A SCHEMATIC CONCEPTUALIZATION OF ALEXITHYMIA: IMPLICATIONS FOR SURVIVORS OF TRAUMA

BY

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FOR
DOCTOR OF PSYCHOLOGY IN CLINICAL PSYCHOLOGY (PSYCH. D.)
CONVERSION PROGRAMME

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SECTION 1: ACADEMIC DOSSIER

I. THE EFFICACY OF EYE MOVEMENT DESENSITIZATION FOR POST TRAUMATIC STRESS DISORDER

The use of EMDR with psychological disorders of all denominations has swept Europe and North America. Given the popularity of this treatment approach, it was felt that as part of Continuing Professional Development, formal training should be undertaken. Subsequently training on Level I and Level II of EMDR was completed in 1996.

As a result of this training and in applying it to clinical practice with trauma survivors questions arose. Specifically, is EMDR more beneficial in comparison to alternative treatments (particularly, cognitive-behavioural approaches) which are frequently administered to traumatized individuals, but which also form part of the procedure for EMDR? Secondly, given that eye movements are presumed to be essential to the treatment process are they the source for the speedy recovery rates claimed for EMDR?
II. (DE)CONSTRUCTING PSYCHOLOGICAL REACTIONS TO STATE SANCTIONED TORTURE

A high proportion of my work at the Traumatic Stress Clinic, London, is the assessment and treatment of survivors of state sanctioned violence, particularly experiences of torture, within non-western communities. With increasing clinical experience and knowledge of this particular group of traumatized people, difficulties with the existing conceptualization (e.g. limitation of PTSD diagnosis, ethnocentric bias) and treatment approaches (e.g. limitation of treatment practices due to complexity of reactions to torture, and understanding from the cultural concerned) could be seen.

Subsequently, this led to the exploration of an alternative understanding of trauma and its conceptual and clinical implications for torture survivors. Attention has been drawn to how individuals construct their experiences of reality. Specifically, interest was directed towards the meanings (cognitive and affective) people ascribe in the aftermath of trauma. Borrowing from work that has already taken place with traumatized populations (survivors of childhood sexual abuse), it is suggested that by allowing the survivor to construct their experiences of torture, clinicians can elicit the core themes that dominate that experience and which culminate in psychological distress. It is suggested that a constructivist approach to understanding reactions to torture has both conceptual and clinical benefits.

SECTION 2: CLINICAL DOSSIER

CONSUMER SATISFACTION IN AN OUT-PATIENT POST TRAUMATIC STRESS DISORDER CLINIC

The Traumatic Stress Clinic has been providing a service since 1987, as a result of the Kings Cross tragedy. Many people have since passed through its doors. One question that constantly reverberates though the minds of the staff and which is openly expressed during meetings is "What do clients really think of us?".
Aside from 'egocentric' reasons it was felt that as part of good clinical practice, it was time for the clinic to ask clients what they thought and felt about the service they had received. Specifically the intention of the survey was to identify areas of weakness, which are probably overlooked in the everyday running of a busy clinic. Once identified the clinic could then discuss ways of improving those areas seen as unsatisfactory to the clients. This should then be followed up by a further survey asking clients whether they approved of the changes. In essence this survey was seen as the beginning of an audit cycle which would continue so as to evaluate the service provided.

SECTION 3: RESEARCH DOSSIER

Title of Project

A SCHEMATIC CONCEPTUALIZATION OF ALEXITHYMIA: IMPLICATIONS FOR SURVIVORS OF TRAUMA

Name of Research Supervisor

Dr. Stuart Turner, Consultant Psychiatrist, Traumatic Stress Clinic, London.

Rational for Project

Whilst in clinical practice it became apparent that some clients were unable to describe or communicate what they were thinking or feeling, despite the tragic circumstances which brought them to the clinic in the first place. Although notably distressed and presenting with multiple complaints, treatment attempts failed.

In order to understand why this was so, a literature search was conducted to identify whether there were any specific reasons that could explain this clinical problem. In doing so, the construct of alexithymia in relation to trauma was brought to attention. Several observations had been made with Vietnam combat veterans, who were unable to identify
and/or communication emotional states. However, theorists were divided as to whether or not alexithymia was a pre-existing trait or a state-dependent reaction.

Given that only a small minority of individuals go on to develop Post Traumatic Stress Disorder following a traumatic event, it has often been suggested that pre-existing vulnerability factors predispose individuals to developing a trauma reaction. As such it was hypothesized that perhaps alexithymia was in fact a pre-existing trait, characterized by cognitive structures. Specifically, negative attitudes towards expressed emotion.

**Methodology**

The study will use two groups (a) a group diagnosed with PTSD and (b) a non-traumatized comparison group. The study will employ a between groups design to detect whether alexithymia and negative attitudes towards expressed emotion exit in both groups and a within groups design to explore the effect of both variables upon trauma in the PTSD group.

The research questionnaires will include the Toronto Alexithymia Scale-20 (Bagby et al., 1992) and the Attitudes towards Expressed Emotion scale (Joseph et al., 1994).

**Data Collection Plans**

For the PTSD group, data will be drawn from individuals referred to the Traumatic Stress Clinic, London. For the non-traumatized comparison group, participants will be taken from University College Hospital, Chiropody course. In both cases approval will be required from the Ethics Committee.
THE EFFICACY OF EYE MOVEMENT DESENSITIZATION
AND REPROCESSING FOR
POST TRAUMATIC STRESS DISORDER

1.0 AIM OF REVIEW

Eye Movement Desensitization and Reprocessing (EMDR), was discovered by chance by Francine Shapiro, (1989a), when she observed that her own "recurring, disturbing thoughts were suddenly disappearing and not returning" following their pairing with saccadic eye movements. Subsequently, Shapiro, (1989a) suggested that saccadic eye movements could effectively reduce the symptoms of Post Traumatic Stress Disorder (PTSD; American Psychiatric Association, 1994), by facilitating the processing of trauma based memories, and in turn diminishing the intensity of affective reactions and altering the semantic content associated with the traumatic event.

Subsequently, there has been an explosion of research in the area of trauma (e.g. Lipke & Botkin, 1992; Puk, 1991; McCann, 1992) in an attempt to support Shapiro's (1989a) findings. Of the research undertaken by Shapiro and her followers is the most remarkable observation that EMDR can alter the affective and semantic content of traumatic memories after one session (Shapiro, 1989a; Solomon, 1991; Lipke, 1991) or within seconds (Kleinknecht & Morgan, 1992).

Given the speed with which EMDR can alleviate trauma symptoms, it has potential clinical and economic benefits for patients and clinicians alike. This has resulted in its increasing popularity within clinical circles during the 1990's. Not only has EMDR been posited as a wonder cure for PTSD, but has in recent years been applied to a wider range of clinical phenomena such as panic disorder (Goldstein & Feske, 1994), phobias (Kleinknecht, 1993) and sexual dysfunction (Wernik, 1993), demonstrating equal success. Consequently, over 9,000 clinicians world wide have flocked to EMDR workshops to receive formal training (Shapiro, 1995).
However, over the last few years, review papers (Lohr et al., 1992; Herbert & Meuser, 1992; Lohr et al., 1995; Greenwald, 1994; Metter & Michelson, 1993, for example) published in psychological and psychiatric periodicals have critically commented on the efficacy of EMDR. Drawing upon research conducted to date, it has been argued that empirical investigations have provided little evidence to suggest that EMDR per se is beneficial for psychological disorders (e.g. depression, generalized anxiety, or specific phobias) nor is it superior to existing treatment modalities (e.g. cognitive and/or behavioural approaches). Given the popularity of EMDR in Europe and North America this raises a serious ethical question. Should clinicians be administering a technique which has limited efficacy?

Critical reviews concerning the effectiveness of EMDR are emerging at a constant rate. In general they tend to focus on the applicability of EMDR to a wide variety of psychological disorders. In addition, they do not discuss the role of eye movements which are claimed to be essential for the effectiveness of EMDR. Specifically, reviews have not appraised the theories which have been proposed to explain the utility of eye movements or research which has attempted to disseminate the importance of eye movements.

So, not wanting to replicate what has already been covered by existing papers, this review will specifically question whether EMDR is clinically proven for the alleviation of trauma symptoms, and whether this approach is superior to current treatment approaches for PTSD. Furthermore it will question whether eye movements are the most important components for the effectiveness of EMDR by reflecting upon the theoretical explanations posited and by examining those studies which have evaluated the contribution of eye movements to the therapeutic process of EMDR.
2.0 WHAT IS EYE MOVEMENT DESENSITIZATION AND REPROCESSING?

Briefly, EMDR involves the client visualizing the traumatic event as well as associated negative cognitions, emotions and related physical sensations, whilst simultaneously tracking the therapists finger whilst it is rapidly moved from side to side in sets of 10 to 30 saccades. Patients typically rate discomfort in terms of Subjective Units of Distress (SUDS, Wolpe, 1991). After the target memory and associated images have been desensitized (SUD ratings have dropped to zero), negative cognitions associated with the image are replaced with restructured, positive thoughts. This involves the patient holding the targeted image and thinking of the positive cognition whilst tracking the therapists finger. Acceptance of the new cognition is assessed by the Validity of Cognitions Scale, (VCS, Shapiro, 1989a,b). When the VCS reaches a rating of 7 (completely valid) the procedure is stopped. When distress for a particular memory has been reduced, a second memory is subjected to the same procedure. The process is repeated in this way until distress is reduced in both affective and semantic content.

3.0 EVALUATION OF EMPIRICAL RESEARCH

Since Shapiro's (1989a) initial observation that eye movements alter the affective and semantic content of traumatic memories, many investigators have aimed to support her findings with case and group studies. Broadly, researchers have tried to see whether EMDR can (a) demonstrate significant improvements with trauma symptomatology and (b) whether the effects of EMDR are comparable to alternative treatments for PTSD. For ease of reference this section will be subdivided into positive and negative outcome studies.
3.1 POSITIVE OUTCOME STUDIES

Case Studies

As is usually the case with new psychological treatment techniques, the efficacy of EMDR was first reported with case studies. Its benefits have been demonstrated with combat veterans (Lipke & Botkin, 1992; Thomas & Gafner, 1993; Viola & McCarthy, 1994), violent assaults (Page & Crino, 1993; Kleinknecht & Morgan, 1992), traumatic bereavement (Puk, 1991), rape (Shapiro, 1989a, Wolpe & Abrams, 1991; Spector & Huthwaite, 1993), burns survivors (McCann, 1992) and those presenting with dual diagnoses such as PTSD and substance misuse (Shapiro, et al., 1994; Forbes et al. 1994, Marquis, 1991).

Individually, these reports present dramatic and often hard to believe clinical changes. As an illustration, Spector & Huthwaite (1993) utilized EMDR on a female survivor of a sexual assault. After one session, the effects of EMDR were almost immediate with the patient reporting a significant diminishment of trauma symptoms, as indicated by SUD (decreased to 0) and VCS (reached to 7) levels. Moreover, it has been reported (e.g. Spates & Burnette, 1995; Forbes et al., 1994) that long term sufferers of PTSD benefited from EMDR. Spates & Burnette, (1995) demonstrated in 3 cases whom had a 30 year history of PTSD, that EMDR was effective after only one session, and that they subjects were completely symptom free when measured on standard (Symptom Checklist-90; Derogatis, 1992; and Impact of Events Scale; Horowitz et al., 1979) and non-standardized (SUD's, VCS ratings) assessments.

Group Studies

Five controlled studies involving comparison groups lend further support to EMDR. It has been reported that EMDR is superior to recounting the traumatic event alone as indicated by SUD and VCS ratings (Shapiro,1989b), that eye movements were superior to hand taps and exposure only, on SUD ratings and psychophysiological measures such
as heart rate and blood pressure (Wilson et al., 1995a), and wait list control group, as measured by non standardized (SUDS and VCS ratings) and standardized (SCL-90 and Impact of Events Scale) assessments (Wilson et al., 1995b). Whilst, alternative treatments such as biofeedback and group relaxation (Silver et al., 1995) and Critical Incident Stress Debriefing (Solomon & Kaufman, 1994) showed no significant changes in comparison to EMDR in non-standardized (SUD) and standardized measures (Impact of Events Scale) respectively.

As an example, Shapiro (1989b) randomly assigned 22 clients with histories of trauma to either one session of EMDR or a placebo condition (recounting their traumatic memories without engaging in therapist directed eye movements). Non-standardized assessments (SUDs and VCS levels) were conducted prior to treatment, throughout the treatment session and at 1 and 3 month follow ups. The placebo group showed no improvement whilst the treated group showed consistent and dramatic improvement, including reduction or elimination of trauma related distress (decrease in nightmares, flashbacks and intrusive thoughts) and irrational negative self attributions. Gains were maintained at a three year follow up (Shapiro, 1991).

**Methodological Limitations**

At first glance the case and group results seem impressive. However, these studies suffer from design flaws.

1. To begin with, there was no independent validation of the diagnosis of PTSD, aside from the clinical judgement of the original treatment providers (e.g. Shapiro, 1989 a,b; Lipke & Botkin, 1992; Wilson et al., 1995a; Silver et al., 1995). For example, with Shapiro's (1989b) study, 5 of the 22 subjects were not clinically referred by counsellors but were "mental health professionals who desired relief from traumatic memories that continued to cause them distress (e.g. intrusive thoughts, nightmares, intimacy problems)". This raises a question as to what clinical condition was actually treated.
2. The choice of indicators of treatment effects, used by all the studies conducted to date, also calls for comment. Firstly, there is an absence of any standardized pre or post treatment measures or baseline clinical data to assess changes in symptomatology in several case and group evaluations of EMDR, (e.g. Shapiro, 1989a, Puk, 1991; Lipke & Botkin, 1992; Spector & Huthwaite, 1993; Silver et al., 1995; Wilson et al., 1995a,b) For instance, while Shapiro provides a narrative listing of complaints, they are in general different from subject to subject, and quantified only in terms of "decreased" or "eliminated". There is little in the way of quantitative evaluation of change in symptoms before, during and after treatment. It is possible that the use of standardized measures would have shown a negative effect for EMDR or conversely, would have demonstrated the positive benefits of this treatment thus increasing its validity.

3. To follow on, some case studies (e.g. Spector & Huthwaite, 1993; Page & Crino, 1993; McCann, 1992) and group trials (e.g. Shapiro, 1989b; Silver et al., 1995) solely relied on SUD ratings as a measure of the therapeutic effects of EMDR. SUD's are a standard measure of emotional reactivity with documented physiological correlates (Thyer, et al., 1984). However, investigators failed to utilize physiological (e.g. galvanic skin response, heart rates) or standardized measures (e.g. Brief Symptom Inventory, Derogatis & Spencer, 1982, or Impact of Events Scale, Horowitz, et al., 1979) to validate their findings. Evidence of reductions in these measures would have given greater validity to the efficacy of EMDR.

4. Most if not all studies relied upon VCS ratings. However, the value of these ratings is questionable. Shapiro (1989b) justifies its use by the presumption that "irrational cognitions are a part of PTSD and cognitive therapy serves to restructure these beliefs (De Fazio, et al., 1975; Keane et al., 1985)". These sources do not directly address the relationship between PTSD and irrational cognitions. Moreover, there is no empirical data to indicate that irrational beliefs are directly associated with PTSD per se. Most measures of irrational beliefs are confounded by emotional lability (Malouff & Shutte, 1986), and those that are not so confounded have not been seen in the empirical
characterization of PTSD. In addition, the VCS appears to be no more than a semantic
differential procedure applied to the idiosyncratic imagery content of each treatment
participant. The psychometric properties of the procedure are unknown. Therefore, it is
possible to conclude that the VCS procedure assesses affective lability more than it
assesses the irrational or pathological nature of attributional processes, and as such is
redundant.

5. The potential influence of non-specific effects in the treatment procedure should also
be addressed. Firstly, in comparison to standard treatment styles (e.g. cognitive,
behavioural and analytical procedures) where the clinician sits some distance away and
has little physical contact with the patient, EMDR has a high level of interaction,
whereby the therapist sits in close proximity to the patient and carries out motoric acts.
This requires considerable enthusiasm on the part of the therapist. Such interaction may
affect patient responses, whereby the patient, may want to 'please the therapist' and get
the 'right' result.

Apart from the influence of the therapist, there are cues within the EMDR protocol which
gives patients an idea of what the treatment will do for them. For instance the EMDR
manual, directs the therapist to give the following rational:

"When a trauma occurs it seems to get locked in the nervous system with the original picture,
sounds, thoughts and feelings. The eye movements we use in EMDR seem to unlock the nervous
system and allow the brain to process the experience." (Shapiro, 1996, p23)

The fact that the experimenter has told the patient that eye movements will resolve their
difficulties surely leads the patient to create that effect, particularly, if they are in need
of approval from their therapist?

Closely related to the arguments of experimenter influence and demand expectancies, the
treatment procedure may also have been influenced by the psychological concept of
'faith' (Plotkin, 1978). In general, the concept of 'faith' denotes that individuals who
have faith in a given procedure, such as, EMDR are more likely to succeed than those who do not have that faith (that is those who doubt). On the basis of their faith in this procedure, they will be strongly motivated to engage in any actions (e.g. tracking a therapists finger or hand) that they understand to be components of the therapeutic procedure, and this will result in or be expressions of therapeutic improvement. Therefore it is possible that those selected for EMDR are those who have ‘faith’ in the procedure, results, may have been slightly different if samples had consisted of ‘doubters’.

