resolution occurs. Within this framework, the key to successful resolution of PTSD is rapid integration of the traumatic memories. Most treatment approaches to PTSD, therefore, include exposure to traumatic memories which are accessed by the exploration of re-experiencing phenomena (Calhoun and Resick, 1993).

Despite the fundamental theoretical role of re-experiencing in the aetiology, maintenance and treatment of PTSD, phenomenological studies of exactly what is meant by 're-experiencing' are rarely reported in the literature (Brewin, 1998). Since re-experiencing is a normal response immediately following trauma, and initial levels of intrusions are not predictive of PTSD development (McFarlane, 1989), it is especially important that re-experiencing phenomena in PTSD are defined. In order to advance our knowledge about the course of PTSD, it would be useful to know at what stage, and how, intrusive images, thoughts, feelings, or dreams about a traumatic event, become pathological. Treatment can then be focused appropriately.

DSM IV describes re-experiencing phenomena within five different categories (see Appendix 4.2). However, a person is required only to exhibit symptoms in one out of the five re-experiencing categories, to meet the diagnostic criterion for PTSD. Within this framework, recurrent dreams of a traumatic event are given equal weighting with recurrent, dissociative, 'flashback' type events. It is suggested (see Chapter 2, Major Project Literature Review) that our understanding of these phenomena is limited if we accept the DSM IV proposition that intrusive memories, dreams, reliving experiences and physiological and psychological cued responses to reminders of the trauma, are equivalent expressions of the same 're-experiencing' process. It is also suggested that there is a need for a deeper understanding of the whole spectrum of re-experiencing in order to progress theory development with respect to the role of these symptoms in PTSD. Such theoretical advances are required to inform clinical decisions about whether or not recurrent imagery should be a focus for treatment, and if so to identify which types of re-experience, which specific

images and which aspects of these images will be most amenable to change.

In this study an attempt is made to understand a small number of participants' re-experiences within their own frame of reference, rather than testing a preconceived hypothesis on a larger sample. Qualitative methodology is utilised because it is generally concerned with exploring, understanding and describing the personal and social experiences of participants and trying to capture the meanings particular phenomena hold for them.

AIMS

This study aims to explore subjective accounts of re-experiencing phenomena in PTSD in order to describe the characteristics and content of 're-experiencing' within this sample.

The following questions will be addressed :-

1) How frequently do the participants in this sample describe re-experiencing phenomena which meet criteria B1- B5 as measured by the CAPS ?

Do participants in this sample tend to experience only one type, or more than one type of re-experience ?

Is intrusion type consistent within individuals during the course of their PTSD ?

2) How are re-experiencing phenomena, within the context of PTSD, described by the participants in this sample ? The phenomenology of a 'reliving experience', commonly termed 'flashback' is of particular interest. Is there a sense of perceptual re-experience of, as distinct from a vivid memory of, the traumatic stimuli ?

3) How closely does the stimuli content of the re-experience resemble the stimuli content of the original trauma ?

METHODS

Research Design

This is an exploratory and descriptive study utilising a grounded theory approach (Strauss and Corbin, 1994, Pidgeon and Henwood, 1997) which allows for the preservation of the complexities of the data, so that its nature can be explored and better understood. The grounded theory approach is a widely used strategy for the analysis of qualitative data. It is fundamental to this approach that concepts and theory arise from the data. Qualitative research using this method, therefore, does not begin with a specific hypothesis to be tested, but with an area of study to be investigated, in this case subjective descriptions of re-experiencing phenomena. Theory and concepts are grounded in the data collected. It is the task of the researcher to extract these, thereby uncovering the participants' own understanding and explanations. This design is appropriate when the focus of the study is on exploratory questions (ie how do people 're-experience' traumatic events, which information is re-experienced and in what modality ?), when the researcher has little control over events (ie the study involves no manipulation of people or variables) and when the focus of the study is on some real life phenomenon (ie reaction to trauma).

Measures

Beck Depression Inventory (BDI) (Beck et al, 1961)

This is an extensively used, 21 item, self report inventory, for measuring degree of depressive symptomatology. This inventory has a split-half reliability coefficient of 0.93. Internal consistency is high (Cronbach's coefficient alpha : psychiatric sample = 0.86, non-psychiatric sample= 0.81). Content, discriminant, construct, concurrent and factorial validity has been demonstrated (Beck, Steer and Garbin, 1988).

State - Trait Anxiety Inventory (STAI) (Spielberger et al, 1970)

This is a widely used 40 item self report questionnaire which contains 20 items to assess state anxiety and 20 items to assess trait anxiety. Test-retest reliability for trait anxiety is 0.81 and for state anxiety is 0.40. Internal consistency is high (Cronbach's alpha coefficients range from 0.83 - 0.92 for both state and trait anxiety scales in the normative sample). Construct, concurrent and discriminant validity has been demonstrated (Spielberger et al, 1970).

Impact of Events Scale (IES) (Horowitz et al, 1979)

This is a widely used 15 item self report scale of subjective distress related to a specific traumatic incident. This measure has two subscales, intrusion and avoidance. Respondents are asked to indicate on a four point scale (not at all, rarely, sometimes, or often) how frequently they have experienced each item during the previous week. The split-half reliability of the IES has been shown to be relatively high ($r = 0.86$) as has test-retest reliability ($r = 0.87$). The internal consistency of the subscales is also

high (Cronbach's alpha : intrusion = 0.78, avoidance = 0.82). Validity and sensitivity to clinical change have been demonstrated (Horowitz et al, 1979).

Clinician Administered PTSD Scale (CAPS - DX) (Blake et al, 1996)

This is a recent, 30 item, clinician administered scale in an interview format. It includes items which assess each of the 17 core symptoms that constitute the DSM IV defined construct of PTSD, as well as items which assess clinically associated features (eg guilt, impact upon functioning etc.). The CAPS quantifies symptom frequency and intensity for each of the criteria. Good internal consistency has been shown on each of the three subscales (Cronbachs alpha : numbing and avoidance = 0.85, re-experiencing = 0.77 and hyperarousal = 0.73). Moderate concurrent validity with other established measures of PTSD has been demonstrated.

Since the aim of this study was to generate a rich set of descriptive data with which to explore the phenomenology of re-experiencing, the CAPS was utilised as an aid to 'directed conversation', as well as a measure of PTSD symptomatology. Participants were encouraged to give full, narrative answers to the interview questions and clarification or further detail was frequently sought by the investigator. Although the CAPS was considered to be a good starting point, the investigator was aware of the tension between the risk of overly directive interviewing, which can cut off interesting theoretical leads and unwittingly load assumptions into the questions asked, and the risk of losing sight of any focus by not constraining the interview at all.