6. Lastly, the group studies had poor sample definition. For instance, Shapiro, 1989b; Wilson et al., 1995b; Silver et al., 1995, had samples of 22, 23, and 55 respectively, resulting in small cell sizes. It is possible that their small sample sizes created a Type 1 statistical error, thus, claiming there was a difference when in fact there was not. Under such circumstances it makes it difficult to conclude that EMDR is superior to other treatment approaches for PTSD.

3.2 NEGATIVE OUTCOME STUDIES

In stark contrast to the plethora of positive outcome studies, several investigations have shown little improvement in trauma symptomatology with EMDR and no significant effects between EMDR and alternative treatments.

Case Studies

Single subject experiments have reported that EMDR failed to diminish the affective reaction to re-experiencing phenomena such as intrusive thoughts, images and nightmares for which this treatment has been claimed to do. The clinical effects of EMDR were found not to be significant when measured with standardized instruments when using the SCL-90 and Impact of Events Scale (Vaughan et al., 1994b) or physiological measures such as heart rate and systolic blood pressure (Montgomery and Ayllon, 1994a,b). For instance, Montgomery and Ayllon, (1994b) evaluated three pairs of individuals diagnosed with PTSD, but for whom the major complaint was re-experiencing the event of the
trauma. The within series treatment phases were designed to assess the effect of adding components of the EMDR procedure. The authors found no statistically significant changes in heart rate, blood pressure or SUD ratings, when comparing subjects who were either (a) exposed to an imagery condition (b) given the full EMDR treatment but omitting eye movements or (c) the complete EMDR procedure.

**Group Studies**

Similarly, group evaluations have observed that there were no differential effects when EMDR was compared to alternative treatment approaches (Vaughan et al., 1994a; Boudewyns et al., 1993). Vaughan et al., (1994a) reported that with 36 trauma victims, there were no significant differences in standardized instruments (Hamilton Rating Scale for Depression; Hamilton, 1960; Impact of Events Scale; Horowitz et al., 1979; Structured Interview for PTSD, Davidson et al., 1989), when EMDR was compared to therapeutic procedures such as Image Habituation Training (IHT), which involves repetitive audio presentation of the trauma scenario accompanied by written self monitoring of cognitions and affect (Vaughan & Tarrier, 1992), or Applied Muscle Relaxation (AMR), an anxiety management technique which is taught by the therapist and practised twice daily for 20 minutes (Ost, 1987).

In comparison with those studies which found EMDR to be effective with those presenting with chronic PTSD (e.g. Silver et al., 1995), two studies conducted with veterans of the Vietnam war (Boudewyns et al., 1993; Jensen, 1994) found that EMDR did not affect trauma symptoms. For example, Boudewyns et al. (1993) compared EMDR to imaginal exposure and a milieu treatment with Vietnam veterans and found no differential effects of treatment on physiological (heart rate, electromyographic response, skin conductance and hand temperature), or standardized measures such as the, Clinician Administered PTSD scale (Blake et al., 1990), Impact of Events Scale, (Horowitz et al., 1979) and Mississippi PTSD Scale, (Keane et al., 1986). Although post treatment results indicated that SUD ratings were lowest for the EMDR group.
Similarly, Jensen (1994) treated 74 combat veterans, who were randomly assigned to either a control group or EMDR. Although EMDR subjects reported a decreased in SUD ratings, no differences were found with standardized measures such as the Mississippi PTSD Scale (Keane et al., 1986) and Goal Attainment Scaling (Kiresuk & Sherman, 1968) or VCS ratings for either group.

Methodological Limitations

Certainly, these studies overcame many of the methodological limitations noted in positive outcome studies, such as validating the diagnosis of PTSD and using reliable measures to evaluate the effect of treatment. Nonetheless, there were several methodological difficulties which could question the reliability and validity within these studies as well as account for the differences observed between the positive and negative outcome studies.

1. Perhaps the differences can be put down to the measurements used? Both Jensen (1994) and Boudewyns et al., (1993) evaluated veterans with chronic PTSD, using the Mississippi PTSD scale which assesses global functioning rather than a specific symptomatology (e.g. intrusions, hyper vigilance, irritability). It may be that in those with severe and chronic PTSD these measures are incapable of detecting subtle improvements with specific symptoms. Moreover, these studies focused on a particular memory, it may be that these measures are insensitive to change when only one of a dozen traumatic memories has actually been treated. To date there exists no standardized measure to assess change in traumatic memories following EMDR. Thus, one could argue that if such measures are insensitive, then EMDR may not be as ineffectual as these studies would have us believe. Nonetheless, these studies also used SUD and VCS ratings as those who reported positive findings for EMDR but still found no differences. Why?

2. In answer to the latter question, it could be suggested that those who demonstrated EMDR to be effective used outpatient samples suffering from a single traumatic memory (e.g. Shapiro, 1989b; Wilson et al., 1995a), whereby, one session of EMDR may have
been sufficient for their resolution. It may be unrealistic to expect significant gains in only a few sessions, for those presenting with multiple memories, such as combat veterans. Boudewyn et al., (1993) and Vaughan et al., (1994a) asked their patients to recall the original memory at post treatment, this, may have reactivated similar, untreated memories, thus contaminating the subjects circumscribed gains. Conversely, chronic traumatic experiences may not be suited to this particular type of treatment. Indeed, conditions such as chronic depression, and borderline personality disorder have been shown to be less responsive to EMDR (Lipke, 1992).

3. Finally, those studies which compared EMDR to alternative treatments and found it to be ineffective may have confounded the outcome. For instance milieu treatment is an invalidated method therefore those studies which used this approach (Jensen, 1994; Boudewyns et al., 1993) as a comparison treatment may have underestimated the effectiveness of EMDR. Moreover, with regards to Vaughan and his colleagues study (1994a) neither of the procedures used provide valid comparisons. The IHT procedure has not yet been empirically demonstrated to be effective, as Vaughan & Tarrier (1992) have evaluated it using only a series of uncontrolled cases. Moreover, AMT has not been validated as a treatment for PTSD per se (Solomon et al., 1992), though it does appear to be effective for other disorders of anxiety (Ost, 1987). Nonetheless, those studies which demonstrated the effectiveness of EMDR also used invalidated treatment procedures. Silver et al., (1995) utilized a milieu treatment, whilst Solomon and Kaufman (1994) used Critical Incident Debriefing which is also not a validated method (Bisson et al., 1994). So, those studies which showed a negative outcome cannot be faulted on invalidated treatment methods alone.

In summary, a very mixed picture is gleaned from the literature concerning the effectiveness of EMDR for traumatized individuals. On the one hand there are case studies which show EMDR to ameliorate the symptoms of PTSD (e.g. Shapiro, 1989a; Lipke & Botkin, 1992) and was shown to be more effective in comparison to placebo groups (e.g. Wilson et al., 1995b; Shapiro, 1989b) and alternative treatments (e.g. Wilson et al., 1995a; Silver et al., 1995). On the other hand there are those studies which
demonstrated that EMDR was not effective whether compared to a non-treatment control group (i.e. Montgomery & Ayllon, 1994b) or ancillary therapeutic procedures (i.e. Vaughan et al., 1994a; Boudewyns et al., 1993). To complicate matters further, both the positive and negative outcome studies were marred by methodological flaws. Consequently, in reviewing the literature it was difficult to come to any definitive conclusion as to the efficacy of EMDR for traumatized individuals.

4.0 AN ANALYSIS OF THE UTILITY OF SACCADIC EYE MOVEMENTS

Possibly, the comparative effect of EMDR and other treatments for PTSD, may not be distinguishable. According to Shapiro (1995) EMDR employs both exposure (i.e. desensitization) and cognitive processing for traumatic memories. These psychological techniques have shown to be helpful in reducing many of the symptoms of PTSD in specific populations (e.g. Resick and Schnicke, 1992; Kilpatrick et al., 1982; Keane et al., 1989). The only unusual aspect of EMDR is that it also involves bilateral eye movements. Therefore, the fundamental question is do eye movements make any difference?

Before discussing the component studies which have been carried out, attention shall first focus on the theories put forward to explain the utility of eye movements to the procedure of EMDR. (1) From the proponents of EMDR, suggestions include: neurophysiological processes (Shapiro, 1989b, 1995), and the notion of Rapid Eye Movement during sleep (Lipke & Botkin, 1992; Morton, 1993), whereby it is proposed that eye movements per se are the main contributory factors to the process of EMDR. (2) Alternative theories have included conditioning models (Dyke, 1993; Armstrong & Vaughan, 1996). In this case, eye movements are not an important part of the EMDR procedure, but tracking the therapists finger is, as it acts as a distraction from traumatic memories. (3) In addition, an idea that has yet to be explored by EMDR enthusiasts, this paper introduces the notion that perhaps hypnotic processes rather than eye movements could explain the effectiveness of EMDR.
4.1 THEORETICAL PERSPECTIVES OF THE ROLE OF EYE MOVEMENTS

Neurophysiological Processes

Shapiro (1989a) argues that EMDR restores the balance between neural excitatory and inhibitory processes. Drawing on the work of Pavlov and Wolpe she claims that:

"pathological neural changes caused by traumatic overload, freeze/maintain the incident in its original anxiety producing form...This pathological change of neural elements blocks the usual progression of continued information processing to a resolution......Rhythmic, bilateral saccadic movement along with an alignment of cognition and pictorial image which connects to the physiologically stored traumatic memory (1) restore the balance (between excitatory and inhibitory processes), (2) reverse the neural pathology, and (3) allow the information processing to proceed to resolution. (Shapiro, 1989a. p.220)"

Shapiro, however, neglects to specify the nature of the 'pathology' generated in the nervous system by trauma, the means by which the neuropathology is reversed, or the nature of the "usual progression of information processing". The brain is a complicated mechanism involving an interplay between neurohormonal, neuroanatomical and psychophysiological effects. Shapiro's model seems to reduce the effects of EMDR to one particular neurological system, and she never makes it quite clear which system she is referring to, and so conveys an overly simplistic understanding of the reality of human psychopathology. Our understanding of the psychobiology of PTSD is still relatively small. Although studies are underway, (see Van der Kolk, 1996, for a review of this area), results are only preliminary.

Rapid Eye Movement Sleep

Other investigators have speculated that eye movements induced during the EMDR procedure mimic Rapid Eye Movement (REM) sleep (Lipke & Botkin, 1992), which is hypothesised to facilitate information processing and integration of upsetting thoughts.
It has also been suggested that reciprocal inhibition or relaxation which occurs during REM sleep also facilitates desensitization of the memory sufficiently to allow integration to proceed (Shapiro, 1989b).

However, there are difficulties with this particular explanation. Firstly, while the physiological correlates of EMDR found by Shapiro (1989a,b) and Wilson et al., (1995a) fit with the latter notion, it is not clear whether relaxation is instrumental to the procedure or merely incidental. Secondly, it is not clear whether it is the actual eye movements which supposedly mimic REM sleep that contribute to the effects of EMDR or relaxation? Alternatively, it could be argued that if EMDR is akin to REM sleep is it theoretically separable from relaxation? Surely, both are one of the same: a time when the body and mind are relaxed thus allowing the processing and desensitization of the traumatic memory to proceed?

**Conditioning Models**

Conditioning models (Dyke, 1993; Armstrong & Vaughan, 1996) may offer a more parsimonious explanation of the efficacy of EMDR for traumatic memories.

Dyke (1993) proposes that impressions of the traumatic event, defined by external (e.g. loss of ones home after a hurricane) or internal stimuli (e.g. the thought: "I brushed with death... and there was nothing I could do about it") of the traumatic event, are associated with a conditioned anxiety response, which is maintained by escape/avoidance behaviours. As the escape/avoidance response is so effective in reducing anxiety, it is continually reinforced when traumatic memories emerge in the future. Thus, subsequent learning is disrupted and so habituation never occurs.

Dyke (1993) proposes that the effectiveness of EMDR does not depend on the finger movements or on their effect of stimulating eye movement, but rather on their being a distracting or engaging stimulus. That is, finger tracking will either completely distract a person from trauma-relevant thoughts and so constitute an extinction treatment, or, if
the person is preoccupied with trauma relevant thoughts then they are unable to concentrate on the finger tracking, which is analogous to a flooding treatment.

It would seem that the key component to Dykes explanation is desensitization. Surely, established behavioural treatments would be just as effective as EMDR? Vaughan and his colleagues (Vaughan et al., 1994a) lend support to this idea. They, found no significant difference between EMDR and Image Habituation Training (desensitization to a traumatic image without finger tracking). Alternatively, if conditioning stimuli may also be the individuals interpretation of the event, then cognitive restructuring would also be as efficacious as EMDR. Unfortunately, there are no studies to date which compare EMDR with cognitive restructuring alone.

Additionally, if EMDR is not dependent upon hand movements, then Shapiro's idea that bilateral eye movements are the reason behind changes in the semantic and affective content of traumatic memories seem unfounded. Interestingly, Shapiro (1994) reports that alternative stimuli such as up and down finger movements, alternating finger clicks, or tapping the patient on either side of their body are just as effective.

Although Dyke's (1993) model is illuminating, it fails to elucidate why under EMDR conditions patients report an almost unbelievable reduction in affect, which is not comparable to more established, therapeutic procedures for PTSD. For example, implosive therapy (flooding of the traumatic material) requires 14, 90 minute sessions for the treatment of combat veterans (Keane et al., 1989), whilst, cognitive-behavioural therapy for adult rape survivors ranges from 12 hours (Resick et al., 1988) to 14 hours (Foa et al., 1991).

A partial answer to this question is given by Armstrong and Vaughan's (1996) Orienting Response (OR) model. Simply, if an individual is assaulted by a man brandishing an iron bar, his/her nervous system will take a snapshot (the neuronal model) of the event. This snapshot will include the objective conditions of the trauma (men brandishing iron bars), and its meaning (e.g. "I'm going to die... there is nothing I can do about it"). Following
the event, the patient is highly primed to respond (OR) to any trauma related stimuli, which the patient construes as dangerous. The OR can include body movements (e.g. head and eyes), sensory (e.g. activation of analysers leading to increased sensitivity at peripheral and cortical levels), autonomic (e.g. increased blood flow to brain, galvanic skin response) and electroencephalographic (desynchroninization of alpha rhythm) responses.

Armstrong and Vaughan (1996), argue that the therapists' moving hand is a signal for danger (i.e. bringing the traumatic memory to mind), subsequently triggering an OR. The intrinsic effects of the OR facilitate continuing attention to the memory without avoidance, and facilitates input of new trauma relevant information. For example, information from the time of the trauma (e.g. the thought "I nearly died") will be replaced by information gained from the clinical situation (e.g. the thought "the event is over, I am still alive because I am sitting with my therapist"). Eventually the neuronal model rapidly modifies to reflect current safety and coping ability, in turn the OR progressively habituates and then extinguishes. The therapists' waving hand no longer serves as a signal of danger and becomes innocuous.

The rapidly changing neuronal model signifies an extinction model and this may account for the extreme speed with which EMDR can work. Yet, the OR model only accounts for the effect of EMDR 'during' treatment not for the effects after treatment. Those studies which reported remarkable therapeutic benefits following EMDR (e.g. Shapiro, 1989a; Lipke & Botkin, 1992; Kleinknecht & Morgan, 1992) failed to follow up the progress of their patients. Those who did conduct follow ups, (Lohr et al., 1995b; Acierro et al., 1994) reported that although EMDR produced a rapid diminution of affective and behavioural symptoms whilst the patients tracked the therapists finger, the effects soon wore off and patients subsequently re-experienced the psychological difficulties they had sought treatment for in the first place. One plausible explanation for this effect is that by distracting the individual 'during' the finger movements, patients will report a rapid decrease of physical and emotional behaviours. Once the movements are over and the
patient is no longer distracted, negative thoughts and emotion return. Thus, as with
cognitive and behavioural approaches to treating PTSD, perhaps, EMDR requires just as
many sessions to see a lasting effect?

As with Dyke's model, Armstrong and Vaughan offer a model which is equally
fascinating for the explanation of EMDR's efficacy. However, it is very difficult to tease
apart the differences in both models, as their assumptions are based upon desensitization
by distraction. Nonetheless, it could be argued that there is a difference. In Dyke's model
the finger waving is to 'distract' the person away from the traumatic memories and hence
increase efficacy of desensitization. Whilst the OR model shows hand waving to 'attract'
the attention of patients to their current situation in the therapists office, while they are
aroused in a preparatory set for responding to the traumatic memory. Yet, whether being
distracted by a therapists waving hand or being in a therapists office which either has a
view out of a window or is littered with interesting objects, surely the common
denominator is still distraction?

**Hypnotic Processes**

Drawing upon the mechanisms of information processing, this paper suggests that there
are similarities between hypnosis and EMDR.

Simply, in our normal waking consciousness we are constantly processing and evaluating
information which helps us make sense of the world we live in. However, this process
is suspended during hypnosis and EMDR. The patient limits their field of awareness, by
relying upon receiving information from the therapist. Such a state is produced by the
constant repetition of a series of monotonous, rhythmical sensory stimuli, such as staring
at a fixed point or rotating flickering discs as in hypnosis or attending to a therapists
moving hand during EMDR.

Given that patients under hypnosis or EMDR are paying increased attention to motoric
acts by the therapist, this can lead to feelings of sensory fatigue or light sleep. This is
hardly surprising when we realize how often people drop off to sleep whilst listening to monotonous lectures, or have feelings of increasing drowsiness whilst driving on motorways. In point of fact, several EMDR investigators have claimed that their patients have reported feeling sleepy (Armstrong & Vaughan, 1996), or relaxed (Shapiro, 1989a,b; Wilson et al., 1995b) during hand movements.

If patients are relaxed (mentally or physically) whilst under conditions of hypnosis or EMDR, then surely, this could facilitate desensitization to, trauma related images or memories. Wolpe (1958) and Rachman (1968) reason that psychological desensitization was greater if the preliminaries of inducing relaxation were observed. If so, this would explain, how with EMDR and hypnosis, anxiety related images can be desensitized, because patients are relaxed.

Yet, in what way does hypnosis or as suggested in this paper, EMDR, an equivalent to hypnosis, differ from relaxation? The difference possibly lies in the emphasis on verbal suggestion and imagery as a means of directly altering the patients mode of responding to and experience of both their inner and outer world.

During hypnosis or EMDR patients are fixing their attention upon an image whilst in a state of sensory fatigue, there is a suspension of ideas from the outside world, thus, allowing them to pay more attention to suggestions given by the therapist. In other words the hypnotic context encourages less critical acceptance of therapists suggestions. In hypnotherapy, this plays an important role when facilitating the re-construction of a significant event. The increased suggestibility reduces the likelihood of the client sayings 'yes but..' or 'I can't do that in the real world', in turn this brings about a more satisfactory resolution of a particular situation. This procedure, may well apply to EMDR when patients are required to imagine the traumatic image, whilst installing positive cognitions.

A central tenet of the hypothesis that EMDR is similar to hypnosis, is that both are an adjunctive procedure. That is, merely performing hypnotic induction is not normally sufficient to produce an appreciable therapeutic change. One must also include,
behavioural or cognitive techniques. The same would also appear to be true of EMDR. Merely tracking a therapist's finger is not beneficial in itself, but, what the therapist proceeds to do after (desensitization and cognitive reframing) is. It is also possible that perhaps both EMDR and hypnosis may affect response expectancies via a placebo effect. That is treatment outcome would be enhanced with patients who have positive attitudes and expectations of a treatment, whereas a degradation of treatment outcome would be expected among clients with negative attitudes (Kirsh, 1993). It would be interesting to compare the therapeutic benefits of both EMDR and hypnosis with trauma related memories. To date no such study has taken place.

Although the models so far discussed offer an illuminating explanation of EMDR’s effectiveness, they are only speculative. To date, little if any research, has been conducted to establish their validity. Considering that EMDR is widely practised, some concern, is voiced in administering a little understood technique to highly distressed individuals such as those presenting with PTSD. In the medical world, for instance, new medications are rigorously tested for an implicit understanding as to the mechanisms and explicit understanding as to that mechanisms effects both in the short and long term, before being marketed to the public. Surely, this should also be practised in a psychological setting? However, neural mechanisms of certain neuroleptics are not understood, but their beneficial effects are accepted (e.g. their side effects are tolerated). Thus, understanding often develops later. This may also be true of EMDR, it may be effective, but its mechanisms may be understood later.

4.2 EVALUATING COMPONENT STUDIES

Given that theorists are divided in their understanding of the role of saccadic eye movements to the procedure of EMDR, perhaps component analyses can shed some light on this matter?

Several studies, investigating the utility of saccadic eye movements in non-clinical groups (Tallis & Smith, 1994; Bauman & Melnyk, 1994) and those with specific phobias
(Sanderson & Carpenter, 1992) reported that saccadic eye movements did not produce any significant difference to distress, when compared to slow eye movement, no eye movement, image confrontation or finger tapping conditions. Possibly the effects of EMDR rests upon individuals with PTSD? However, given that the principles of anxiety reduction are equally applicable to clinical and non-clinical populations, and that EMDR has been demonstrated to be effective with problems other than PTSD, such as substance abuse (Shapiro et al 1994) and sexual dysfunctions (Wernik, 1993) it seems unlikely that EMDR has such a restricted domain of application.

Within the field of PTSD only two component studies have been undertaken. These reports claim that eye movements are not essential to treatment outcome, when compared to hand tapping, fixating on a dot on the wall (Pitman et al., 1993) or tracking a moving object or again focusing upon a fixed point (Renfrey & Spates, 1994). However, several of the tasks (hand tapping, tracking a moving object) could be comparable to EMDR itself. Shapiro (1994, 1995) points out that alternative stimuli have been used clinically with comparable results to bilateral eye movements. Shapiro (1995) comments that both eye movements and alternative stimuli may be effective because of "an interaction of such factors as focused attention, stimulation of an orienting response or dual processing mechanisms, rhythmic activity, or bilateral activation" (p.335). If this is the case then why does the treatment place a great emphasise on bilateral eye movement?. From Shapiro’s comments they are not unique.

Renfrey & Spate (1994) propose distraction may be a possible explanation for EMDR's outcome. They point out that the treatment conditions in their study (EMDR and tracking a moving object) requires greater attention than focusing upon a fixed point (control condition), thus lowering the SUD's ratings. Certainly, this notion, lends support to Dyke's (1993) distraction model to explain EMDR's efficacy, which was introduced earlier in this paper.

A further explanation is that attention to a visual task such as EMDR may come to function as a safety signal. According to the safety signal hypothesis "the omission of
anticipated punishment is a reinforcing event... (and it) confers conditioned, or secondary, rewarding properties on stimuli (safety signals) which occur in association with it" (Gray, 1981). The brief exposure period and the therapist controlled thought stopping technique used in EMDR may keep anxiety within tolerable limits. As a function of this "dosing" of exposure to trauma recall, the level of distress experienced may be reduced below that anticipated thereby endowing salient features of EMDR with safety. Accordingly, subject avoidance of trauma-related stimuli during treatment may be significantly reduced. This explanation, would also fit with the OR model, in that the therapists hand acts as an object whereby the patient cannot avoid the traumatic memories (cortical set e.g. terror laden thoughts) which then triggers off the OR (behavioural response) thus allowing for new information (safety information) contrary to the cortical set to enter. Hence, changing the neuronal model. Future studies might explore this hypothesis by designing "dosed" versus more "continuous" exposure features within the overall treatment protocol.

From the argument posed so far, it would appear that the effectiveness of EMDR does not rest entirely on bilateral eye movements. However, it should be pointed out that investigators conducting component analyses and comparative studies did not adhere to Shapiro's treatment protocol, for instance using a restricted number of eye movements (e.g. Tallis & Smith, 1994), being untrained in the method (e.g. Sanderson & Carpenter, 1992; Jensen, 1994) or not administering the full protocol (Vaughan et al., 1994b). Nevertheless, these investigators make conclusions about the entire method. While these studies may allow for conjectures about the efficacy of isolated eye movements, the results shed no light on the effectiveness of EMDR overall. As Shapiro (1995) makes quite clear EMDR "is a complex methodology that entails much more than directed eye movements "(p.332). It's effectiveness also relies upon cognitive restructuring and exposure to the traumatic event.

Researchers should be formally trained, practice the method on subjects in pilot studies to obtain consistent, positive fidelity checks, and feel comfortable using such a technique before conducting controlled research. This is a format used by researchers in the hard
sciences, and should be an established part of general research practice in clinical psychology. Clearly, methods used incorrectly or incompetently by researchers contribute little or nothing to the knowledge base about these methods and indeed can lead to false conclusions.

5.0 CONCLUSION

Given the paucity of outcome research and the limitations of the efficacy of current treatments for PTSD (Solomon et al., 1992), any methodologically sound, experimental investigation of treatment outcome for PTSD is a welcome addition to the literature. However, with regards to the research conducted upon the benefits of EMDR for traumatized individuals, there is no proof that a systematic evaluation has been carried out. Many of the investigations are marred by methodological limitations whether they have reported a positive or negative outcome. Thus it makes it difficult to conclude whether EMDR is beneficial for the alleviation of trauma symptoms and/or superior to existing treatments. Furthermore, given that bilateral eye movements are the cornerstone for the effects of EMDR, there appears to be some theoretical divide as to their actual role in the therapeutic process. Whilst, component analyses seem to indicate that they are insignificant to the treatment process. Alternative methods based upon distraction or attention techniques are just as helpful.

The fundamental problem with EMDR is that it utilizes a combination of treatment modalities which are commonly used with trauma survivors. Namely, cognitive and behavioural techniques. The only difference is that EMDR focuses on eye movements as the requisite factor for effectiveness. Thus, one has to ask whether the effectiveness of EMDR is due to either cognitive procedures, behavioural techniques, or eye movements per se ?. Or, is it a combination of all three ?

Perhaps this situation could be rectified with improved experimental designs. Some tentative suggestions for future research are proposed. For instance future studies should adequately control for non-specific effects. Or maybe, EMDR could be compared to other
validated or customary techniques. For example, EMDR is similar to flooding in that both use idiopathic affective imagery for repeated re-exposure, but flooding does not use eye movements. Thus control groups could be based on similar form and content of EMDR. Such as, matching eye movements with simultaneous affective imagery or using affective imagery without eye movements.

Moreover, future studies should concentrate on demonstrating the necessity of separate components. For instance, an additive or subtractive strategy could be implemented (e.g. Rehm et al., 1982) whereby one could compare different groups receiving all the possible combinations of the components of EMDR (memory re-exposure, negative self statements and saccadic eye movements). However, it can be reasonably assumed that re-exposure is an a priori requirement of EMDR, and that the other two components would function in conjunction with re-exposure. Thus, re-exposure alone could be compared to re-exposure plus negative self statements, or, re-exposure with eye movements.

Certainly, EMDR requires a more rigorous evaluation as to whether or not it is superior to more established treatment approaches for trauma reactions. Particularly, research should delineate whether eye movements are essential to the recovery process. Until such time, the use of any technique which is not supported by sound documentation of its efficacy is inappropriate.
REFERENCES


1.0 AIM OF REVIEW

The purpose of this paper is to deconstruct some of the conceptual assumptions involved in the discourse of PTSD and use this analysis to question its relevance to an extreme form of trauma such as torture, and to communities in the non-Western world, where torture, commonly takes place. It is then argued that if our understanding of trauma is confounded by conceptual limitations then the treatments offered are of little benefit.

Drawing upon constructivist ideology and borrowing from narrative methodologies, an alternative framework is presented. By allowing the survivor to give a narrative of their experiences, the meanings (cognitive-affective responses) which survivors use to construct their experiences can be elicited. A phenomenological picture can then be drawn as a way of representing the effects of prolonged and repeated abuse. It is suggested that such a bottom-up approach will highlight responses overseen by the concept of PTSD, and will enable clinicians to understand trauma sequelae from the culture concerned. Moreover, these meanings underlie the psychological difficulties with which survivors present, and so can be used as targets of therapeutic change.

2.0 DEFINITION AND PREVALENCE OF TORTURE

War represents a most ancient and important form of man-made violence in terms of the magnitude of its effects. Since World War II, there have been 127 wars, all but 2 have taken place in developing countries. It is estimated that a total of 40 million people, usually civilians, have died as a result (IFRC, 1993), whilst, 43 million have been made refugees, either by being internally displaced or by crossing international borders (Toole & Waldman, 1993).
Such devastation often takes place within the context of abusive authorities who do not tolerate those of differing political, ethnic or religious groups. Repressive states will exercise their power by using systematic methods of terrorization. Torture is one such method. By deliberately inflicting severe pain, by physical brutality (e.g. beating, kicking, electrical torture, 'submarino', suspension, sexual torture, burning and 'falaka') and/or psychological ill treatment (e.g. humiliation, mock executions, witnessing others being tortured or isolation), authorities can obtain information and/or confessions about anti-government activities, or intimidate and coerce individuals to conform to the beliefs of the state (United Nations, 1985). It is a devastatingly effective form of control, used not just to destroy the victim's body, mind and spirit but also as a message to spread terror throughout communities, shattering social, cultural and economic grassroots.

Despite numerous international declarations (e.g. UN Declaration on Protection from Torture, 1975) and conventions (e.g. UN Convention against Torture, 1984), state sanctioned torture, is a shockingly frequent phenomenon. Amnesty International (1992) reports that torture occurs in 93 of 204 countries in the world. It is estimated that of the world's 14 million refugees, between 5% and 35% have had at least one experience of torture (Baker, 1992). These figures may well be an underestimate. It is a politically sensitive issue which is all too often either suppressed by survivors or denied by the Governments concerned (Cienfuegos & Monelli, 1983; Haley, 1974).

3.0 CONCEPTUALIZING RESPONSES TO TORTURE: AN OVERVIEW

Early investigations of torture survivors were broadly aimed at describing the most common physical and psychological consequences. Goldfeld et al., (1988) summarized these findings by conducting a world wide review of the published literature. They found that the most common physical symptoms reported included:- headaches, impaired hearing, gastrointestinal distress and joint pain; the most common physical signs were scars on the skin and bone dislocations and fractures; whilst common psychological symptoms included, anxiety, depression, memory disturbances and impairments in sleep.
Given that these early studies, clearly defined the physical and psychological effects of torture, several investigators advocated that they could be classified into a distinct 'torture syndrome' (Allodi & Cowgill, 1982; Abildgaard et al., 1984). However this proposal, did not attain widespread acceptance, and was criticised for only offering a list of common psychological and physical symptoms seen in survivors of torture (Turner & Gorst-Unsworth, 1990), which, lacked a theoretical basis on which to guide effective treatment (Thorvaldsen, 1986).

Moreover, although earlier descriptions of traumatic events had been classified according to the precipitating event, such as concentration camp syndrome (Eitinger, 1964) or 'war neurosis' (Kardiner, 1941), by the 1970's there was a growing recognition that diverse forms of trauma produced similar clinical pictures in sufferers. With the introduction of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III) published by the American Psychiatric Association (APA) in 1980, a generic theory unifying the single stress approaches was proposed. According to this theory different types of trauma may provoke similar symptomatology, conceptualized by the diagnosis of Post Traumatic Stress Disorder (PTSD), which embodies a cluster of symptoms, notably, (a) re-experiencing aspects of the original trauma (b) avoidance of stimuli that resemble any aspect of the traumatic event and (c) increased arousal such as variability in mood, cognitive impairment and sensitivity to environmental stimuli. As such, investigators (Rasmusen, 1990; Turner & Gorst-Unsworth, 1990), have argued that the effects of torture do not constitute a specific syndrome, which is qualitatively different from PTSD.

Lastly, the existence of a syndrome can only be validated by the demonstration of a coherent cluster of symptoms that can be replicated across samples and cultures. If a symptom cluster can be found it should then be compared with existing diagnostic categories for similarities and differences. The only study to examine this issue was by Somnier et al., (1992). They conducted a literature review with reference to the consequences of torture. Of the 46 citations the most common sequelae of torture comprised of a wide range of cognitive and emotional symptoms. However, a comparison
with the diagnosis of Post Traumatic Stress Disorder failed to show significant differences.

Subsequently, attention has shifted to elucidating the existence of PTSD following torture. This is a relatively new field of enquiry. To date 13 studies, have appeared in the psychological (Psych. Lit) and medical (MedLine) abstracts. Investigations have taken place in the country where torture took place with those who are detained (Paker et al., 1992; Friendlander, 1988; Simpson, 1992), former detainees (El Sarraj et al., 1996; Yuksel, 1993; Basoglu et al., 1994a,b; Kozarik-Kovacic et al., 1995) and refugees who have experienced torture (Ramsey et al., 1993; Van Velsen et al., 1996; Mollica et al., 1988; Weine et al., 1995; Lavik et al., 1996; Thompson & McGorry, 1995).

Due to space limitations these studies cannot be discussed individually. However, collectively these studies show that the most common diagnosis is that of PTSD. For example, El Sarraj et al., (1996) examined 550 Palestinian political ex-prisoners from the Gaza Strip. Overall, 40% reached criteria for a diagnosis, whilst the remaining subjects had symptoms of PTSD. In all, 77% reported intrusive memories, and 47% experienced nightmares. Seventy five percent reported withdrawal and numbness, whilst 30% avoided reminders of their prison experience. Forty three percent indicated difficulties in hyper arousal.

Moreover, the length of time and type of torture has been shown to predict severity and type of trauma symptomatology. For instance, it has been noted that the longer one serves in prison, the more likely it is that individuals will experience more frequent episodes of torture, and thus the greater level of post trauma symptomatology (El Sarraj et al., 1996; Basoglu et al., 1994a,b). In addition, certain types of torture predict psychopathology. For example, physical torture has been noted to have a greater psychological impact than psychological mistreatment (Basoglu et al., 1994b). As an illustration, suspension (or Palestinian hanging) is extremely painful and cannot be tolerated for more than 15-20 minutes. It involves a risk of serious physical damage and even threat to life. Thus, having peripheral nerve damage as a consequence of this form of torture would possibly
indicate an experience of greater overall traumatic stress, relative to someone who was not subjected to this form of torture.