Participants

All participants were recruited from Clinical Psychology outpatient clinics in the

Greater Glasgow Area. Clinical Psychologists were asked to identify adults (aged 18-65), currently in treatment with them for symptoms of PTSD, to describe the study to them and to give written information and a consent form to those who were willing to participate. Written consent and contact information was then returned directly to the investigator.

Eight participants currently receiving outpatient treatment for PTSD were included in this study. A sample size of 8 - 20 participants is common in qualitative studies involving a single extensive interview (Turpin et al, 1997). All participants were male, and although females were not excluded, none were recruited, Ages ranged from 30 years to 60 years 6 months. PTSD developed subsequent to a road traffic accident (RTA) in four participants, combat related trauma in two participants, assault in one participant and a post office robbery in one participant. Co-morbidity was not an exclusion factor. Scores on standard measures of depression (BDI), anxiety (STAI) and PTSD severity (IES and CAPS) are summarised in Table 1.

Table 1 Sample mean scores on standard measures

	BDI	STAI		IES	CAPS
		State	Trait		
Mean	19	39	50	37	75
Standard Deviation	+/- 8.7	+/-15.6	+/-14.2	+/- 15.7	+/- 21
Range	2 - 30	21 - 68	29 - 65	3 - 61	31 - 97

Sample means indicate a moderate level of depression and trait anxiety within this sample. All participants met DSM IV criteria for lifetime PTSD, as assessed by the CAPS, and all but one met criteria for current PTSD. The participant who did not, participant 8, did not do so because he experienced only 2/7 avoidance symptoms (3

are required for PTSD diagnosis). He experienced 4/5 re-experiencing symptoms however (1 is required for PTSD diagnosis). His IES score was 35 (I = 18, A = 17), which suggests a significant level of both intrusive and avoidance symptoms.

Procedure

Data collection

Eight male participants, recruited from Clinical Psychology outpatient clinics, were interviewed once only, by a single researcher, using the CAPS structured interview schedule. Free narrative was encouraged by seeking further detail and clarification to replies given to the CAPS question. Interviews lasted between 1-1.5 hours, depending upon the talkativeness of the respondent, and were audiotaped with permission. Participants were asked to complete the BDI, STAI and IES self-report measures at the end of the interview. The audiotaped interviews provided the raw data for analysis.

Data storage

Audiotapes were labelled with participant number (eg P1) and stored securely together with CAPS, BDI, STAI, and IES data. Initial data selection was undertaken by the researcher who listened to each tape and extracted all responses associated with the description of re-experiencing phenomena. Verbatim accounts of narrative describing 're-experiencing' were extracted and transcribed by the interviewer. 256 passages of text were extracted in total (Mean = 32, range = 20-44 per participant). Only data describing the content of re-experiences was further analysed, data describing triggers or responses, to the re-experience, was not analysed

further. 180 passages of transcribed text describing the content of re-experiencing phenomena were therefore selected. The decision about whether selected text described trigger, content or response information was made by the same single researcher and is therefore subject to bias. Data segments were then coded and categorised.

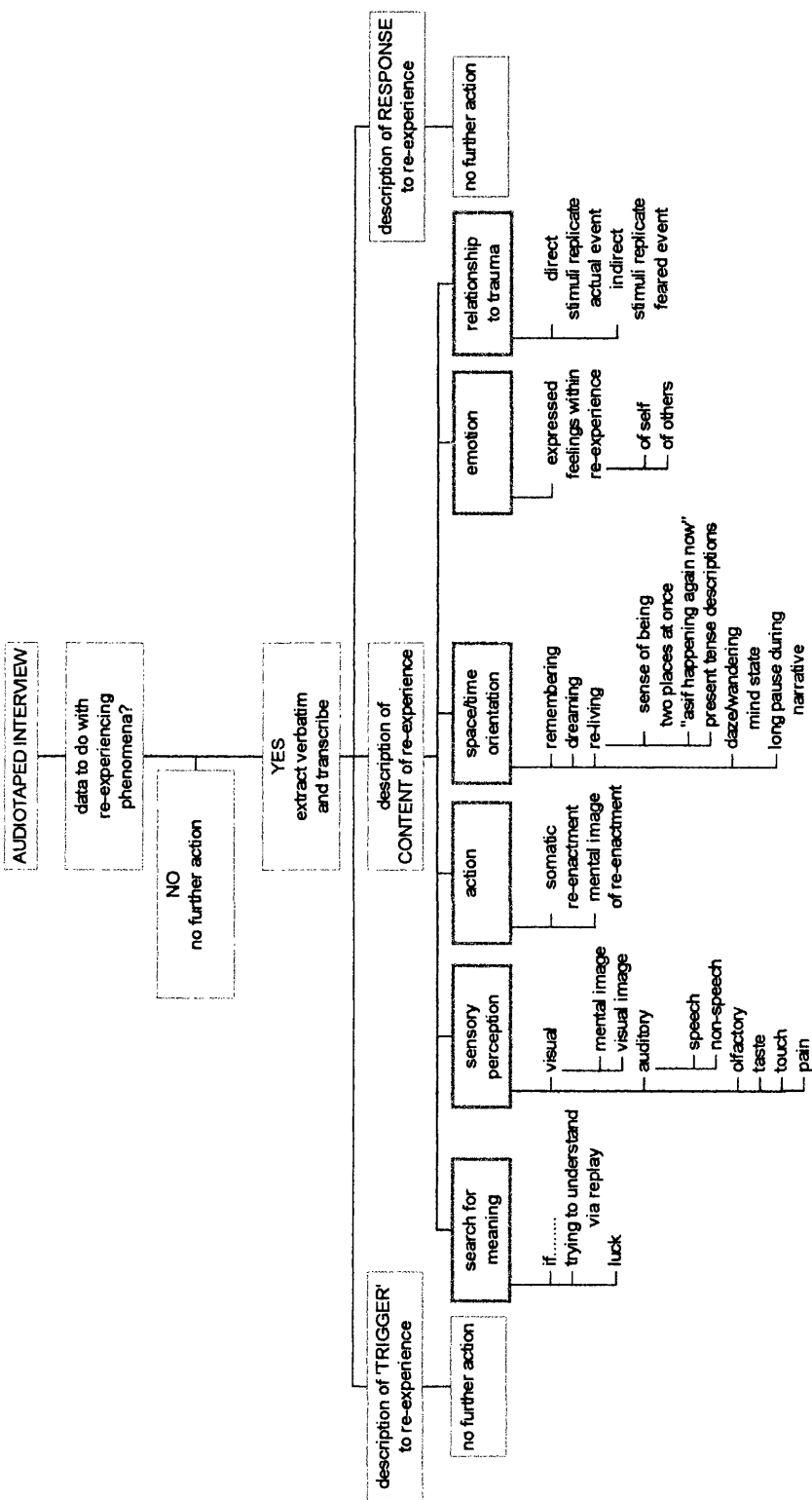
Coding

The aim of a grounded theory approach at this stage of analysis, is to seek similarities and diversities within the data, which may point to the various facets of a potentially significant concept. Understanding of each concept emerges from the interplay (ie process of constant comparison) between the researcher's interpretations and variation within the body of data.