It is also conceivable that the physical sequelae per se may account at least in part, for subsequent psychopathology. For example, the presence of physical sequelae may serve as a constant reminder of the traumatic experience and thereby helps maintain feelings of helplessness experienced during the torture, thus possibly maintaining and compounding trauma reactions. Also, it has been observed that sexual torture and impact torture, were associated with avoidant symptoms and intrusive symptoms respectively (Ramsey et al., 1993; Van Velsen et al., 1996). Similarly, physical torture such as chemical and electrical torture significantly predicted avoidance, withdrawal and intrusive re-experiencing of the torture (El Sarraj et al., 1996).

Research has also shown that PTSD co-exists with other psychological difficulties, in particular major depression and somatization. For example, in a retrospective study of 100 survivors of political violence, Ramsey et al., (1993) reported that although 31 of their subjects presented with PTSD, 20 also demonstrated PTSD and major depression, 42 had major depression alone, whilst 29 presented with somatoform disorder.

This paper has no intention of discrediting the concept of PTSD. It fully acknowledges that the medical formulation of PTSD has great value as an instrument of testimony against torture and violence. As Goldfeld et al (1988) argue "the medical verification of injuries caused by torture can provide powerful testimony to this occurrence... the application of a rigorous medical approach to the patient who has survived torture will not only provide these individuals with the best possible care, but will contribute to the international recognition and eradication of this inhuman practice " (p.2792).

What is in question, however, is whether the effects of sequential and cumulative trauma such as torture can be accounted for by the concept of PTSD and if such a Westernized concept is applicable to cultures outside the Western world? These questions will, in the
first instance, be answered by deconstructing the relative component parts of the term PTSD, followed by outlining the conceptual difficulties in the cross-cultural application of this term.

4.0 LIMITATIONS OF THE MEDICAL MODEL

Conceptual Limitations

Firstly, the concept of PTSD does not sufficiently describe the magnitude or quantitative aspects of the stressor with regards to survivors of human rights violations. The term 'post', signifies a circumscribed traumatic event that is limited to a certain moment in time. (Kilpatrick & Resnick, 1993). This may apply to those who have experienced traffic accidents, natural disasters and violent crime, but does not fully capture the experiences of torture survivors who more often than not experience cumulative and continuous trauma (Becker, 1995; Summerfield, 1995). As an illustration (authors experience), a South American survivor of torture presented with trauma and depressive symptomatology. When did the trauma start for her? Doubtless, when she was arrested and subjected to several hours of interrogation. But when did it stop? When she was imprisoned and experienced physical and psychological ill treatment? Witnessing the torture of fellow prisoners? When she heard that several members of her family had also been detained? (1)

In short, 'post' seems to have very little to do with the kind of traumatic experiences people undergo as a consequence of political repression. The Israeli psychotherapists Benyakar, et al., (1989) very impressively summed up the problem by citing a personal communication of Gabriel Dagan, a psychotherapist and Auschwitz survivor:

(1). Throughout this text references are made to the authors clinical experience of working with torture survivors. In all cases cited the clients identify is kept confidential and information pertaining to their experiences and psychological difficulties are kept to a minimum. Verbal and written consent was given.
"I think that in Auschwitz we have been hit in the core of the denial of death. Something has been damaged, smashed in this mechanism, and through this irreparable crack, Death keeps dripping into life.... I have survived hell but I have not been released from it. It is still inside me, day and night" (p.443).

By the same token, the term 'traumatic stress', also has limitations when applied to torture survivors. It fails to convey the qualitative notion of psychological breakdown or injury following an event. In the DSM III-R and-IV, the word 'trauma' has no definition or conceptual context and is often used interchangeably with a 'traumatic event' or "stressor". Surely, this makes it difficult to differentiate the extent of psychological injury between a circumscribed event such as an assault or road traffic accident, which may disrupt the psychological functioning of the individual, with an extreme trauma such as torture?

The damage inflicted by torture involves not only a horrifically intimate relationship between torturer and victim, whereby the torturer will calibrate his methods to the prisoner's weaknesses, fears and sensitivities but also the devastation caused to the individual's, cultural, political and economical grassroots. As Benyaker and his colleagues (1989) quite rightly point out, "trauma has become devoid of any of its original connotations of disruption and discontinuity and in fact has become meaningless, used in the vernacular to imply any terrible situation" (p.432).

Bettelheim (1943) justified the need for a new term when he wrote about his experiences in a concentration camp "What characterized it most was its inescapableness, its uncertain duration, but potentially for life; the fact that nothing about it was predictable that one's life was in jeopardy at every moment and that one could do nothing about it" (p.418).

From his experiences, Bettelheim (1943) suggested the term 'extreme traumatization'. Following in his footsteps, others created terms such as 'cumulative trauma' (Khan,
1977) and ‘sequential traumatization’ (Keilson, 1992). Certainly, these terms are more meaningful to survivors of political violence than the word 'traumatic stress'. They imply that traumatization is continuous in those who have suffered political repression, and that subsequent pathology cannot be compared to those having suffered circumscribed events for which the role of PTSD was originally designed (Kilpatrick & Resnick, 1993).

Yet, these models fail to elucidate exactly what, the qualitative differences are, between psychological reactions of individuals who have experienced a single episode of trauma and those who have experienced multiple events. Some light is shed by the concept of Disorders of Extreme Stress (DES; Herman, 1992, Van der Kolk et al., 1993; Pelcovitz et al., 1997). The concept of DES is applied specifically to those who have experienced chronic interpersonal abuse, such as sexually and physically abused children (Terr, 1991) and battered women (Walker 1984). As a consequence of repeated and/or prolonged trauma, DES implies that these individuals present with symptoms which go beyond those outlined by PTSD (e.g., re-experiencing phenomena, avoidance, numbing and hyper arousal) such as, problems relating to affect regulation (e.g., suicidality, anger), changes in self-identity (e.g., alterations in consciousness, guilt, shame) and interpersonal functioning (e.g., inability to trust others). Herman (1992) outlines three areas that differentiate this constellation of symptoms from simple PTSD: (a) the symptom pattern is complex, diffuse, and resistant to change (b) there are personality changes, including deformations of relatedness and identity, and (c) these survivors are more vulnerable to repeated harm, either self-inflicted or from others. The breadth of problems described by DES reflects the complexity of the traumatic adaption to prolonged and repeated interpersonal trauma evident with survivors of torture. Unfortunately, the concept of DES has yet to be validated with survivors of torture.

Finally, the concept of PTSD, implies that individuals are ‘disordered’. It is argued here that labelling them as such is not acceptable, for the simple reason that those who exercise torture, use the term disorder to justify their acts of cruelty and destruction. As an illustration (current authors experience), a Kurdish Iraqi client, had been imprisoned for 18 months during the recent Gulf War. During this time, his torturers repeatedly told
him that his political beliefs were a "disorder of his mind", instilled by those he followed. As a result, they subjected him to prolonged episodes of 'submarino' (submerging his head in water) claiming that this would 'cleanse' his mind of his 'disorder'. If our clinical language voluntarily or accidentally mirrors this self-justifying attitude of the victimizers, we evidently run risks of converting ourselves into traumatizing agents. Although to the clinician these individuals appear to be 'disordered' because of the severity of their presenting complaints, one should bear in mind that their difficulties are also an indictment of the social contexts which produce them.

Having, deconstructed and analysed the constituent components of the term PTSD and argued that it has limitations when applied to survivors of state sanctioned torture, questions then arise as to its relevance to non-Western communities.

**Cross Cultural Limitations**

Let us begin with the concept of individualism. In the West, the intra-psychic plays a central role in the way mental ill-health is defined by both professionals and patients. This is evidenced in how clinicians understand the effects of trauma. For instance, Horowitz (1986) proposes that trauma disrupts the individual's life by producing a block in cognitive and emotional processing, resulting in a vicious cycle of intrusion and denial. Similarly, the models of Freud (1953), Lifton and Olson (1976), Kolb & Multalipassi (1982), and Brett & Ostroff (1985), maintain that responses to trauma are a purely internal phenomenon, located entirely within the confines of the individual self.

But surely it is simplistic to say that victims of trauma are mere passive receptacles of psychological phenomena? One cannot ignore the fact that survivors react to trauma in accordance with what it means to them. Generating these meanings is an activity that is socially, culturally and often politically framed. Torture, worldwide does not take place as an isolated act, but in the context of the destruction and terrorization of entire communities. Thus, the meaning of torture may have little to do with its effect upon the survivor per se, but its effect upon social, political and cultural domains. For instance, in
Mozambique, fleeing survivors of torture are haunted by the spirits of their dead relatives, for whom the traditionally prescribed burial rituals had not been enacted (Harrell-Bond & Wilson, 1990). Eisenbruch (1991) described culturally bereaved Cambodians in the United States who continue to feel guilty about abandoning their homeland and their unfulfilled obligations to the dead, and who are haunted by painful memories and unable to concentrate on the tasks facing them in an alien society.

Closely related to the assumption of individualism is that of universalism. It is assumed that forms of mental ill health observed in the West are basically the same as those found elsewhere. The tendency towards universalism in research upon torture survivors from diverse ethnic cultures has meant an emphasis upon the similarities rather than differences in response. Horowitz (1986) argues that traumas ranging from combat, nuclear bombing, rape, natural disasters etc, produce similar responses, consisting basically of 'intrusive thinking and denial'. By defining these phenomena as the core features of the human response to trauma are we not in danger of ignoring important cultural differences? When researchers assert that they have found these features in so many situations we are led to ask if they have not found just what they are looking for.

Horowitz's (1986) assertion that stress events bring about universal (intra psychic) conflicts in individuals is deeply problematic given the variety of human belief systems and values in the world. While the physiology of trauma reactions may be reducible to a universal sequence of events, this is clearly not true of cognitions and emotions. This notion is aptly illustrated by the cultural meaning of torture. For instance, in the West the definition of torture is derived from the Latin word 'torquere' which means to cause pain by turning or twisting so as to extract a testimony or repress opposing religious or political views. In contrast, in Cambodia, torture or 'tieru-na-kam' is derived from the Buddhist term for Karma. In this case, torture is believed to be caused by an individual's actions or thoughts (often of an evil nature) in a prior existence. Given the difference in meaning concerning the act of torture between the West and South East Asia, it is possible that affective, cognitive and behavioural responses following torture will also differ.
Taking into consideration the issues of individualism and universalism, one has to ask whether by indiscriminately applying the Western concept of PTSD to non-Western cultures there is a serious risk of producing what Kleinman (1987) calls a 'category fallacy'. That is that just because signs and symptoms are identifiable in different social settings, it does not necessarily show that they have the same meaning in those settings. To assume that there are similarities in reactions across cultures, is tantamount to a conceptual distortion and, would hinder an accurate and comprehensive understanding of psychological reactions following state sanctioned torture.

5.0 THE LIMITATIONS OF CURRENT TREATMENT PRACTICES

The assumptions made above in turn lead to others. Specifically, to the prescribed treatment approaches that Western mental health professionals apply to non-Western communities.

Approaches reported to help survivors recover from torture include, psychodynamic methods (Bustos, 1992), insight therapy (Vesti & Kastrup, 1992), testimony method (Cienfuegos & Monelli, 1983), cognitive therapy (Somnier & Genefke, 1986) and cognitive-behavioural treatment (Basoglu, 1992). Common to all these approaches are cognitive (re-framing thoughts) and behavioural (relaxation, in-vivo/imaginal exposure) procedures. This seems hardly surprising as cognitive and behavioural theorists (e.g. Chemtob et al., 1988; Foa et al., 1989) have been influential in describing the underlying processes of how individuals respond to trauma. In combination, these models have led to highly focused treatments, which are increasingly appealing to clinicians. They are short term, relatively uncomplicated, well defined, replicable and allow for systematic measurement of treatment efficacy.

Common to both cognitive and behavioural paradigms is the therapeutic exposure of the client to traumatic material. The goal of exposure is to extinguish negative emotional reactions to the traumatic material and strengthen more positive associations. Cognitive changes concerning threat related meanings (to the self) associated with the traumatic
event are altered as a result of incorporating information incompatible with the original meaning assigned to the trauma (Foa & Kozak, 1986). These treatments have been, relatively speaking, well evaluated and have demonstrated some efficacy in remediating recurring recollections of the event (i.e. intrusive thoughts/images, and nightmares), particularly in the context of fairly discrete traumas (Keane et al., 1989; Foa et al., 1991).

However, targeting re-experiencing phenomena through exposure of traumatic memories becomes less viable when the clinical picture is more complicated. Torture survivors often have fragmented memories due to head injuries and impaired cognitive abilities (e.g. Stuker et al., 1991). Further, recent research has suggested that there is an association between PTSD and impaired cognitive functioning, such as difficulties with short term memory of verbal information (Bremner et al., 1993), impaired monitoring and regulation of memory information (Yehuda et al., 1995), processing bias for disaster-specific information (Thrasher et al., 1994) and impaired cognitive abilities due to concomitant diagnoses of depression, generalized anxiety and substance misuse (Barrett et al., 1996). In addition, psychological mechanisms (i.e. avoidance and denial) which may affect the memory of trauma survivors has been extensively described by Horowitz (1986). In light of this, it is suggested here, that for torture survivors with fragmented memories, exposure is unlikely to facilitate habituation/extinction because of the residual, associated information not being consciously exposed.

Limitations of exposure also emerge in relation to avoidance, numbing and hyper arousal symptoms of PTSD in torture survivors, as well as difficulties of affect regulation (e.g. anger, suicidality), issues concerning mistrust, shame (e.g. due to sexual torture), or guilt (e.g. providing information during interrogation) or broad based problems in living (e.g. concerns in seeking asylum, financial worries, or fears at having left family and friends behind who continue to experience violence). These aspects will not be remediated by direct exposure to traumatic memories.

Moreover, treatment modalities which focus solely on intrusion and avoidance responses will not address the real needs of torture survivors. Underlying these difficulties are the
political, religious or cultural convictions for which many people have in essence been tortured. If these convictions are ignored during therapy, they will have difficulty in making sense of their experiences and will not achieve an adequate recovery.

Finally, the systematic evaluation of these treatments has not occurred with diverse cultural groups. Thus, it may be a mistake to assume that treatment modalities developed in the West are also appropriate for people in other parts of the world. For example, in the West "talking therapies" such as cognitive approaches are aimed at altering emotions and behaviour through a persons self awareness of thought processes (Beck & Emery, 1985). However, to other societies this may seem peculiar, as the exploration of cognitions are not emphasized. For instance, in Japan, where the notion of the self is seen as an inner non-verbalized entity, there is little regard for psychotherapy (Lock, 1982).

Also, western notions of recovery are based upon a collaborative relationship between the therapist and client. For example in psychoanalytic therapy, recovery is based upon the transference-counter transference matrix. In, cognitive therapy, the therapeutic alliance relies upon the patient supplying raw data (reports on thoughts and behaviour) whilst the therapist provides structure and expertise in how to solve problems. However, as Kleinman (1980) points out, healing may take place in the "popular sector of health care", that is social and cultural context. For instance, from the present author's own experience, Iranian survivors of torture seek religious cures to the reactions of trauma. The most common is having a prayer (du'a) written by a religious practitioner who divines the cause of the illness through religious or astrological techniques and who treats illness primarily by writing special Arabic prayers or verses from the Qur'an. By using accepted therapeutic practices in the West for non-Western cultures, who may have little regard for such approaches, recovery from trauma may be limited.
6.0 CONSTRUCTING AN ALTERNATIVE UNDERSTANDING OF TORTURE

This section aims to present, albeit, briefly, an alternative way of understanding and treating responses to torture, by the construction of subjective reality. Broadly, diverse domains of psychology such as information processing, personality theory and developmental and social cognition have postulated that human beings take an active role in constructing their experiences of reality, defined by a cohesive set of assumptions, expressed by cognitive and affective mental states, about who we are and how the world works, which influences our planning and behaviour, as it shapes our decisions as to how we will act, and how we expect the world to respond. This basic idea has over the years been recognized in the field of trauma (Lifton, 1979; Horowitz, 1986; Janoff Bulman, 1992; Epstein, 1994; McCann & Pearlman, 1990). It is argued that a traumatic event dramatically alters an individual's construction of reality, causing changes in beliefs about the self, others, and their world, and, resulting in post trauma symptomatology.

For instance, Lifton (1979) suggested that trauma is a form of psychological death that follows the cessation of the ongoing process of creating symbolic forms of meaning. Horowitz (1986) posits that a trauma represents an individual with information which is incompatible with pre-existing 'schemas' (e.g. beliefs, knowledge, images). The greater the incompatibility the greater the affect it arouses. Whilst, McCann & Pearlman (1990), Janoff-Bulman (1992) and Epstein (1994) describe the experience of victimization as the shattering of 'assumptions' which people use to construct a liveable framework for their lives. Janoff-Bulman (1992), for example, describes three types of assumptions: a belief in personal invulnerability, the perception that the world has order and meaning which includes notions of fairness and predictability, and the assumption that one is a worthy person. Trauma shatters these assumptions, making the victim feel that life is unmanageable. The survivor is then presented with paradoxes that appear insoluble, leading them to a form of psychological paralysis. For example, a belief that the world is fair, and that bad things only happen to bad people, may promote hard work and a sense of safety, prior to a trauma. When this assumption is violated, they may feel forced to
choose between reconstructing their vision of the world or changing their vision of themselves.

Although the models propose slightly differing processes to describe the relationship between trauma and meaning, they share the assumption that trauma affects cognitive and emotional meanings basic to one's organization of self in relation to others and the world.

Empirical work in documenting the cognitive/affective meanings associated with the traumatic event, is not at present a clearly unified and coherent body of literature, reflecting a relatively early phase in the research process. Briefly, several research projects (e.g. Dutton et al., 1994; Norris & Kaniasty, 1991) have attempted to validate the meanings ascribed to traumatic events outlined by theoretical models proposed by Janoff Bulman (1992) and McCann & Pearlman (1990). As an example, Norris & Kaniasty (1991) examined the assumptions of safety, esteem and trust proposed by McCann & Pearlman (1990), by comparing the effect of trauma with victims of violent crime, property crime and non-victims. Negative schemas in all three domains were related to violent crime, whilst, only beliefs in the safety domain were related to property crime. It was also observed that the disruption of schemas following trauma were found to co-occur with severity of PTSD. Thus, violent crime victims had higher degrees of symptomatology than property crime victims.

Other researchers have focused upon a particular aspect of the meaning or construction of traumatic experience such as shame (Wong & Cook, 1992), guilt (Kubany, 1994), anger (Riggs et al., 1992) or personal responsibility for death and destruction (Fontana et al., 1992). Wong & Cook (1992) administered the Internalized Shame Scale (Cook, 1987) which measures the affect of shame to 47 Vietnam combat veterans who had been clinically diagnosed with the diagnosis of PTSD, 44 veterans suffering depression and 22 veterans diagnosed with substance abuse. Subjects clinically diagnosed as having PTSD scored highest on shame globally as well as its two subfactors, alienation and inferiority. Moreover, they reported that shame was a strong factor in relation to the severity of PTSD presented by veterans. Wong & Cook (1992) suggested that shame and
its related feelings of alienation and inferiority can be directly attributable to (a) experiences of combat such as the failure to act in accordance with internalized concepts of duty and action, the continual breaking of the bridge of comradeship via death and perhaps betrayal and (b) the aftermath which included betrayal of the American people and the government felt by some veterans and the resulting feelings of paranoia and isolation. In essence, these experiences broke the connection between the idealized and perceived real self, providing the setting for resultant feelings of shame in the Vietnam combat veteran.

Collectively, these pieces of work support the idea that trauma can violate the fundamental meanings that we use to organize our experience of self and world and so exert its influence on subsequent experiences and ultimately cause psychological impairment. Nonetheless, the systemisation of cognitive and affective meanings has proved difficult. In the first instance, researchers have struggled to account for the idiosyncratic ways people give meaning to their experiences. As a result, there is no consensus between them as to the definition and/or measurements of constructs used. For example, trust is defined by McCann et al., (1990) as both the belief and expectancy that one can trust or rely upon one's own perceptions and judgement, as well as seeing others as trustworthy. For Norris & Kaniasty (1991), beliefs in the trust domain were defined by cynicism and pessimism based on an individual's pervasive sense of social malintegration and alienation. Thus, items on Norris & Kaniasty's (1991) questionnaire such as "hardly fair to bring children into the world" and "public officials not interested in the problems of the average person" have a totally different sense than McCann & Pearlman's (1990) "I feel uncertain about my ability to make decisions" or "People shouldn't place too much trust in their friends".

Moreover, can the victim's experience of trauma, be captured by experimenter-generated, constructions or categorizations of that experience? As an example, take the meaning of self-blame and its role in the coping process with rape victims. There are two distinct types of self-blame. Behavioural self-blame which involves blaming one's behaviour for a negative outcome such as victimization. Thus a rape victims can blame herself by
saying she should not have hitchhiked or should not have walked alone at night. The second is characterological self-blame which involves blaming one's character or enduring qualities. In this case rape victims may say that they are too trusting, a bad person, or the type of person who attracts rapists. Frazier & Schauben (1994) make a convincing argument that self-blame, following rape, is not adaptive and is associated with greater symptomatology.

However, although the distinction between the two kinds of blame are logically coherent, it may not be experientially relevant for the rape victim. For instance, behavioural self-blame is frequently manifested following victimization, especially by victims of violence who have been singled out for harm by another human being (Fischer, 1984). Janoff-Bulman (1995) observed that behavioural self-blame could be an adaptive response to victimization, as it enables victims to minimize their perception of vulnerability by allowing them to believe that altering their behaviours in the future can minimize the likelihood of recurrence. Not only does behavioural self-blame involve the avoidability of the particular negative outcome in question, but also promotes a general belief in one's ability to avoid or control future negative outcomes in general.

In an attempt to override these conceptual problems, researchers have recently, turned to narrative methodologies (e.g. Roth & Lebowitz, 1988; Dansky et al., 1990; Roth & Newman, 1991; Roth & Batson, 1993; Lebowitz & Roth, 1994; Lebowitz & Newman, 1996; Turner, de Rosa et al., 1996). In essence, the phenomenology of trauma has been constructed by listening to victims describing their experiences.

These pieces of work have in the main focused upon a variety of sexual traumas such as rape and childhood sexual abuse, and have consistently, documented salient cognitive and affective states or meanings (Roth & Newman, 1995) subsumed under the heading of 'themes'. Cognitive themes have included issues surrounding self-blame (i.e. "I am responsible for what happened to me"), mistrust (i.e. "People are dangerous, and will deceive you") and concerns about fairness and justice (i.e. "The world is unpredictable,
uncontrollable and unjust"). Affective themes include feelings of guilt, shame, loss or fear.

Moreover, these basic core themes have been validated in other trauma groups such as those traumatized by a fire (DeRosa et al., 1996); men sexually victimized as children (Lisak, 1994) and gay men assaulted because of their sexual orientation (Lebowitz and Dillon, 1992).

It is proposed here, that just as is the case with survivors of sexual trauma, natural and technological disasters, the internal model of reality that torture survivors once had can be fractured in the aftermath of overwhelming trauma. Torture survivors often learn three things: about themselves (Such things can happen to me); about other people (They can do such things to me) and about the world (It can let such things happen: no one cares enough to stop it). Such fractures to their internal belief system requires major revisions in order for them to continue functioning. However, torture survivors are unable to revise their new world view and are consequently left in a perpetual state of unresolved conflict.

7.0 IMPLICATIONS OF A CONSTRUCTIVIST APPROACH TO TORTURE

This theoretical model has yet to be applied to torture survivors. It is proposed here that drawing upon constructivist ideology and utilizing a narrative methodology outlined in the latter group of studies, will be of clinical value in providing a comprehensive organizational framework for understanding and treating traumatic sequelae following torture. Consequently, overcoming the conceptual and cultural limitations emanating from current thinking as discussed in previous sections of this paper.

Conceptual Implications

Firstly, this bottom-up approach has implications for the way clinicians conceptualize the effects of torture. In a broad sense, by allowing the survivor to construct their experiences in detail, it delineates the phenomenology of torture such as cognitive, affective and
behavioural responses. This allows clinicians to gather information which could expand and perhaps even alter the existing model of PTSD, to include psychological phenomena not otherwise captured by this concept (e.g. affect regulation, changes in self identity and interpersonal functioning) which manifest following prolonged and repeated violence. Ideally, it could support the conceptualization of Disorders of Extreme Stress (Herman, 1992; Van der Kolk et al., 1993; Pelcovitz et al., 1997) which does recognize these difficulties.

However, there is one difficulty with this approach in that meanings attributed to the experience of torture are often idiosyncratic and unique to the survivor concerned. As an example (authors clinical experience) two brothers from Turkey were detained at the same time. Both had experienced physical torture for their involvement in political activities. The reason for their being detained was the same, but the meanings they attributed to their experiences differed. One brother reported that prior to his being detained he did not believe in a benevolent state (beliefs about safety, trust or justice) as such he was prepared to take the consequences of torture for his political activities. The other brother, however, construed his experiences as one of injustice on the part of the Turkish authorities concerned and the world in general for not intervening.

Nonetheless, there may be themes which are similar between torture survivors. Drawing from the authors clinical observations those who have experienced sexual torture often hold beliefs concerning self-blame and feelings of shame, whilst those who have imparted information (i.e. names of party members) under torture suffer intense guilt.

**Clinical Implications**

In expanding our conceptual understanding of torture, by using a constructivist approach, this will have clinical implications for the way Western health professionals assess torture survivors and direct treatment.
The construction of 'meanings' resides within a larger construct of the self, a construct that is essential for understanding the impact of prolonged and repeated exposure to interpersonal abuse such as torture. Torture not only involves physical damage, but a violent assault on the individual's sense of self and world so as to coerce them to conform to the ideology of the authorities. Such abuse does more than create problematic thoughts, feelings and behaviours, it alters the concept of self which subsequently becomes integrated into the individuals' experience of themselves, others, and the world. By addressing those 'meanings' which have altered the self, rather than the symptoms which emanate from the torture experience one can presume it would help someone free themselves from the controlling influence of their traumatic past. Moreover, focusing upon underlying meaning structures implies that if these are resolved adaptively, multiple areas of functioning should be positively affected.

This notion is illustrated from a clinical case (authors experience) of a Zaïrian national who had been detained and tortured for two years due to his political ideology and activities. Formally he had been diagnosed with PTSD, and severe depression. He reported attempting to take his life on two occasions and self-mutilating behaviours. Prior to his presenting to the clinic he had received physical and psychological treatment from various professionals but with little effect. Before attempting any direct methods of treatment he was asked to tell his story, specifically, his thoughts and feelings about his experiences. It came to light that he was suffering from feelings of guilt. His guilt arose from the fact that he had disclosed the names of fellow activists to his torturers. This resulted in the imprisonment and death of a colleague. His feelings of guilt also arose from the fact that he had survived and his friend had not. By adopting a schema-focused approach to treatment (primarily addressing the guilt), the client reported and the clinician observed, that the feelings of guilt diminished. As the guilt diminished so did the symptoms of PTSD, depression and self-harming behaviours.

Furthermore, the meanings that survivors attach to the experience of torture, will be manifested in a variety of situations, from re-experiencing phenomena (e.g. flashbacks, nightmares) to relationships. Because it is the meaning and not the symptoms of PTSD
that is of importance, therapy can take place in whatever context is most effective and suited to the survivor. For instance, some individuals may work best addressing core meanings directly through traumatic memories, while others may do better working through these sequelae as they emerge in current relationships. Also, certain themes, such as mistrust of others, may be easier to access in the context of current relationships, while, others such as fear may be more accessible through memory.

As was argued earlier, targeting the intrusive symptoms of PTSD through exposure may not be beneficial due to fragmented memories as a result of head injuries, cognitive impairment and mechanisms of denial and avoidance. By focusing on the meanings survivors give to their experiences of torture, clinicians and clients are able to proceed with treatment whether an individual has complete or fragmented memories.

A narrative supplied by the survivor can also serve as a document of human rights violations. Torture is often a closely guarded secret by both victims and perpetrators. By allowing survivors to voice their experiences, their suffering is validated in the presence of an impartial witness (the clinician), a situation the survivor may find empowering. The effect of being empowered is further created by the fact that a non-medical approach moves away from the idea that psychological pain is synonymous with pathology as conceptualized by the PTSD model, and emphasises the nature of their struggle under repressive regimes.

**Cross-cultural Implications**

Finally, a constructivist approach moves away from ethnocentric biases such as individualism and universalism. In establishing the subjective meaning that survivors give to the experience of torture, presumably this will be from their own political and cultural perspective, rather than a Western notion of ill health. Such an approach may emphasis the differences in responses to traumatic events across cultures. It may be that cognitive, affective and behavioural states will differ between Bosnian Muslims who
were persecuted by long standing Serbian neighbours because of their ethnicity and Iranian communities persecuted by Islamic fundamentalists, for their Western style of thinking and behaviour. Furthermore, by elucidating the effects of the trauma through the eyes of the survivor (e.g. not having carried out prescribed burial rituals, the destruction of their community) these can be used as targets of treatment, which may be more effective than targeting problem areas (e.g. nightmares, hyper vigilance) which the health professional sees as important, but the client may not.

Once the core, cognitive and affective meanings, survivors ascribe to their experience have been elucidated, clinicians and clients can discuss appropriate methods of treatment, pertinent to the complexity, cultural and political aspects of their experiences, either through prescribed Western styles of treatment and/or culturally accepted methods of guidance (e.g. contacting a Bosnian 'Imam').

**Directions for Future Research**

It should be noted that the suggestions made in this section are purely speculative built upon ideas borrowed from constructivist ideology. However, it is believed that there is considerable scope for future research regarding the effects of state sanctioned torture. For instance, studies utilizing a narrative methodology could attempt to construct a phenomenological picture of trauma responses within a specific culture. Or, perhaps, to construct meanings following specific types of torture. For example, do those who experience sexual torture hold a different understanding to those who have undergone physical torture? Another idea would be to see whether those who witnessed torture, experienced torture or participated in human rights abuses under duress, differ in their conceptualization? Moreover, one could assess how meanings mediate in the development and severity of PTSD. Finally, one could evaluate whether adopting a schema focused approach to the meanings survivors give to their experiences is clinically beneficial.
Subsequently, this review has led to the current author to conduct a small scale, pilot, project to investigate trauma responses with a group (N=6) of Bosnian concentration camp survivors who were detained in the infamous Manjaca camp (2). Specifically, by using repertory grids to elicit information, it is hoped that the core meaning structures which are pertinent to the type of trauma experience and culture concerned can be identified. Although the narratives given will be idiosyncratic it is hoped that there will also be common themes which exist between the survivors. Moreover, the study aims to assess whether the meanings the survivors ascribe to their experiences are associated with the severity of PTSD.

### 8.0 CONCLUSION

Although the concept of PTSD has contributed to our knowledge about the aftereffects of torture and provides guidance in approaches to treatment, there is still much to be learnt. Our understanding can be furthered by listening to the voices of survivors.

Their construction of their experiences through the use of a verbal narrative can help professionals build a more accurate and comprehensive, conceptual and cultural understanding, of the effects of torture and in turn enable health workers to provide the best possible care.

By expanding our existing knowledge of reactions to torture this can be utilized within the wider context of the human rights movement. Health professionals are in a unique position to foster the prevention of torture.

A more comprehensive understanding will enable agencies to train personnel in countries where torture takes place, those going abroad to work in such countries or those who

(2) Unfortunately, the results of this study cannot be report here as it is in its initial stages of development
work with asylum seekers to identify and report indications of torture to appropriate organizations such as Amnesty International. Moreover, an expanded understanding can be used to verify the damage caused by torture and can provide powerful testimony to its occurrence. Such evidence can focus international attention on human rights abuses even when they are strenuously denied by the governments that commit them.
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CONSUMER SATISFACTION IN AN OUT-PATIENT
POST TRAUMATIC STRESS DISORDER CLINIC

1.0 AIM OF SURVEY

The aim of this survey was to find out patients opinions about the services provided by the adult psychology team (comprising of 4 Clinical Psychologists) at the Traumatic Stress Clinic. The survey, looked at three distinct areas: (a) the structure of the service such as accessibility, waiting time for first appointments and punctuality of future appointments, (b) the process of treatment, for example, opinion on assessment/debriefing and treatment sessions, and (c) health status at the end of treatment. This present survey was conducted to highlight areas of the service which patients were satisfied with, but more importantly, to identify areas which they were dissatisfied with, so that modifications could be made. Before reporting on the outcome of this survey a brief literature review concerning consumer surveys is presented.

2.0 BRIEF LITERATURE REVIEW ON CONSUMER SATISFACTION SURVEYS

The impetus to measure consumer satisfaction was developed in the United States in the early eighties when the book 'In search of excellence: Lessons from America's best run companies' (Peter's and Waterman, 1982) was first published. It demonstrated that Americas most successful businesses were those who got 'close to the customer'. This ethos was eventually adopted by the NHS with 'Getting closer to the Public' (Local Government Training Board, 1987), which is based upon two primary principles, either the views of service users are brought into decision making procedures or, services are modified on the basis of such views. The latter principle has been encouraged by the introduction of the White Paper Working for Patients (Secretary of State for Health, 1989), and, has in recent years, played a significant role in most Clinical Psychology Departments under the guise of consumer satisfaction surveys.
Although surveys are taking place in most psychology departments nationwide, most published research on consumer satisfaction within the British health service, has concentrated on in/out-patient consumers of medical and surgical services in general hospital settings (e.g. Ross et al., 1995; Like & Zyzanski, 1987) and in general practice (e.g. Khayat & Salter, 1994: Lewis, 1994). More recently satisfaction studies have been carried out on the recipients of mental health services (e.g. Wykes & Steven, 1993; McIver, 1991; Bond et al., 1992) Again these studies focused on in-patient or long-term psychiatric care rather than out-patient services (Jones and Hodge, 1991). A recent survey of the psychological literature (Hewson, 1994) found only two references to out-patient facilities. Dagnan and Fish (1991) looked at patients satisfaction with a child and adolescent psychology service, while Brunning (1992) reported a survey carried out on her own therapy clients.