Initial coding involved the tentative development and labelling of concepts and categories within the selected text. Once again the judgement of the researcher is integral to the labelling process. Each label, eg 'perception - smell', was recorded at the top of an A4 page. A precis of the data of interest, together with a specific transcript reference was noted on the appropriate category page. It was possible for the same piece of data to be recorded under more than one category heading. This categorisation process is summarised in Figure 1.

All data relating to the content of re-experiencing was analysed. A selection of data, comprising 15 passages of verbatim data, was selected by the researcher to be coded by an independent clinical psychologist who was not involved in the data collection process. The independent assessor was presented with each of the verbatim text

FIGURE 1 Summary of Categorisation Process



extracts, selected by the researcher to be of mixed difficulty to categorise, and the category labels (as shown in Figure 1) and asked to assign one or more appropriate label(s) to the data. This was an attempt to ensure that the emergent categories were useful and that interpretation was consistent. Consensus was reached on the assignation of all category labels except 'somatic re-enactment'. This led to a discussion regarding the categorisation of narrative which included references to physical phenomena. Physical signs and symptoms eg sweating, nausea, headache, were categorised by the researcher as 'responses to' rather than 'content of' re-experiencing phenomena and were not therefore analysed further. However, this is a difficult, and possibly arbitrary, differentiation to make. It is possible that conditioned physical signs and symptoms could be trigger, content and/or response elements within a re-experience. Consider the following verbatim extract describing the re-experience of an RTA upon waking from sleep:-

P6 : *'.....In the crash, when you are in the vehicle, looking out of the vehicle, the smoke makes you claustrophobic,..... and like weeks ago, when I was waking up and smelling the smoke and all that , it was...oops, straight to the window ...but now if it happens you know what it is... '*

Researcher : *' So you would actually go and open the window..was that to try and let the smell out ? '*

P6 : *'No.....you'd go to the window, you weren't caring about the smell getting out, you were more interested in you getting air...what's behind you, you're not bothered about,.....right at that second you need cold air to breathe.. '*

Is the claustrophobia, desire for fresh air, and actual movement towards the window,

described here, a somatic re-enactment, ie reliving the psychological and physiological traumatic stimuli of being trapped in a burning car, or is this a psychological and physiological panic response to the imagery content ?

The role of physical signs and symptoms within re-experiencing needs further exploration. It was agreed that this particular example should be categorised as a somatic re-enactment, because of the reference to '*..what's behind you...*' ie the burning car (as if it was there in present time, rather than a memory of the burning car). However, it was agreed that within the confines of the current study, where it was unclear, these physical elements would be categorised as 'responses' eg.

'....A horrific bang...a noise that...oh, it turns your stomach when you think of it...'

(P6)

It is possible that the physical stomach turning described here, also happened during the actual RTA (fear response), thus suggesting a categorisation of 'content of ' re-experience, however '*....when you think of it....*' suggests that it is a response to thinking about the noise. It is the noise therefore which is categorised as the content of the re-experience.

These examples highlight the difficulties inherent in this study which because of practical constraints did not allow for more than one researcher. The difficulties of initial data selection are demonstrated. This study limited itself to exploring 'content of ' re-experiencing phenomena, however the distinction between, trigger, content, and response is dependent upon the researcher's opinion and therefore bias. Study design would be scientifically more robust if more than one researcher was involved

in the initial data selection stage, as well as the later categorisation stages.

Core analysis

Analysis proceeds by linking and refining the emergent categories and concepts. This is a circular rather than linear process, initial concepts and categories arise from the data and are modified by comparing, contrasting and creating links between them, supported by the data. The aim is to integrate the categories by creating links between them, e.g. sensory content within a re-experience is commonly described in this sample. This occurs across modality ie visual, auditory, taste, smell, touch, pain, which are sub-categories of sensory perception. Links between these categories suggests that this may occur as either a 'real' sensory perception ie experiencing it via the sensory organ, or as a 'minds eye' perception.

RESULTS

Frequency of different types of re-experiencing as measured by the CAPS

7/8 participants in this study each described current re-experiencing symptomatology to fit each DSM IV category as measured by the CAPS. In these participants, all types of intrusion were consistently experienced throughout the course of their PTSD.

Participant 8 described current re-experiencing phenomena in all categories except trauma related dream imagery. However, he did experience this immediately following his trauma (RTA). This result was unexpected and suggests that it may be more common than previous reports suggest (reviewed by Hodgkinson and Stewart, 1989) for individuals to simultaneously experience all the different types of re-

experiencing (ie DSM IV criteria B1-B5) during the course of their PTSD. This may however, be due to varying methodologies and definitions across studies and highlights the need for further research into the definitions of, natural history of and relationships between, re-experiencing phenomena.

Descriptions of re-experiencing phenomena

Based on the descriptions of the participants in this study, four types of re-experiencing can be described (see Table 2).

Table 2 Types of Re-experiencing

	Type	Conscious State	Space/Time Orientation	Occurrence outwith PTSD?
1	Memory	Conscious	Fully orientated	Yes
2	Dream	Unconscious	Variable orientation within dream. Fully orientated on waking	Yes
3	Hynogogic/ Hypnocampic Imagery	Semi-conscious	Disorientated in space/time	Yes
4	Reliving experience	Conscious	Disorientated in space/time. May be processing information in different space/time orientations	No

Re-experiencing phenomena are described by the participants in this study,

predominantly in terms of sensory information associated with fear, experienced within various space/time orientations. This sensory information most commonly directly replicates sensory perceptions of *actual* stimuli experienced during the original trauma. However, sensory perceptions of *feared* stimuli, not experienced during the original trauma, (ie pseudomemories) are also described, suggesting that the sensory information within the re-experience has been constructed during some initial processing of the traumatic stimuli.

Content of reported sensory experiences

Re-experiencing phenomena in this small sample contained perceptual images from each sensory domain (see Table 3). Examples are provided in Appendix 4.3. All re-experiences contained both visual and auditory imagery.

Table 3 Frequency of perceptual imagery in re-experiencing

SENSORY DOMAIN	% OF SAMPLE
Visual	100% (n = 8)
Auditory	100% (n = 8)
Olfactory	50% (n = 4)
Pain	37.5% (n = 3)
Taste	25% (n = 2)
Tactile	12.5% (n = 1)

Sensory re-experiences are described in two ways :-

1) “ Mind’s eye ” images (ie ‘ what we hear / see in our heads’).

These are described during waking and dream states in the context of ‘remembering’ rather than ‘reliving’ re-experiences. Knowledge that the image derives from past rather than present stimuli is inherent e.g.

"I can see things, they're not there, they're in my mind, I can see them but..."(P5)

2) Present time sensory perceptions (ie 'what we sense in the world, happening now')

These are described in the context of 'reliving' re-experiences only, as if the stimulus is recurring in present time e.g.

"I can see everything, he is just lying there.....that part has gone..there is a massive pool of blood.....black...like crude oil.....he is just lying there" (P6)

"I see his motor turning,.....I see the woman screaming.....I can hear the woman screaming..." (P6)

3/8 participants also reported re-experiencing physical pain stimuli, replicating that of the original trauma, within 'reliving' type re-experiences e.g.

"as if it is happening again..I can feel the pains in my legs, the pains in my head, the pains in my arms,..I am reliving it." (P3)

Different formats of presentation of the re-experiencing were described, although the significance of the difference is unclear. They are described as occurring within :-

- a) specific, recurrent still images and / or
- b) video like - normal speed and / or
- c) video like - slow motion and / or
- d) video like - rewind, normal speed. (see Appendix 4.4 for examples)

Orientation in Space and Time

The variation in descriptions of orientation in space and time seems to define the different types of re-experiencing phenomena described in this sample. Maintenance of space/time orientation is associated with descriptions of 'remembering' type

experiences. Space/time disorientation is associated with 'reliving' type experiences. In this small sample there were no exceptions. Re-experiences during dreams, are associated with disorientation on waking, when the dream contained 'relived' elements of the trauma which wake the dreamer up. Imagery in the period between wakefulness and sleep (hypnagogic) and between sleep and waking (hypnocampic) is of the reliving type in this sample. There is potential for confusion in categorising this type of re-experience because the type of imagery experienced in these states is often described as a 'dream'. However, 'reliving' experiences themselves are not difficult to distinguish. Descriptive language was very consistent across participants and involved the following phrases :-

"....it's like being there right now " (P1)

"....I felt as if I was there.." (P3)

"....It's as if I'm there again " (P4)

"....It's as if it's actually happening " (P5)

"....It was really as though I was there again " (P7)

There is also some suggestion of disorientation whilst actually describing the re-experiences. Long pauses during the narrative were observed where participants appeared to lose concentration whilst attempting to describe their experiences suggesting delays in information processing, e.g.

"..the policeman said 'we have just had a report that your colleague has been taken hostage..aye...I'll.....and like.....em.....the em.....I'm.....I'm.....right, I'll just tell you exactly what happened, right ? ." (P7)

"At night you lie and you see it.....you see it.....you see it.....you

see it.....and you're like that, ' come on, get your head together, you don't want to see that..” (P6)

At one point during the interview with participant 4, a helicopter flew overhead. He reported that this triggered an immediate reliving experience during the interview.

This was not associated with any observable behaviour change. He reported :-

“I just heard a helicopter flying overhead there and I thought I was in Northern Ireland right away....I was sitting in the base waiting for a chopper to go out on patrol.....When I am here I'm actually in the two places at the same time...I am in Northern Ireland, but I am speaking to you about the subject you are asking me about at the time..” (P4)

It is interesting that participant 4 says “ ..I AM in Northern Ireland ”. This may suggest that he was processing information simultaneously in two different space/time frames ie past, service in N.Ireland, and present, interview in Glasgow, both of which made individual sense. The trigger of the helicopter noise was apparently processed in both orientations for participant 4 to be immediately able to understand his experience and relate it to the interviewer. It is also noteworthy that the word ‘helicopter’ is used in relation to the interview situation, but the word ‘chopper’, army slang, is used in the next phrase, in relation to the ‘reliving’ Northern Ireland situation.

Relationship of re-experience content to original trauma content

All participants described re-experiences of all types, in which the content mirrors the exact content of an aspect of the original traumatic event. 3/8 participants also report recurrent, intrusive images of feared, rather than actual, traumatic events, ie the re-

experience content was different from that of the original traumatic event. This phenomenon has been reported in the literature previously (Burstein, 1985, 1986, Bryant, 1996) and has been termed 'pseudomemory'.

Participant 4, a Northern Ireland combat veteran, described recurrent dream imagery of himself being blown up in a car bomb explosion. The content of the dream replicated exactly, an actual incident in which he was involved, except that in that case the bomb was successfully defused. His imagery, therefore, is of a feared, rather than actual, outcome. The dream image, of himself being blown up, has also become an intrusive and distressing memory (the dream resulting from the trauma, not the trauma per se, therefore, appears to be the subject of the re-experience).

Participant 5, also a Northern Ireland combat veteran, described recurrent nightmares of being shot by a sniper. Although this never actually happened to him it was a constant threat. The dream was described as having a 'reliving' quality, in that the shot is heard and the pain of the impact is felt upon waking, and there is disorientation, in that the dreamer is confused about whether he is alive or dead.

It is interesting that in both of these veterans, who were repeatedly exposed to work associated traumatic stimuli, recurrent imagery based on feared stimuli is more distressing than that based on their actual traumatic experiences. A 'reporter' like style was adopted by both participants, especially participant 4, to describe their experiences, which may suggest that through training (ie development of appropriate expectancy schemata) these soldiers were able to distance themselves emotionally from actual, combat related, traumatic events but were unable to do so with their fears. It is also pertinent that neither veteran became symptomatic until leaving

Northern Ireland.

Participant 7 described recurrent visual images of his colleague with a gun in his mouth, taken hostage during a post office raid. He was involved in a P.O. raid and was mistakenly told by a policeman that his colleague had been taken hostage. A couple of minutes later he was told that this was in fact incorrect, his colleague had not been taken hostage and nobody had been hurt. This original image, however, has been resistant to change and has been re-experienced for three years. It was observed that participant 7 kept his eyes tight shut for the duration of this description. His reason for this suggested orientation difficulties whilst trying to describe this image.

"..It's not as though I'm trying to remember it.....I just get lost in it somehow.....it's as if I'm kinda there, it's em.....it's as though my mind is kinda there somehow, you know..?" (P7)

Loss of confidence in own judgement ability

It is noteworthy that 4/8 participants suggest that they have suffered a loss of confidence in their own judgement ability, e.g.