Unfortunately, due to space limitation these studies cannot be discussed at length here. However, there appears to be two important questions which run through ones mind when reviewing surveys. Firstly, are the opinions sought from patients valid and secondly, does the measurement of satisfaction, give a true reflection of satisfaction and dissatisfaction with a particular clinical service?

**Validity of Opinions**

With regards to the validity of patients opinion, one must firstly understand the meaning of the concept 'patient satisfaction'. Although it is a widely used term, it is seldom defined and almost never theoretically examined (Locker and Dunt, 1978). Amongst the few attempts to clarify the concept, were Pascoe (1983) and Linder-Pelz (1982). Both believe satisfaction to be a cognitive evaluation and an emotional reaction to health care. This suggests that surveys have to be based upon the implicit assumption that patients have 'expectations' which have to be fulfilled for satisfaction to be attained.
However, the idea that evaluation is based upon 'expectations' can be problematic. Patients may have informed expectations of certain aspects of health care e.g. appointment waiting times, whether the service is within easy reach, availability of refreshments, waiting areas, facilities for the disabled. However, other aspects of their care may be elusive, this may be particularly so for 'technical matters' such as the advantages and disadvantages of certain types of medical treatment.

So, what of psychological treatments, are they too technical for clients to evaluate? On the one hand patients may enter treatment with the notion that therapy is mystical or unfathomable and that they will not be able to comprehend the process by which they will get better (Beck, 1995). West (1976) illustrated that this held to be true for first time users of a specialist service. Subsequently, the new patient may modify their expectations if it is not met, rather than blaming the quality of the service (Carlsmith and Aronson, 1963). For example, if a behavioural programme for a spider phobic fails, the new patient may attribute this to the severity of their problem or their inability to grasp the therapeutic rational rather than to the failings of the particular treatment administered or the clinicians competence.

On the other hand, in recent years extensive media coverage has been given to mental health care (e.g. electroconvulsive therapy, medication and psychotherapy) which provides a basis for patients, whether they have just entered the health system or not, to form opinions prior to entering the health system. In addition therapists often discuss the rational of treatment and the likely outcome once treatment has been completed. This is particularly so for cognitive-behavioural treatment approaches. The therapist stresses that therapy is based on rationalization and that patients get better because they understand themselves better, solve problems and learn tools they can apply themselves. Moreover, those who have had previous experience of a particular service (e.g. had contact with more than one health professional or received more than one type of treatment), will hold certain expectations, thereby enabling them to make comparisons, and as a result may express higher levels of dissatisfaction.
However, is satisfaction entirely dependent upon 'a priori' assumptions of a particular service, or are there other modulating factors which need to be taken into account? Several investigators of consumer surveys have highlighted the fact that patient satisfaction is affected by numerous factors (Hall and Dorman, 1988, Cleary and McNeil 1988) other than just a patient's expectations of a particular service.

Firstly, it has been suggested that powerful Halo effects are involved in shaping patients' judgements with regard to the care received (Linda-Pelz, 1982; Sira, 1980). That is the opinions of patients may not actually be based upon their evaluating the technical aspects of care, but, as a reflection of their confidence in the ability of their health professional (Williams and Calnan, 1991) or interpersonal skills of the clinician, such as good empathic skills (Dimatteo et al, 1980), giving patients appropriate and comprehensible information about their problems (Pendleton, 1983) or reassurance (Fitzpatrick et al, 1983). In short, Linder-Pelz (1982) believes that "...patients are likely to express satisfaction no matter what care the doctor gives...". Thus, it could be argued that perhaps the technical aspects of care are not important to the patient but feeling confident about the clinician's ability as well as the clinician's interpersonal skills are.

Secondly, satisfaction may be based upon health status. It has been suggested, that individuals with long term health difficulties may have higher levels of dissatisfaction (Williams, 1994b). Certainly, this has been demonstrated in several studies (for example, Corrigan & Jakus, 1993; Bradley & Lewis, 1990; Fitzpatrick et al., 1987). A possible explanation for this phenomena is that chronically ill patients receive a less satisfactory standard of care as they are not as rewarding to treat, such instances may be detected by patients, which is then reflected in their levels of dissatisfaction. In this case, the association between dissatisfaction and poorer health status are evidence of real differences in the quality of care. However, it is also possible that, these patients view aspects of life negatively including health care. As such satisfaction scores may not actually reflect the quality of their care.
Alternatively, it is plausible that satisfaction may influence health status rather than the reverse. For instance Hall et al., (1990) suggest that satisfied patients are more likely to follow the advice of their clinician which in turn gives the treatment more chance to have a beneficial effect. Or, that some placebo form of non-specific benefit may be responsible, such as the sense of being understood or having their health problem taken seriously.

Furthermore one cannot ignore background factors of survey participants, such as gender, education, ethnic group, or personal characteristics such as attitudes towards authority or beliefs about health and medicine. For instance, one study showed that men are more satisfied than women with health care amongst ethnic minorities but not amongst whites (Hall and Dornan, 1988). Often details (e.g. demographics, personality factors of the respondent) of surveys are under-reported, so it is difficult to determine whether satisfaction levels are a product of individual differences of the respondents, or to real differences in health care experiences.

**Measurement Issues**

At the core of satisfaction surveys are issues of measurement, which although frequently discussed are never resolved. One fundamental problem is that surveys produce little variation, with most respondents expressing positive satisfaction. One of the most comprehensive reviews to date, a meta analysis of published medical patient satisfaction surveys concluded that the mean proportion of positively satisfied respondents was 81% (Hall and Dornan 1988). Whilst in the area of mental health, a review by Lebow (1983) listed the results of over 50 surveys, found that the average percentage of satisfied patients was 77.5%. Undoubtedly, given the skewed distributions, this poses a problem in the analysis and interpretation of survey results.

So where does this limited variation in responses stem from? In the first instance, when qualitative methodology is employed, little support is found for believing that evaluations can be placed upon a continuum of satisfaction (Fitzpatrick and Hopkins, 1983).
instance, studies by Calnan (1988) and Locker and Dunt (1978) have noted that patients offer critical feedback when encouraged to voice concerns in their own terms.

With regards to quantitative surveys, responses are often collapsed into a single category of satisfaction. For example, Williams (1994a) pointed out that a quantitative survey may result in:

"...diverse opinions ranging from 'I've evaluated the service and I'm happy with it' through 'I don't really think I have the ability to evaluate, but I do have confidence in the staff' to 'the service was appalling but I don't like to criticise, after all they're doing their best' " (p.514)

In addition the reliability and validity of surveys are questionable. In the former instance, surveys have shown to give a misleading impression of satisfaction. For example, a general practice study found a significant reduction in levels of satisfaction between assessment and one week later (Savage & Armstrong, 1990). This suggests that surveys may miss the phenomenon of the sample shifting its level of satisfaction. Also, it is especially difficult to assess validity of surveys against an accepted external criterion. It could be argued that there cannot be any 'gold standard' against which to judge the views of patients.

Finally, no matter how methodologically sound a questionnaire is, consumer surveys will more often than not drive respondents to reply with socially acceptable answers. There are a number of different possible explanations for this tendency, but one factor undoubtedly is that patients are reluctant to express criticism of the NHS or of health professionals (Fitzpatrick & Hopkins, 1983).

**Summary**

Clearly patient 'satisfaction' is a complex construct, in which a multitude of factors are at work. For example, expectations, health status, social and personal characteristics of respondents and interpersonal characteristics of the clinician, to name a few. To complicate matters further, there are also difficulties in measuring satisfaction, in that
more often than not, survey results have a tendency to be skewed towards the positive. Factors which contribute to this effect include how questionnaires are designed, difficulties with reliability and validity and respondents giving acceptable answers as they are reluctant to express criticism of NHS services.

On the whole, one cannot give a true or single answer to the question of whether a patient is satisfied with his or her health care. Many have argued that surveys are not the most efficient way to measure satisfaction, (Williams & Wilkinson, 1995) however, until a more reliable and valid method can be found to measure satisfaction, we should not underrate the potential of consumer surveys. As noted, at the beginning of this review, the most innovative and successful organizations outside of the NHS are those that are obsessed with listening to their customers (Peters and Waterman, 1982).
3.0 ABOUT THE CLINIC

Established in 1987, the Traumatic Stress Clinic is a national referral centre which offers, assessment and treatment services to both adults and children who have either witnessed or experienced a life threatening event and whom as a result have developed either an Acute Stress Disorder or Post Traumatic Stress Disorder (PTSD). These are recognized disorders as codified in the Diagnostic and Statistical Manual for Psychiatric Disorders IV (DSM IV; American Psychiatric Association, 1994). For example, the clinic has cared for those involved in major incidences, such as, the Kings Cross Fire, Marchioness River Boat sinking, Clapham Rail Crash, Lockerbie, and IRA bombings, and individual traumas such as road traffic accidents, physical assaults, rape, armed robberies, shootings, and traumatic bereavement. The clinic also sees those involved in state organized violence, including torture, (e.g. individuals from Eastern Europe, the Middle East and Africa) and those in the armed forces and emergency services (police, fire, ambulance and body recovery crews).

The Staff

This unique service is provided by a total staff number of 22 this includes, Psychiatrists, Clinical Psychologists, Family Therapists, Psychodynamic Therapists, Trainee Psychologists and Administrative staff.

The Adult services are lead by two Clinic Directors (Consultant Psychiatrist and Psychologist), and working beside them are four clinical psychologists (2 men and 2 women) of which this survey is based upon. Between the four psychologists there is an average of 4 years experience in clinical practice. All the psychologists involved in the survey are trained Cognitive-Behavioural therapists and thus treatment programmes are based upon this model.
How are Patients Referred?

The Traumatic Stress Clinic works on an Extra Contractual Referral basis. Referrals are received nationwide from General Practitioners, hospital Consultants, social and legal services. Assessment and/or treatment is offered only when funds from these individual agencies has been approved. Waiting times for funds vary from one institution to another. Those who are refused funding and their referrers are informed in writing and alternative services suggested.

Assessment of Patients

Patients who receive funding will then be offered an appointment for either a Critical Incident Debriefing for those who have recently experienced a traumatic event or an assessment session for those who present with long standing psychological difficulties after a traumatic event.

The initial assessment which lasts between 3 to 4 hours, involves (a) eliciting information from the patient, (b) administration of self report questionnaires which include: (i) Impact of Events Scale (Horowitz, 1979), (ii) The Beck Depression Inventory (Beck et al., 1961), (iii) Symptom Checklist-90 R (Derogatis, 1977 ), (iv) General Health Questionnaire (Goldberg & Williams, 1988) and (v) Alcohol and Drug Questionnaire and (c)a semi-structured interview (Clinician Administered Post Traumatic Stress Disorder Scale; Blake et al., 1990).

Treatment Programmes

The adult clinical psychology service offers three distinct treatment programmes. These include:

- Critical Incident Stress Debriefing for those who have experienced or witnessed a threatening life event within the first month of the event occurring and
presenting with an Acute Stress Disorder (DSM IV, APA, 1994). Patients in this category are offered a debriefing and 1 month follow-up session.

- Simple Trauma Programme (8 treatment sessions) for those who have developed PTSD from one single event but have suffered from psychological difficulties for over 1 month. This programme may include those involved in Road Traffic Accidents, physical assaults, or armed robberies.

- Complex Trauma Programme (20-30 treatment sessions) for those who are repeatedly exposed to traumatic events or those who continue to be at risk from further trauma. This may include, rape, combat, state organized violence, and torture.

All treatment programmes are based upon Cognitive Behavioural approaches, broadly they include:

- Psycho educational component about the nature of trauma reactions, and other mental health disorders (e.g. depression, anxiety disorders such as obsessional compulsive disorders, panic and generalized anxiety, anger and substance misuse).
- Imaginal Exposure to the traumatic event
- In-vivo Exposure to situations, places or people, related to the traumatic event
- Cognitive restructuring of distorted thought patterns and underlying schemas
4.0 DEVELOPMENT OF THE QUESTIONNAIRE

The questionnaire used for this survey was developed in two stages. To begin with a discussion was held with all members of the Adult team present (psychiatrist and four clinical psychologists) in which the areas to be surveyed were identified, these areas included the structure of the clinic, the process of treatment and its outcome. Within each of these elements, a list of areas for inquiry were compiled as follows:

- **STRUCTURE OF THE SERVICE**
  - Physical accessibility of the service
  - Attractiveness and comfort of the clinic
  - Waiting time for first assessment appointment
  - Punctuality of follow up sessions
  - Confidentiality
  - Sensitivity to religion and ethnicity

- **PROCESS**
  - Opinions on debriefing/assessment sessions
  - Opinions of follow up treatment sessions
  - Opinions on psychometric tests
  - Competence of clinician (e.g. knowledgeable about their difficulties, empathy, explaining psychological difficulties and proposed treatment)

- **OUTCOME**
  - Health status at the end of treatment

Following this initial meeting a draft questionnaire comprising of 30 questions was drawn up.

In the second stage of the questionnaires development, a draft was presented to a group of 7 patients (4 men and 3 women) who were currently in treatment. They were invited
to comment on the questionnaires content. For example, how 'user friendly' the questionnaire was (i.e. whether the questionnaire was too exhaustive, phrasing of items too difficult to understand), and whether certain areas of the service had been overlooked. This approach allowed the investigator to examine whether the contents of the instrument appear to cover clearly and unambiguously the full scope of what was intended to be measured (content validity). Given that the literature on surveys highlights the difficulty of respondents giving socially desirable responses, the group was also asked as to ways they thought best that the questionnaire be administered (e.g. during treatment, immediately after the last session or some time after the session and to whom questionnaires should be returned).

Overall the participants agreed that the items in the questionnaire addressed most of the areas they thought should be included in a survey of consumer satisfaction.

Members of the group did, however, feel that some of the items were difficult to understand and confusing, for example one question stated 'Did you think your therapist was psychologically competent?'. The members suggested that perhaps the question should read 'How competent and knowledgeable did you think your therapist was?' which was included in the final draft.

Moreover, the group felt that some questions were similar in content. For example, one question states 'How satisfied are you with the amount of help you received?' whilst another question asked 'Would you like further treatment if possible?'. It was felt that the latter question should be excluded from the questionnaire.

Further, five of the participants also suggested that some of the questions should be open ended so that recipients of the service could freely express their opinions. As a result, open ended questions such as what was helpful and unhelpful during sessions, what elements of the service they would like changed and any other comments were included.
Finally, the participants felt that the questionnaire should not be administered immediately after the final treatment session and should not be returned to the therapist concerned. The group pointed out that should the opinions of recipients be negative, their remarks may adversely affect future treatment should it be required. As a result it was felt best that questionnaires should be given between 1 to 2 weeks after treatment, be anonymous, and returned to someone other than a clinician in the clinic.

The final draft consisted of 26 questions (Appendix A). Some questions were qualitative, and others quantitative. In the latter instance, items were based upon a four choice scale, for instance, from 'very dissatisfied' (0) to 'very satisfied' (3) or 'not at all' (0) to 'extremely' (3).

**Administration of the Questionnaire**

Every person discharged from the clinical psychology service was sent, within two weeks of discharge, a letter explaining the nature of the survey (Appendix B) and a survey questionnaire (Appendix A). All respondents were guaranteed confidentiality of replies and neutrality of data gatherers, so completed questionnaires were sent back to the clinic administrator. It was hoped that this would solve the problem of respondents giving socially acceptable answers.

Although participants in this survey were guaranteed confidentiality, a record by each therapist was kept of whom they had discharged. Each entry was coded, and which tallied with codes placed on the questionnaires. This helped the investigator keep track of non-responders to the survey and the reasons why.
5.0 RESULTS OF THE SURVEY

Between June 1995 and March 1996, 74 patients had been discharged from the adult psychology team. Of these, there were 42 (57%) responses and 32 (43%) non-responders to the survey.

In this section, the results of the survey will be discussed. Data will be presented in the following way: (a) characteristics of responders and non-responders (b) presentation of quantitative data, and (c) qualitative data. In the latter instance, responses were quantified by conducting a content analysis.

**Demographic Characteristics of Respondents and Non-Respondents**

With regards to the demographics of respondents, the data is illustrated in Table 1.

<table>
<thead>
<tr>
<th>Table 1: Demographics of Responders</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demographic type</strong></td>
</tr>
</tbody>
</table>
| Gender | Female 64% (27)  
Male 36% (15) |
| Age | Average age for men 49  
Average age for women 38 |
| Marital Status | Married 26% (11)  
With partner 21% (9)  
Single 19% (8)  
Separated 12% (5)  
Divorced 12% (5)  
Widowed 10% (4) |
| Employment Status | Full time employment 36% (15)  
Unemployed 31% (13)  
Part time employment 21% (9)  
Student 12% (5) |
| Ethnic Origin | White UK/European 76% (32)  
Black Caribbean 7% (3)  
Irish 5% (2)  
Mixed Parentage 5% (2)  
Black other 5% (2)  
Pakistani 2% (1) |
Thirty two, of the 74 patients sent questionnaires did not respond to the survey. With regards to the demographic characteristics of non-responders these are shown in Table 2.