"...you don't know if you are sleeping or not, you don't know if you are thinking or dreaming,.....that wasn't real, or was it real ?.....that's where the fear comes from....is this happening or am I dreaming it ?" (P6)

"... I find it impossible to stand back from this, I'm talking about the whole thing, ...trying to understand it,my critical values are just all away." (P7)

This is described not as a result of their trauma per se, but as a result of re-experiencing traumatic imagery. Vivid, sensory perceptions of stimuli from past trauma, may be associated with a loss of trust in fundamental, perceptual processes and subsequent judgemental ability. A confusion is described between deciding what is 'real', ie actually happening now, and what is 'not real', ie not actually happening now, but perceived as if it is. It is this confusion which seems to be associated with a loss of confidence.

DISCUSSION

Intrusive thoughts and images (DSM IV, criterion B1) are associated with normal anxiety resolution processes (Marks, 1990) and have been linked specifically with obsessive compulsive disorder (reviewed by DeSilva 1986) and more recently with depression (Brewin et al, 1996), as well as with PTSD. Dreams (criterion B2), although still poorly understood, have long been accepted to occur as part of normal anxiety resolution processes (Seligman, 1987). Reliving experiences (criterion B3) are not associated with normal anxiety resolution processes and occur only in PTSD. Psychological (criterion B4) and physiological (criterion B5) cued responses to reminders of the trauma are well understood in terms of conditioned responses to any aversive stimuli (Brown and Kulik, 1977, Kolb and Mutalipassi, 1982). It is perhaps confusing for these conditioned arousal states to be included as separate categories of re-experiencing in PTSD since they occur *within* memories, dreams and reliving experiences and therefore are not mutually exclusive. Reliving re-experiences then, during which sensory stimuli which replicate traumatic stimuli are perceived 'as if the

trauma were happening again' seem to be the only re-experiencing phenomena which occur exclusively in PTSD.

In this study reliving re-experiences are described in association with fundamental changes in self perception and trust in one's own perceptual judgement to the extent of being unsure of one's own conscious state. Participants described difficulties in deciding whether they were awake or asleep, thinking or dreaming, and even alive or dead, following reliving re-experiences. Within an information processing framework then, this may suggest that following a traumatic experience, it is not only the new traumatic stimuli which are incongruent with pre-existing schemata, but also pre-existing, basic schemata, eg knowledge of consciousness, sensory perception, which become disorganised and are unable to *consistently* interpret 'everyday' stimuli.

Pseudomemories, in which the image content is of an imagined rather than actual, traumatic experience, have been described infrequently in the literature (Burstein, 1985, Bryant, 1996). However, 3/8 participants described them in this study, a higher incidence than expected. Again, this may be due to definition difficulties,

Pseudomemories seem to challenge information processing theories of PTSD. If traumatic stimuli are held in an active memory buffer, outwith conscious control (Horowitz, 1980, 1986), then the theory predicts that the content of 're-experiences', based on repetition of the stimuli in the buffer, should replicate these stimuli exactly.

The existence of pseudomemories suggests that images of expected outcomes, presumably based on existing fear networks and expectancy schemata (Foa et al, 1989, Creamer et al, 1992), rather than actual outcomes, based on sensory perception, replace trauma stimuli in active memory, and it is these which are re-experienced.

A more complex model such as an Interacting Cognitive Subsystems (ICS) approach (Teasdale and Barnard, 1993) may offer an appropriate framework for understanding re-experiencing phenomena within PTSD. Nine subsystems of mental codes dealing with specific types of information are proposed within the ICS which both store and transform cognitive and affective information (see Table 4).

Table 4 Summary of mental codes within the ICS

<i>INFORMATION CODE</i>	<i>SUBSYSTEM</i>	<i>INFORMATION CONTENT</i>
SENSORY	ACOUSTIC	what we 'hear in the world'
	VISUAL	what we 'see in the world'
	BODY STATE	taste,smell,touch,kinaesthetic
STRUCTURAL DESCRIPTION	MORPHONOLEXICAL	what we 'hear in the head'
	OBJECT	what we 'see in the head'
MEANING	PROPOSITIONAL	'knowing that....' specific facts schematic models of experience
	IMPLICATIONAL	
EFFECTOR	ARTICULATORY	subvocal speech output
	LIMB	'mental' physical movement

The development of the processes which transform the stored information depends upon the accumulated experience of the system and each subsystem can interact with the other subsystems allowing dynamic interplay. Information related to a trauma may be represented in patterns of several different codes therefore representations related to the trauma in one code, can have functional relationships that are quite different to those of related representations in other codes. This would allow for images to be created as a response to initial traumatic stimuli which maintain the context of a traumatic situation, but include elements of feared, rather than actual, perceptual

stimuli. This framework also allows for the occurrence of delayed onset PTSD which is difficult to explain using more simplistic and traditional models. It can also explain the simultaneous occurrence of the same perceptual stimuli but within the different contexts of memories, dreams or reliving re-experiences. It would, perhaps, be interesting to explore re-experiencing phenomena to a content analysis based on the ICS mental code system.

CONCLUSION

Re-experiencing in PTSD is a complex and multidimensional process and qualitative methods can be utilised to explore this complexity. Although it is not possible to draw firm conclusions from a sample of eight participants, it has been possible to begin to describe re-experiencing phenomena in terms of their perceptual content and space/time orientation within this sample.

All participants in this study have experienced all five types of re-experiencing (ie DSM IV, criterion B1-B5), during the course of their PTSD. All except one participant, who no longer described experiencing recurrent trauma related dreams, described re-experiences in all DSM IV categories at the time of interview. This suggests that it is more common for people to experience different types of re-experiencing phenomena concurrently, rather than to experience just one type, or one type at a time.

Descriptions from this sample suggest that 'reliving experiences', commonly termed 'flashbacks', are consistently associated with a sense of perceptual re-experience of stimuli which were reported to occur during the actual trauma, but are perceived to

occur in present time, ie '....as if (a perceptual aspect of the trauma) was happening again, now..'. These are distinct from vivid memories, which can be sensory images, but within the space/time framework that this is something which has already happened. Reliving experiences, which awaken the participant, are described to occur during dreams. However, it is often unclear whether these are dreams occurring during sleep, or hypnogogic/hypnocampic images occurring between sleep and wakefulness. All participants in this study described re-experiences in which stimuli content exactly replicated those described within the actual trauma. However, 3/8 participants also reported pseudomemories in which stimuli occurring within the re-experience seemed to have been constructed from a feared, rather than actual event. This was a surprising result and may suggest that pseudomemories are more common than the literature suggests.

Data analysis in this study was constrained to exploration of the content of re-experiencing, however, the content of re-experiencing cannot be fully understood without the preceding triggers and resultant responses associated with it. Processing of the memory of the re-experience itself, and the effects this has upon future re-experiencing, also needs to be explored in order to understand the role of re-experiencing in the development, maintenance and ultimately treatment of, PTSD.