**Table 2: Demographics of non-responders**

<table>
<thead>
<tr>
<th>Demographic type</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male 59% (19)</td>
</tr>
<tr>
<td></td>
<td>Female 41% (13)</td>
</tr>
<tr>
<td>Age</td>
<td>Average age for men 40</td>
</tr>
<tr>
<td></td>
<td>Average age for women 37</td>
</tr>
<tr>
<td>Marital Status</td>
<td>Separated 31% (10) Single 25% (8) Married 22% (7)</td>
</tr>
<tr>
<td></td>
<td>With partner 19% (6) Divorced 3% (1)</td>
</tr>
<tr>
<td>Employment Status</td>
<td>Unemployed 50% (16) Part Time Employment 22% (7)</td>
</tr>
<tr>
<td></td>
<td>Employed Full Time 16% (5) Students 12% (4)</td>
</tr>
<tr>
<td>Ethnic Origin</td>
<td>White UK/European 78% (25) Black African 19% (6)</td>
</tr>
<tr>
<td></td>
<td>Greek 3% (1)</td>
</tr>
</tbody>
</table>

*Trauma Type for Respondents and Non-Respondents*

In the table overleaf (Table 3), the types of traumas experienced by both groups are given.
Table 3: Types of Trauma

<table>
<thead>
<tr>
<th>TRAUMA TYPE</th>
<th>RESPONDERS</th>
<th>NON-RESPONDERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Assaults</td>
<td>24% (10)</td>
<td>13% (4)</td>
</tr>
<tr>
<td>Road Traffic Accidents</td>
<td>17% (7)</td>
<td>6% (2)</td>
</tr>
<tr>
<td>Rape</td>
<td>14% (6)</td>
<td>16% (5)</td>
</tr>
<tr>
<td>Transport Disasters</td>
<td>12% (5)</td>
<td>-</td>
</tr>
<tr>
<td>Murder (Witness to murder,</td>
<td>12% (5)</td>
<td>22% (7)</td>
</tr>
<tr>
<td>attempted murder</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combat</td>
<td>7% (3)</td>
<td>-</td>
</tr>
<tr>
<td>Armed Robbery</td>
<td>7% (3)</td>
<td>-</td>
</tr>
<tr>
<td>Shooting</td>
<td>2% (1)</td>
<td>9% (3)</td>
</tr>
<tr>
<td>Discovery of a dead body</td>
<td>2% (1)</td>
<td>-</td>
</tr>
<tr>
<td>Torture</td>
<td>-</td>
<td>9% (3)</td>
</tr>
<tr>
<td>Childhood Sexual Abuse</td>
<td>-</td>
<td>9% (3)</td>
</tr>
<tr>
<td>Hostage</td>
<td>-</td>
<td>6% (2)</td>
</tr>
<tr>
<td>Bombing</td>
<td>-</td>
<td>6% (2)</td>
</tr>
<tr>
<td>Industrial Accident</td>
<td>-</td>
<td>3% (1)</td>
</tr>
</tbody>
</table>

Reasons for not responding to survey

Of those who failed to respond to the survey, the reasons for their not participating in the survey included:

- 13% (4) were illiterate.
- 31% (10) who completed treatment and were sent questionnaires failed to return them.
- 34% (11) dropped out of treatment prematurely.
- 9% (3) dropped out of treatment prematurely due to admittance for in-patient psychiatric treatment either for substance misuse, self-harming behaviour, eating disorders and psychotic episodes.
- 13% (4) found the distance between home and to the clinic to long, due to
Agoraphobic difficulties. These patients were subsequently referred to alternative services.
5.1 RESULTS OF QUANTITATIVE DATA

1. Is the clinic easy to get to?

Of the 42 respondents who answered this question, 39 (93%) replied that the clinic was within easy reach for them, whilst 3 (7%) said that it was not easily accessible.

2. How long did you wait for your first appointment?

Subjects were asked to indicate how long they had waited for their first appointment, by indicating either 'a month or less', 'more than a month' or 'more than three months'. Responses are presented in Table 4 below:

<table>
<thead>
<tr>
<th>RESPONSES</th>
<th>NUMBER</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A month or less</td>
<td>23</td>
<td>55%</td>
</tr>
<tr>
<td>More than a month</td>
<td>10</td>
<td>24%</td>
</tr>
<tr>
<td>More than three months</td>
<td>9</td>
<td>21%</td>
</tr>
</tbody>
</table>

Table 4

3. Was this wait acceptable to you?

Subjects were asked to indicate their satisfaction with their wait for a first appointment either as 'acceptable' or 'unacceptable'. Of the 42 responses given, 28 (67%) endorsed that the wait was 'acceptable', whilst 14 (33%) endorsed that it was 'not acceptable.'
4. **Overall, how satisfied are you with the quality of the service received?**

Patients were asked to indicate on a four point scale the degree of satisfaction with the overall quality of the service. The value labels ranged from 'very satisfied' to 'very dissatisfied'. The results indicate that opinions were skewed towards the value of 'very satisfied'. That is 71% found the quality of the service very satisfactory in comparison to 26% who found that the service to be 'satisfactory', whilst only 2% endorsed that they were 'very dissatisfied' with the service. Scores are represented in the table below:

<table>
<thead>
<tr>
<th>RESPONSES</th>
<th>NUMBER</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Satisfied</td>
<td>30</td>
<td>71%</td>
</tr>
<tr>
<td>Satisfied</td>
<td>11</td>
<td>26%</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>0.00</td>
<td>0%</td>
</tr>
<tr>
<td>Very Dissatisfied</td>
<td>1</td>
<td>2%</td>
</tr>
</tbody>
</table>

Table 5

5. **Did you receive any specific treatment for your current problem before coming here?** Responses are given in the table below:

<table>
<thead>
<tr>
<th>TYPE OF TREATMENT RECEIVED</th>
<th>NUMBER OF PEOPLE TREATED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did not receive any treatment</td>
<td>18</td>
</tr>
<tr>
<td>Prescribed Medication</td>
<td>11</td>
</tr>
<tr>
<td>Counselling/Psychotherapy</td>
<td>9</td>
</tr>
<tr>
<td>Psychiatric Services</td>
<td>4</td>
</tr>
<tr>
<td>Hospitalization</td>
<td>2</td>
</tr>
<tr>
<td>Alternative Medicine</td>
<td>1</td>
</tr>
<tr>
<td>Religious Guidance</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 6
6. **How helpful was this treatment?** Responses are given in the pie chart (1) below:

![Pie Chart 1](image)

**SATISFACTION WITH PREVIOUS TREATMENT**

In this case the majority of respondents endorsed that previous treatment for their current problems was either 'Very unhelpful' or 'Unhelpful' (29% and 34% respectively), in comparison to only 4% finding it 'Very helpful' and 33% endorsing prior treatment as 'Helpful'.

92
7. How punctual were your appointments? Responses for this question are given in Table 7 below:

<table>
<thead>
<tr>
<th>RESPONSES</th>
<th>NUMBERS</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waited less than 15 minutes</td>
<td>32</td>
<td>76%</td>
</tr>
<tr>
<td>Waited 15-30 minutes</td>
<td>8</td>
<td>19%</td>
</tr>
<tr>
<td>Waited more than 30 minutes</td>
<td>2</td>
<td>5%</td>
</tr>
</tbody>
</table>

Table 7

8. Was the therapist sensitive to your religious and ethnic background?

Responses are given in Table 8 below:

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>NUMBERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>21</td>
</tr>
<tr>
<td>No</td>
<td>0.00</td>
</tr>
<tr>
<td>No response</td>
<td>21</td>
</tr>
</tbody>
</table>

Table 8

Of the 42 questionnaires returned, a total of 21 patients endorsed that their therapist was sensitive to their religious and ethnic background. The remaining questionnaires (21) did not reply to this item.

9. How much did you feel the therapist understood your problems?

Subjects were asked to indicate on a 4 point scale, from ‘Not at all’ to ‘Extremely’ their opinion as to whether their therapist demonstrated a good understanding of
HOW MUCH THERAPIST UNDERSTOOD CLIENTS PROBLEMS

Pie Chart 2

their difficulties. Responses to this question are given in Pie Chart 2 above.

The majority of responses (74%) endorsed that their therapist had an ‘extremely’
good understanding of their difficulties. In contrast, only 14% replied that their
therapist had a ‘moderate’ understanding of their difficulties, whilst 9% and 2%
endorsed responses ‘slightly’ or ‘not at all’ respectively.

10. In general, how satisfied are you with the comfort and attractiveness of the
place where you were seen for treatment?

Subjects were asked to indicate their level of satisfaction on a four point scale
ranging from ‘very satisfied’ to ‘very dissatisfied’. Of the 42 responses given, the
majority (62%) expressed that they were ‘very satisfied’ with the comfort and
attractiveness of the clinic. In comparison, 31% indicated ‘satisfaction’ and 2%
and 8% endorsed that they were ‘dissatisfied’ or ‘very dissatisfied’ respectively.
11. How competent and knowledgeable did you think the therapist was?

Responses are illustrated in Table 9 below:

<table>
<thead>
<tr>
<th>RESPONSES</th>
<th>NUMBERS</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at All</td>
<td>0.00</td>
<td>0%</td>
</tr>
<tr>
<td>Slightly</td>
<td>0.00</td>
<td>0%</td>
</tr>
<tr>
<td>Moderately</td>
<td>8</td>
<td>19%</td>
</tr>
<tr>
<td>Extremely</td>
<td>34</td>
<td>81%</td>
</tr>
</tbody>
</table>

Table 9

Of the 42 responses obtained from this question, a large majority of subjects (81%) endorsed that they found their therapist ‘extremely’ knowledgeable and competent during treatment. Nineteen per cent replied that they found their therapist ‘moderately’ competent and knowledgeable, whereas, none of the respondents indicated dissatisfaction in this area (e.g. endorsed the items ‘not at all’ or ‘slightly’).

12. How satisfied are you with the amount of help you received?

Responses to this question are given in Table 10.

<table>
<thead>
<tr>
<th>RESPONSES</th>
<th>NUMBERS</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Dissatisfied</td>
<td>0.00</td>
<td>0%</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>4</td>
<td>10%</td>
</tr>
<tr>
<td>Satisfied</td>
<td>10</td>
<td>24%</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>28</td>
<td>67%</td>
</tr>
</tbody>
</table>

Table 10
All 42 subjects responded to this question, in which, 67% were ‘very satisfied’ with the amount of help received, whilst 24% endorsed the statement ‘satisfied’. Only 10% of the responses expressed ‘dissatisfaction’ with the amount of help given.

13. **Would you recommend this service to someone with similar difficulties?**

Again, all 42 subjects who replied to the questionnaire, answered this question. All replied that ‘yes’ they would recommend this service to someone with similar problems.

14. **How clearly did the therapist explain things to you?**

Responses to question 14 are given in Table 11:-

<table>
<thead>
<tr>
<th>RESPONSES</th>
<th>NUMBERS</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at All</td>
<td>0.00</td>
<td>0%</td>
</tr>
<tr>
<td>Slightly</td>
<td>0.00</td>
<td>0%</td>
</tr>
<tr>
<td>Moderately</td>
<td>9</td>
<td>21%</td>
</tr>
<tr>
<td>Extremely</td>
<td>33</td>
<td>79%</td>
</tr>
</tbody>
</table>

**Table 11**

Forty two responses were obtained from this question. The scores were again skewed towards the positive, whereby, 79% of respondents felt that their therapist explained their difficulties to them ‘extremely’ well, whilst, 21% endorsed the statement ‘moderately’. None of the respondents expressed any dissatisfaction in this area.

15. **Did your therapist inform you that your records are confidential?**

Subjects were asked to indicate, whether or not their therapist had informed them
that their records were confidential. 42 responses were given, in which 81% said ‘yes’, they had been informed about confidentiality, whilst, 19% said they had not been informed of this matter.

16. **Were you satisfied in the way your therapist explained your proposed treatment?** Responses to question 16 are given in Table 12 below:

<table>
<thead>
<tr>
<th>RESPONSES</th>
<th>NUMBER</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Dissatisfied</td>
<td>0.00</td>
<td>0%</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>0.00</td>
<td>0%</td>
</tr>
<tr>
<td>Satisfied</td>
<td>14</td>
<td>33%</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>28</td>
<td>67%</td>
</tr>
</tbody>
</table>

Table 12

Subjects for this item were asked to indicate the level of satisfaction with the way their therapist explained the treatment rational. Scores ranged from ‘very dissatisfied’ to ‘very satisfied’. Again scores indicated high levels of satisfaction, whereby, 67% of subjects endorsed the response ‘very satisfied’ and 33% endorsed the response ‘satisfied’. None of the respondents indicated any dissatisfaction.

17. **How helpful did you find the initial screening questionnaires that were sent to you by post?** Responses to this item are depicted in the pie chart (3) overleaf.

Subjects were asked to express their satisfaction with regards to the screening questionnaires given. A four point scale was utilized which ranged from ‘very satisfied’ to ‘very dissatisfied’. Thirty one per cent of responders found the questionnaires to be ‘very helpful’, whilst, 54% endorsed the questionnaires to just be ‘helpful’.

97
A moderate proportion of respondents, however, did express dissatisfaction with the questionnaires, in that 10% and 7% endorsed the items 'very unhelpful' and 'unhelpful' respectively.

18. **How helpful did you find your first (debriefing) session here?**

For this item subjects were asked to indicate on a four point scale from 'very helpful' to 'very unhelpful' their opinion as to the first debriefing/assessment session. Replies are illustrated in Pie Chart 4 overleaf:-

With this item, again the majority of respondents found that the initial session (debriefing/assessment) was either 'very helpful' (52%) or 'helpful' (41%). Only 7% of respondents found it 'unhelpful'.

98
19. Overall how helpful did you find therapy? Responses are shown in Table 13 below:

<table>
<thead>
<tr>
<th>RESPONSES</th>
<th>NUMBER</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Unhelpful</td>
<td>0.00</td>
<td>0%</td>
</tr>
<tr>
<td>Unhelpful</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Helpful</td>
<td>7</td>
<td>17%</td>
</tr>
<tr>
<td>Very Helpful</td>
<td>34</td>
<td>81%</td>
</tr>
</tbody>
</table>

Table 13

42 replies were given to this question. The majority of responses were skewed towards the positive. That is 81% claimed that overall they found therapy ‘very helpful’, 17% found therapy to be ‘helpful’, whilst 2% claimed that it was ‘unhelpful’.
20. Did therapy help you deal more effectively with your problems?

Subjects were asked how satisfied they were in the way treatment helped them deal with their problems. Subjects were required to indicate their satisfaction on a four point scale ranging from ‘extremely’ helpful to ‘not at all’ helpful.

All subjects who participated in this survey, responded to this item. As can be seen by the diagram, a large proportion of responses indicated high levels of satisfaction. That is 71% of respondents felt that therapy was ‘extremely’ helpful, whilst only 24% and 5% endorsed that therapy was only ‘moderately’ or ‘slightly helpful. The scores for this question are illustrated in the pie chart (5) below:

DID THERAPY HELP WITH PROBLEMS?

![Pie Chart 5](image)

Pie Chart 5
5.2 RESULTS OF QUALITATIVE DATA

The remaining questions (17, 18, 22, 25, and 26) were open ended statements. These were included in the survey so that patients could freely express their opinions as to the quality of the service provided. Qualitative data was collated by categorizing individual responses or items using an arbitrary scheme. If any one subject produced 2 responses that might be included in the same category only 1 response was included. However, if a single response could legitimately be placed in more than 1 category then this was done.

So as to establish the reliability of these categories, two clinical psychologists who did not work at the clinic (so as to reduce any bias) were asked to indicate, in which category (set by the investigator) each response fell into. The percentage agreement between the independent observers and the investigator was calculated by adding the number of responses with which they agreed to according to the categories set by the investigator, by the total number of responses given for each individual question.

Where the independent observers disagreed with the categories set by the investigator, they were asked to supply a category they thought the response fell into. For example, with regards to the question “What were the main things that helped during sessions?”, the independent raters felt that some of the responses which the investigator had placed under the category of reassurance, should be placed into a separate category of ‘advice’, and that then this category should be subdivided into written advice and verbal advice. Furthermore, they felt that another separate category was required for ‘disclosure’, which the investigator had originally placed under the heading reassurance.

As a result of conducting this content analysis, the following information was obtained. Only the most salient features of this analysis are reported with respect to frequently endorsed statements.
1. **What were the main things that helped during sessions?**

Of the 42 questionnaires returned 38 gave written replies of which some respondents gave more than one answer. Overall their were 55 separate statements which fell under the following categories:

**Empathy**

For this category statements included those which conveyed the notion that the therapist had an understanding of the complaints presented by the client. This included covert behaviours (e.g. listening to the patient without comment) or overt behaviours (e.g. providing verbal expressions of empathy about patients complaints).

37% (22) of the statements endorsed found the clinician to be empathic. For example respondents stated that "for the first time since the event, I finally felt I was understood" or "At last somebody who understood what I went through!". Whilst one patient commented “my therapist just sat and listened to me.. They looked so kind..I felt comfortable telling them everything”.

**Reassurance**

Statements which fell within the category of ‘reassurance’ were those which expressed a sense of relief when therapists provided information about psychological difficulties in the aftermath of trauma..

20% (12) of responses endorsed that they felt reassured during sessions. For instance, a respondent stated "with the help of my therapist I realised that I was not insane!" another described “I felt enormous relief when my therapist told me that I could overcome my panic attacks”
Advice

With regards to the category for ‘advice’ this was conveyed by descriptions given by patients about useful information provided by the therapist.