Two decades after the introduction of PTSD into DSM III re-experiencing phenomena are still poorly understood. It is suggested that basic phenomenological information is needed before theory formulation can advance.

CRITICAL ANALYSIS

Qualitative research methods are utilised in an attempt to move research towards a greater realism (and hence validity), however this can be at the expense of reliability. Qualitative methods are often criticised for lacking scientific rigour (Mays & Pope, 1995). The most common criticisms are:-

1. These methods are strongly subject to researcher bias.
2. These methods can lack reproducibility - ie the research data is so dependent upon the perceptions and interpretations of the researcher that there is no guarantee that a different researcher would not come to radically different conclusions.
3. These methods lack generalisability.

Researcher bias

This study relies exclusively on the observation, interpretation and analysis of a single researcher, and is, therefore, subject to researcher bias. An attempt was made to enhance the reliability of the study by asking an independent assessor to categorise a selection of data. However, this process was still subject to researcher bias because the sample of data to be categorised and the list of potential category labels, was selected by the researcher in the first instance.

Reliability could have been improved by having more than one researcher involved in the process of data selection so that a consensus could have been reached with regard to the initial 'content of re-experiencing phenomena' dataset. Ideally, full interview transcripts could be analysed for content and structure by both the researcher and an independent panel of assessors. The level of agreement could then be assessed and

reported. Although this was not practically possible within the confines of this study, this process can be aided by the use of computer packages. Software is available to facilitate the analysis of the content of interview transcripts. A coding frame can be developed to characterise each utterance (eg participant identifier, age, sex, topic, word usage etc) and transcripts can then be coded by more than one researcher. Audiotapes can then be used for subsequent analysis by independent assessors. QSR NUD*IST (Qualitative Solutions in Research, Non-numerical Unstructured Data Indexing Searching and Theorising) is an example of such software. This system allows the data to be stored and indexed in such a way that the index system develops as the category structure emerges from the data. However, although this type of system sounds very promising, and would be useful for the amount of data generated within this study, it is still only as good as the original data collected, the design of the coding frame and the skill and judgement of the programmer.

Interview process

The CAPS interview schedule, based on the theoretical assumptions of DSM IV, was selected in an attempt to structure the initial interview, whilst at the same time allowing for free narrative, as well as quantifying PTSD in an attempt to reliably describe the sample. However, this may have also limited the data made available by the participants during the interview. The aim of the qualitative research interview is to discover the participants own framework of meaning. As far as possible it is important not to impose a priori categories and concepts from the researcher's own professional knowledge onto the process of data collection. However, the CAPS

interview schedule asks about re-experiencing phenomena directly , in terms of its' B1- B5 categories, and therefore does impose some a priori structure upon the data collection.

The effect of the interview process itself, upon the validity of the data collected, should also be considered. Data was collected by a single interviewer, during a single interview. Although this may be advantageous with regard to consistency and coherence within the interviewing process, the rigour of the study ultimately depends upon the integrity and judgement of the researcher. It is not possible for the researcher to answer the following questions objectively : Is the same degree of direction given to each participant ? What are the effects of leading questions ? How significant is the level of rapport ? Were participants given enough time to explain their viewpoint ? How did the researcher decide which information to follow up and which to ignore ? Hence, it is not possible for the researcher to assess and clearly report the effect they themselves have upon the interview outcome, and thus the data collected.

Presentation of account

Reliability in qualitative research depends upon producing a convincing account and can easily be compromised by its' presentation. The sheer volume of data can be difficult to summarise and to present 'objectively'. Enough of the original evidence needs to be systematically presented within the original account, so that the reader can be satisfied of the relationship between the interpretation and the evidence. The author hoped to try and address this problem by including identifiable verbatim examples within the account. However, once again these have been selected by the author to

illustrate her own interpretations and are therefore subject to bias.

Qualitative accounts are predominantly narrative in character and often do not sit easily within the traditional framework of a scientific paper. Although it is necessary to present the research in a way which allows the reader to follow the process of data collection, analysis and interpretation, the demarcation between 'results' and 'discussion' is not as clear as in quantitative enquiry. 'Results' in qualitative enquiry are, by definition, interpretations and cannot be clearly presented, outwith the context of a discussion of the rationale for their interpretation.

Comparison of grounded theory and content analysis

The aim of this study was to describe subjective accounts of re-experiencing phenomena within PTSD. Grounded theory methodology was selected because it aims to generate definitions, concepts and ultimately theory which is generated inductively from data provided by a purposive sample, of relevant cases. Content analysis is an alternative method of qualitative analysis which can also be used in descriptive studies. It differs from grounded theory in that the aim of content analysis is to record the frequency of *pre-defined* concepts within the data set, whereas the aim of grounded theory is to seek similarities and diversities within the data, which indicate the different facets of a *previously undefined*, potentially significant, concept (Pigeon & Henwood, 1996). Both approaches can be complimentary, however, eg using a content analysis technique in this study, 3/8 participants were identified as describing 'pseudomemories', an uncommon, but pre-defined concept identified within the PTSD literature. Content analysis is also a useful method of subsequent research, which can be used to explore specific concepts which have

arisen from grounded theory research.

Conclusion

The written account of research using qualitative methods is integral to the evaluation of the research itself. Only through the narrative account can the reader evaluate the rigour, and hence scientific worth of the study. The role of the researcher as a 'research instrument' also needs to be explicit in the account to address issues of reliability. However, this cannot be done objectively if the researcher is interviewer, sole data analyst and author.

Qualitative methods are useful in that they can generate rich and contextually meaningful data. The challenge however, is how best to analyse and summarise such data using non-numerical language, and to communicate the findings clearly and transparently.

REFERENCES

- American Psychiatric Association. (1994). *Diagnostic and Statistical Manual for Mental Disorders*. 4th edition. Washington DC : APA.
- Beck, A.T., Ward, C.H., Mendelson, M., Mock, J. & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry*, 4, 561 -571.
- Beck, A.T., Steer, R.A., & Garbin, M. (1988). Psychometric properties of the Beck Depression Inventory : twenty five years of evaluation. *Clinical Psychology Review*, 8, 77 -100.
- Blake, D.D., Weathers, F.W., Nagy, L.M., Kaloupek, D.G., Charney, D.S. & Keane, T.M. (1996). A clinician rating scale for assessing current and lifetime PTSD : The CAPS -1. National Centre for PTSD. Boston.
- Brewin, C.R., Hunter, E., Carroll, F. & Tata, P. (1996). Intrusive memories in depression : an index of schema activation ? *Psychological Medicine*, 26, 1271 - 1276.
- Brewin, C.R., (1998) Questionable validity of 'dissociative amnesia' in trauma victims. *British Journal of Psychiatry*, 172, 216 -217.
- Brown, R., & Kulik, J. (1977). Flashbulb memories. *Cognition*, 5, 73 - 99.
- Bryant, R.A. (1996). Posttraumatic stress disorder, flashbacks and pseudomemories in closed head injury. *Journal of Traumatic Stress*, 9, 621 - 629.

Burstein, A. (1985). Posttraumatic flashbacks, dream disturbances and mental imagery. *Journal of Clinical Psychiatry*, 46, 374 - 378.

Burstein, A. (1986). Two cases of lifelike visualisations based on imagination in posttraumatic stress disorder. *American Journal of Psychiatry*, 143, 939.

Calhoun, K.S. & Resick, P.A. (1993). Posttraumatic stress disorder. In *Handbook of Psychological Disorders*. 2nd edition. (ed. D. Barlow).

Creamer, M., Burgess, P. & Pattison, P. (1992). Reaction to trauma : a cognitive processing approach. *Journal of Abnormal Psychology*, 101, 452 - 459.

De Silva, P. (1986). Obsessional - compulsive imagery. *Behaviour Research and Therapy*, 24, 333 - 350.

Foa E., Steketee, G. & Rothbaum, B.O. (1989). Behavioural / cognitive conceptualisations of posttraumatic stress disorder. *Behaviour Therapy*, 20, 155 - 176.

Hodgkinson, P.E. & Stewart, M. (1989). *Coping with catastrophe. A handbook of disaster management*. Routledge: London.

Horowitz, M. J., Wilner, N. & Alvarez, W. (1979). Impact of events scale : A measure of subjective stress. *Psychosomatic Medicine*, 41, 209 - 218.

Horowitz, M. J., Wilner, N., Kaltreider, N. & Alvarez, W. (1980). Signs and symptoms of posttraumatic stress disorder. *Archives of General Psychiatry*, 37, 85 - 92.

Horowitz, M. J. (1986). *Stress response syndromes*. 2nd edition. Jason Aronson : New York.

Kolb, L.C. & Mutalipassi, L.R. (1982). The conditioned emotional response : a subclass of chronic and delayed posttraumatic stress disorder. *Psychiatric Annals*, 12, 979 - 987.

Marks, D.F. (1990). On the relationship between imagery, body and mind. In *Imagery Current Developments*.(eds. P.J. Hampson, D.F. Marks and J.T.E. Richardson). Routledge: London.

Mays, N. & Pope, C. (1995). Rigour and qualitative research. *BMJ*, 311, 109-112.

McFarlane, A.C. (1989). The aetiology of posttraumatic morbidity : predisposing, precipitating and perpetuating factors. *British Journal of Psychiatry*, 154, 221 - 228.

Pidgeon, N. & Henwood, K. (1997). Grounded theory : practical implementation. In *A Handbook of Qualitative Research Methods for Psychology and Social Science*. (ed. J.T. Richardson). BPS.

Seligman, M.E.P. & Yellen, A. (1987). What is a dream ? *Behaviour Research and Therapy*, 25, 1 - 24.

Spielberger, C.D., Gorsuch, R.L, Lushene, R., Vagg, P.R. & Jacobs, G.A. (1983). *Manual for the State-Trait Anxiety Inventory*. Consulting Psychology Press.

Strauss, A & Corbin, J. (1994). Grounded theory methodology. In *Handbook of Qualitative Research*. (eds. N.K.Denzin and Y.S. Lincoln). Sage: California.

Teasdale J.D. & Barnard, P.J. (1993). The interacting cognitive subsystems framework. In *Affect, Cognition and Change: Remodelling depressive thoughts*. Lawrence Erlbaum : Hove.

Turpin, G., Barley, V., Beail, N., Scaife, J., Slade, P., Smith, J. A. & Walsh, S. (1997). Standards for research projects and theses involving qualitative methods : suggested guidelines for trainees and courses. *Clinical Psychology Forum*, 108, 3 - 7.

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APPENDIX 1:2

GP Satisfaction Questionnaire

Lomond Healthcare NHS Trust Clinical Psychology Service
Audit of attitudes of General Practitioners

Name :

Date :

Practice Code :

1) Over the last 12 months approximately how many patients have you referred to clinical psychology ?

More than 10

Between 5 and 10

Less than 5

2) Would you like to be able to refer more patients ?

Yes

No

Don't know

3) If you would like to refer more patients, or have decided not to, do any of the following apply ? (please tick as many boxes as appropriate).

Waiting time too long

Lack of capacity for urgent referrals

Psychologist not on site

Don't know psychologist

Don't think psychologist can help

Unsure if referral is appropriate

Not enough psychology sessions

Patient unwilling to attend

No choice of psychologist

4) Which ones of the following would you regard as an acceptable waiting time for a first appointment with a clinical psychologist ?

Non-urgent patients 2 weeks

4 weeks

6 weeks

8 weeks

10 weeks

12 weeks

urgent patients 1 week

2 weeks

3 weeks

4 weeks

5) Once the patient has been referred , do you receive sufficient information about :

- | | | |
|-----------------------------------------------------------|----------------------------------------|----------------------------------------|
| a) Waiting time | too much
satisfactory
too little | |
| b) Initial assessment, formulation and proposed treatment | | too much
satisfactory
too little |
| c) Progress of treatment | too much
satisfactory
too little | |
| d) Termination and discharge | too much
satisfactory
too little | |
| e) Non attendance by patients | too much
satisfactory
too little | |

6) What kind of written communication do you find helpful ?

Long detailed reports
Short reports with headings
Brief letters on one page

7) Is the Clinical Psychology service provided sufficiently local for your patients ?

Yes
No

8) On the whole how have you regarded the Clinical Psychology service you have received ?

Positively
Negatively
Mixed Feelings

9) Do you have any other comments you would like to make ? If so please write in the space below :

Thankyou very much for your cooperation. Please return in the SAE provided.

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APPENDIX 3:1

Participant information sheet and consent form

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PARTICIPANTS INFORMATION SHEET

STUDY OF RE-EXPERIENCING SYMPTOMS IN POST- TRAUMATIC STRESS

Thankyou for your interest in this study. I would like to give you some more information about it and to invite you to participate if you wish.

Please read the information carefully.If you decide that you are able to take part , please detach and sign the consent form below and return it to me in the stamped addressed envelope provided.

Why is this study being done ?

People who have suffered a traumatic experience like yourself, often re-experience their trauma through intrusive pictures, thoughts, feelings and memories of it for a long time afterwards. This can be very distressing. We would like to be able to understand these symptoms more fully, so we can treat them more effectively. To do this we need to gather information in the form of personal descriptions of how exactly individuals re-experience their trauma.

Where will I have to go ?

If you decide to help with this study, you will be invited to meet with me, Gillian Simpson, at a place which is convenient for you, such as your local Clinical Psychology Department.

How long will it take ?

We will meet only once, for between one and one and a half hours. This session will be split into two sections to allow for a short break in the middle. You can of course take other breaks if you wish, and it is you right to terminate the session at any point.

What will I be expected to do ?

I will ask you some questions about your reaction to your trauma. I will be seeking information specifically about imagery, nightmares, flashbacks and any other ways in which you re-experience your trauma. Your responses will be audiotaped to allow analysis by myself and another Clinical Psychologist, Dr. Kate Davidson . I will also ask you to complete three short questionnaires which assess your general mood.

What will happen to the information ?

All information will be kept strictly confidential. It will be looked at by myself and Dr. Davidson only. The study should be complete by October 1998. All questionnaires and tapes will then be destroyed.

Will my current treatment be affected ?

No. Participation in this study will not affect your patient rights or treatment in any way. If you decide not to participate, or decide to withdraw your consent at any stage, this will not affect your patient rights or treatment in any way.

I hope you will be interested in taking part in this study.

**GREATER GLASGOW COMMUNITY AND MENTAL HEALTH
SERVICES NHS TRUST**

CONSENT FORM

I, (please print name)

of, (please print address).....

.....
TEL:

have read and understood the information provided.

I understand that part of my session will be audiotaped.

I understand that participation or non participation in this study will have no effect upon my current treatment.

I AGREE TO PARTICIPATE IN THE STUDY AND GIVE MY CONSENT TO THE RESEARCH PROCEDURES DESCRIBED IN THE INFORMATION SHEET.

DATE..... SIGNED.....

Please return this form in the envelope provided. Thankyou .

Gillian Simpson, Trainee Clinical Psychologist.
University Department of Psychological Medicine, Academic Centre, Gartnavel Royal Hospital,
1055 Great Western Road, Glasgow G12 OXH.

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APPENDIX 4:2

DSM IV Diagnostic criteria for PTSD

Appendix 4:2

DSM IV diagnostic criterion B (re-experiencing) for PTSD (APA 1994, p428)

B. The traumatic event is persistently re-experienced in one (or more) of the following ways :-

- 1) recurrent and intrusive recollections of the event, including images thoughts or perceptions.
- 2) recurrent , distressing dreams of the event.
- 3) acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations, and dissociative flashback episodes, including those that occur on awakening or when intoxicated).
- 4) intense psychological distress at exposure to internal and external cues that symbolise or resemble an aspect of the traumatic event.
- 5) physiological reactivity on exposure to internal or external cues that symbolise or resemble an aspect of the traumatic event.

APPENDIX 4:3

Verbatim examples of sensory re-experiencing

Appendix 4:3

Verbatim examples of reported re-experiencing in each sensory domain

1) VISUAL

"...I see his son in this dream. He's got something in his hand, some kind of weapon and he is jumping about like a boxer, from side to side.." (P2)

"...that wakes me....the Iraqis.....visiting me in my bed.....em.....all they burnt guys are all standing around my bed looking at me, I usually see that....." (P4)

2) AUDITORY

"... I wake up with a bang, like a bullet....and you hear the crack..... and you wake up..." (P5)

3) OLFACTORY

"... I can smell the petrol, I can see everything, I'm reliving every bit...." (P3)

"... the smell.....em.....is like bacon burning...." (P4)

4) PAIN

"... It's scary, I wake up, I'm very painful, sweating and shouting out...." (P1)

"... this uncontrollrd picture that you can't stop, you had the smell of smoke and your arms were lowping because you had just hit the steering wheel and you feel all that pain.." (P6)

5) TASTE

"... sometimes I get a taste in my mouth, I don't know what it is , like a dryness...and when that happens I usually get a flashback..." (P5)

"... I wake up in the night and I see the motor, and I see myself trapped in it, I smell the smoke, and I taste it in my throat....." (P6)

6) TACTILE

"... I felt I was actually there, I actually felt their hands in my hands to take them out (of the crashed van).." (P3)

APPENDIX 4:4

Verbatim examples : Descriptions of re-experiencing format

Appendix 4:4

Examples of verbatim descriptions of formats of re-experiencing

1) STILL

"... my crash is a picture, there is a vehicle on top of my vehicle and nothing is moving. I'm sitting looking out of the windscreen of the motor.....seeing it all....." (P6)

2) LIKE A VIDEO

"... as if I am standing back watching them coming, you see them coming into the room, as if you are watching it, as if it is a video..." (P5)

3) SLOW MOTION

"... it all comes back in wee flashes..wee slow motions, one after another and it builds into a big picture....." (P3)

4) BACKWARDS VIDEO

"... when I started seeing this and feeling it in my head, I seen that first (image of a stabbed man) and then it goes to the bit before that , then it works itself to the very start and I always go back to the night before...." (P2)

APPENDIX 5:1

Clinical Case Research Studies - Abstracts

Appendix 5:1

CLINICAL CASE RESEARCH STUDIES - ABSTRACTS

Case 1

Treatment of recurrent nightmares using imagery rehearsal : a case study

Abstract

Imagery rehearsal is a cognitive-behavioural technique which has been shown to be effective in reducing the frequency of nightmares. A case is presented where imagery rehearsal techniques were successfully utilised to treat recurrent, posttraumatic nightmares resulting from a scaffolding accident five years previously. The role of imagery in models of posttraumatic stress disorder is considered.

Case 2

Cognitive deficits associated with early onset Type 1 Diabetes Mellitus.

Abstract

A case is presented of early onset (prior to 4 years old) Type 1 Diabetes Mellitus. This case highlights the importance of cognitive assessment in diabetes management. The role of cognitive deficit as a maintaining factor in dangerous eating behaviour is explored. The need for early identification of cognitive vulnerability is important so that the educational needs of these children can be adequately met.

Case 3

Adaptation to chronic pain : a case study.

Abstract

The medical model of disease seeks to identify pathology, obtain a diagnosis and thus treat the symptoms of the 'disease'. However, chronic pain does not fit easily into this model because often it occurs in the absence of identifiable pathology. Psychological approaches are effective in helping people cope with their pain and can help people achieve improved function. A case is presented of the treatment of a 48 year old woman with a one year history of chronic, disabling pain of unknown aetiology. Pain management strategies focused on improving mood and function by increasing perceived control over pain symptoms. Maintenance of treatment gains is considered within a a stages of change framework.