15% (9) of the responses given, indicated that sessions provided useful written (7%) and verbal (8%) information pertaining to their difficulties. As an example, one patient stated "I was given information as to how to move forward. For a long time I have just felt 'stuck'" whilst another patient said "the whole incident was broken down into small pieces and explained to me, this was of great help". another claimed "the leaflet about PTSD was written for me personally, it was amazing to see everything there in black and white!"

Disclosure

Included in the ‘disclosure’ category were statements concerning the ease with which patients could talk about their traumatic experience.

This category was found in 20% (12) of written statements. Several responses claimed that treatment had been the first time they were able to discuss the impact of the event, such as the following statement "I could tell my therapist things that I had never told anyone before" or "For the first time in my life I had the chance to tell someone what happened to me and be allowed to cry". Whilst others commented on the ease of talking to a stranger, “I always feel uncomfortable telling people what happened to me, but I felt completely relaxed with my therapist"
2. **What if anything was unhelpful to you during sessions?**

In comparison to the 38 of statements indicating how sessions were helpful only 4 respondents indicated how sessions were unhelpful.

Considering that so few statements were obtained for this question they were not placed under any particular category and will be reported here as they were written:

- “my therapist never told me the right answer to my problems”
- “I thought treatment was meant to make you forget, this was not the case for me”
- “I felt an hour was not enough. By the time the session had ended I had just got started”
- “I was told that my thinking was faulty”

3. **Please write down your reasons why you found the first (debriefing) session helpful/unhelpful.**

In this section 34 of the participants answered. A total of 47 statements were given, several respondents giving more than one answer.

**Unhelpful**

With regards to being *unhelpful* only two statements were given. Both respondents felt that they were given too much information which caused confusion.

- “I was given too much written information, I couldn’t read it all in the time give”
- “By the end of the session my head was full of facts that I got confused”
The majority of responses (96%) felt that the debriefing was "helpful". Their statements have been placed under the following categories:

**Reassurance/Normalizing Experiences**

Definition as for question 1 in this section.

28% (13) of responses commented that during the debriefing their clinicians normalized their experiences. For example, one respondent said "Because one issue was a body Function, and although I felt ashamed telling my therapist, it was finally explained why it happened to me. I no longer feel ashamed" another claimed "I was assured that I was not mad and that my behaviours could be reversed" or "I finally realized that my feelings were totally natural under the circumstances"

**Empathy**

Definition as for question 1 in this section.

23% (11) of comments were based on the clinician being empathic. Such as one respondent who said "I felt completely understood and not judged" or "I felt that at last there was somebody who was really listening and taking it all in".

**Disclosure**

Statements included in this category were similar to those for question 1 in this section.
19% (9) of comments given showed that the debriefing allowed them to disclose details with regards to the traumatic event they experienced. Statements endorsed included, "First time I could talk about the horror of what happened" or "In the past I was too afraid to talk about what happened to me as I thought people would be shocked and would walk away".

**Venting**

Statements included for the category of ‘venting’ were defined by descriptions of the ease with which patients could show what they thought and how they felt without repercussions.

11% (5) of statements given claimed that during the debriefing they could vent their feelings without repercussions. For example, one respondent commented "at the first session I could unleash all my thoughts, feelings and difficulties and I wasn't criticised" another said "Gave me a chance to say how I really felt without comment or criticism" whilst one claimed "being in the army I am told I should not cry. During the fist session I felt I could do this without being told I was a 'sissy'. It felt really good".

**Awareness of treatment**

Statements which fell into this category were those which reported that their therapist had discussed the process of treatment and its outcome.

15% (7) commented that they were told about treatment which put them at ease. For instance "Insight into what to expect, calmed my fears of the unknown" and "I was informed as to how the treatment was to be carried out and I felt I could go through with it"
4. What if anything would you like changed about the service?

19 responded to this question. Some gave more than one response. In all 27 comments were given.

More Sessions
• 3% (1) stated that they would like more sessions like the debriefing session
• 6% (2) felt that they would have liked more treatment sessions

Waiting Times
• 23% (7) claimed that the waiting time for the first (debriefing) appointment was too long.

Questionnaires
• 23% (7) said that there were too many questionnaires

Information
• 13% (4) replied that they would have liked more information about the clinic

Advertising
• 16% (5) of statements endorsed the opinion that the clinic should publicize more so that people knew that specialist help available.

Refreshments
• 16% (5) of the opinion that refreshment required in the clinic.
5. **Any other comments?**

In this section of the 42 replies, 20 gave no comment, and the remaining 19 responded with thanks and gratitude.
In this final section, it may be helpful if it were subdivided into the following: (a) summarizing the satisfied views of clients, (b) summarizing the dissatisfied opinions given by respondents and then discussing ways of modifying these areas and (c) difficulties with the study and suggested ways of overcoming these problems for future surveys to be conducted at the clinic.

**Areas of Satisfaction**

Overall this survey painted a positive picture of the psychology services offered at the Traumatic Stress Clinic. That is, participants indicated high levels of satisfaction in most areas of the service looked at in this survey.

With the items looking at the *structure* of the service the following results were obtained:

- With regards to accessibility, 93% of respondents said that the clinic was within easy reach. However, upon closer examination most of the respondents (35 of 42 respondents) came from the locality of Camden and Islington in which the clinic is based. The 7% who found accessibility to the clinic unfavourable were according to our records from the Home Counties and beyond (e.g. Scotland).

- Of the questions asked about waiting times for appointments. Fifty five per cent claimed to have waited a month or less for a first appointment. However, 45% of respondents waited either more than a month or more than 3 months. With respect to satisfaction in waiting times, 67% of respondents found the wait for the first appointment acceptable, yet, 33% replied that they were dissatisfied. This particular issue will be discussed later on (section 7.2). With regards to punctuality, 76% of the sample found that clinicians were punctual, that is patients waited less than 15 minutes.
• With regards to sensitivity to ethnicity and religion, 50% of respondents felt that their clinicians were sensitive to these facts, however, 50% of respondents did not reply to this question. Either these issues was of little importance to them, or they were in fact dissatisfied and afraid to say so.

• As for confidentiality of records, 81% reported that they were informed of this by their clinician. However, 19% claimed that this was not addressed. Although only a small figure in comparison to those who were informed, it is important to understand why this occurred. There are several possible explanations, firstly, patients who present with PTSD often suffer from poor concentration and short term memory difficulties (Barrett et al., 1996) thus the clinician may have informed them of confidentiality as well as other procedures in the clinic but the patient may not have absorbed this information. On the other hand, the clinician may have overlooked this issue.

• Finally, 62% of respondents said that they were 'very satisfied' with the comfort and attractiveness of the clinic whilst 31% reported it to be just 'satisfactory'. 10% however, found the clinic not be aesthetically pleasing. Unfortunately the questionnaire did not ask for an embellishment of responses in this area.

With items assessing satisfaction with the process of treatment participants of this survey gave the following responses:

• The majority of respondents in this area indicated high levels of satisfaction. That is, the quantitative items showed that, 75% of respondents claimed that their respective clinician understood their difficulties, whilst, 67% replied that their presenting complaints were explained by the therapist (e.g. development and maintenance of psychological difficulties) involved in their care. With regards to explaining the rational behind treatment programmes, 79% of respondents claimed that this was carried out by their respective clinician. Finally, 81% of respondents felt that overall their clinician was 'extremely' competent and
knowledgeable.

Moreover, high levels of satisfaction were reflected in the qualitative items of the questionnaire, specifically, those items which asked respondents to give their own comments as to what they thought was unhelpful or helpful about sessions. As shown in the content analysis in the results section, most comments (93%) illustrated that sessions were helpful in comparison to only a small number of comments (7%) claiming that sessions were unhelpful.

- With regards to the debriefing sessions, over 90% of the quantitative responses reported to be satisfied. (endorsing values of ‘very helpful’ and ‘helpful’). These opinions were further supported by the qualitative responses. Only 7% of the sample found the debriefing unhelpful, it would appear from the qualitative responses that this was due to information overload which in turn caused confusion.

- Of the screening questionnaires sent out to new patients, over 80% found them to be helpful. However, there was a small proportion of respondents (17%) who found otherwise. This opinion was further demonstrated in the qualitative items of the survey. This will be discussed in the next section (7.2)

With regards to the opinions given in the areas of structure and process, this survey illustrates that the clinic adheres to certain rights and standards set out in the Patients Charter (Department of Health, 1995) in relation to out patient services. The charter points out that (a) religious and cultural beliefs should be respected, (b) patients have the right to have their proposed treatment clearly explained to them, (c) that out patients should wait no longer than 26 weeks for a first appointment, (d) that patients should expect to be given a specific appointment time and be seen within 30 minutes of that time and (e) patients have access to their health records and that anyone working for the NHS is under a legal duty to keep records confidential. This survey has shown that all of these have been put into practice at the clinic.
As for **outcome**, again the distribution of responses tended to be skewed towards the positive.

- Overall, 72% of the sample claimed that they were 'very satisfied' with way treatment helped them deal more effectively with their difficulties. Whilst, 67% claimed to be 'very satisfied' with the amount of help received, 81% found overall that therapy had been 'very helpful', and 71% endorsed that they were 'very satisfied' with the overall quality of the service provided at the clinic.

The feedback from the recipients of this service seemed to be highly satisfactory. However, by analogy, quality control standards within industry, aim for 100%. So, even though the service users of this present study, expressed a positive opinion of the service, there were still a significant percentage of recipients who did not think so. For example, 81% of users expressed satisfaction with confidentiality, 19% did not, whilst 75% claimed that their clinician was understanding, however, 25% did not think so. By conceptualizing satisfaction levels within the framework of industry, it would appear that there is still room for improvement for the services offered at the Traumatic Stress Clinic.

Perhaps, those who are dissatisfied with a particular element of the service should be allowed to express their views. This could be achieved by including open ended statements following each closed question, in future surveys.

**Areas of Dissatisfaction**

Although the recipients of this particular service expressed high levels of satisfaction, there were certain areas of the service which they thought could be improved upon. This information was obtained from the qualitative responses rather than quantitative, which supports studies by Calnan (1988) and Locker and Dunt (1978) who noted that patients are more likely to voice criticism on open ended questions. These will now be discussed in detail and suggestions for improvement made.
• Firstly, the waiting time for the first appointment (debriefing/assessment) showed a reasonable level of dissatisfaction. 24% waited more than a month, whilst 21% waited more than three months. 33% of respondents felt that this was not acceptable. As the clinic works on an Extra Contractual Referral (ECR) basis, it is often the case that waiting for approval for funding can be lengthy, depending on the Health Authority involved in making the referral. Although the clinic has very little control in this area, it was felt that a letter should be sent to each new referral explaining the ECR system, and an estimated waiting time for funding.

• Although the Traumatic Stress Clinic is a national referral centre, it would appear from the qualitative sections of the survey that some respondents expressed dissatisfaction (13%) regarding the lack of information about the service outside of the NHS trust in which it is based. Some respondents pointed out that they and other professionals involved in their care, were not aware of this specialist service. As a result, they felt that had the service been recognized outside of the London locality, they could have overcome their difficulties sooner. Although the clinic attempts to advertise the work done, (e.g. via the media, professional journals and conferences), it would appear from the remarks made in the survey this information does not filter to certain areas of the U.K. As a result of this, discussions are currently underway to see how the clinic can effectively advertise its services to the Home counties and beyond. Suggestions have included, inserting leaflets in professional journals which are distributed nationwide (e.g. British Journal of Psychiatry, and British Journal of Clinical Psychology, and General Practitioner Review) and conducting a mail shot to General Practitioners in the Home Counties. Unfortunately, although these suggestions in theory could overcome this problem, practically, the clinic does not have the type of financial resources to make it possible in the immediate future.

• Thirdly, 13% of respondents requested more information about the clinic. For example, the rational behind its treatment. It is often the case for some clients that they fear coming to the clinic with little knowledge of who they are to see or what
is required of them in the treatment process. As such it was felt that an information sheet addressing these facts should be sent to all new patients prior to their first appointment (Appendix C).

- Fourthly, both the qualitative and quantitative data identified a considerable number of respondents, who held negative opinions about the quantity of questionnaires sent to them. As a result of this information the number of questionnaires, has been cut down from 7 to 4 (now to include: Impact of Events Scale, Beck Depression Inventory and Beck Anxiety Inventory and General Health Questionnaire).

- Finally, some respondents felt the need for refreshments. This may be particularly so during debriefing sessions which can last between three and four hours. However, it was felt that for financial and practical reasons, a drinks machine was not possible. It is argued that the clinic is sited in the centre of London and is surrounded by coffee bars, which should be utilized. As a compromise, clinicians now ask clients whether they would like to stop for a break in the middle of a debriefing/assessment only. Breaks are not suggested for subsequent sessions, unless the clinician felt it was absolutely necessary (e.g. if patient highly distressed).

Although the clinic has acted upon improving those areas which clients have expressed dissatisfaction, a follow-up survey has yet to be conducted to see whether service users are happy with these changes.

7.0 DIFFICULTIES WITH THE STUDY

The most prominent criticism of this survey is the fact that the distribution of scores were skewed towards the positive, a factor commonly associated with consumer surveys (Lebow, 1983; Hall and Dornan, 1988). Stallard and Chadwick (1991) pointed out that
satisfaction of between 70 and 90% is reported in studies of satisfaction with health care. However, this is typically based on return rates of only 50 to 60%. This difficulty certainly seems to be reflected in this present survey. Of the 74 individuals sent questionnaires there was only a 57% return rate. Forty three percent did not respond to questionnaires sent or were not included in the study.

The fact that a large number of people who received treatment at the clinic did not take part in this survey, should be noted as a limitation to the outcome of the survey. These individuals may have been highly dissatisfied with the services they received. Had these opinions been expressed a greater variation in responses would be have been captured, and so perhaps this survey would have yielded a more negative outcome.

So, what factors accounted for some individuals to not be included in the study? When comparing the types of experiences (see Table 3) to whether individuals responded or not, those who had experienced a circumscribed event (e.g. road traffic accident, physical assault) responded to the survey whilst those who had experienced prolonged and repeated trauma (e.g. torture, childhood sexual abuse, murder) did not. Perhaps those placed in this latter category, had chronic and enduring problems. Thus, it may be that they become emotionally overwhelmed when talking about their experiences and psychological problems, thus leading them to drop out of treatment prematurely.

Secondly, this survey failed to seek the opinions of those who were illiterate, had been referred to local services due to agoraphobia or those who during treatment had a significant deterioration in mental health, consequently, they had difficulty in attending the clinic or led them to be admitted to in-patient psychiatric units.

Furthermore, this survey did not ask the opinions of those who were not English speaking. Over 35% of the clinics population are from Eastern European, Middle Eastern, African and Central American countries. These individuals may have expressed dissatisfaction with interpreting services, the fact that appointment letters were in the English language, the lack of translated literature about how the clinic works or literature
explaining their psychological disorders which they may be experiencing, and advice on how to cope with these difficulties. Or more importantly, cultural insensitivity or lack of socio-political knowledge on the part of the clinician, or the mere fact that a therapist from their own culture is not available. Whatever, their opinions would have given a greater variation in satisfaction, and supplied the clinic with an invaluable source of information about how services for refugees should be conducted.

Certainly, the inclusion of all recipients of a service should be considered when conducting a survey. This would give a greater variety of responses and perhaps a more accurate picture of the benefits and limitations of a particular service. Certainly, this situation would need to be rectified in future surveys conducted a the clinic. As a suggestion the opinions of those who had literacy difficulties and agoraphobia, could be elicited by a semistructured interview, in the latter instance this could be completed over the telephone. The questionnaire of course would have to be administered by a member of the personnel department who has no affiliation with the clinic thus lowering the possibility of socially acceptable responses. Whilst the views of those who have been hospitalized could have been sought following discharge. It has been shown that it is difficult to elicit accurate information whilst receiving in-patient treatment (e.g. Corrigan & Jakus, 1993). Finally, a considerable number of individuals completed treatment but failed to return the questionnaire. At the time it was felt that chasing questionnaires may have been an infringement of their privacy. However, in retrospect it may have been that these people purely forgot to complete the survey. Perhaps in the future reminders could be sent. Moreover, the questionnaire needs to be translated into several languages so as to include non-English speaking service users.

In addition it is possible that the respondents in this survey gave socially acceptable answers. Although, this survey attempted to overcome this difficulty by informing participants that it was confidential and anonymous. It is possible that respondents gave favourable answers for fear of relapse in the future and thus requiring our care once again or more likely requiring their allocated clinician to write a report for either compensation, litigation or insurance purposes, a fact, which is typical of this service.
Another criticism of this survey is that the high levels of satisfaction could also be attributable to the design of the questionnaire. Firstly, and perhaps most importantly, is that the questionnaire was not rigorously tested with respect to reliability and validity. In the former instance, the questionnaire was not examined for its stability by repeated administration (test-retest). Had this been done perhaps the questionnaire would have been shown to be unstable (e.g. did not produce the same results on repeated use under the same conditions), thus indicating poor reliability. In future surveys, this principle should be followed, perhaps by administering the questionnaire to say, 10 subjects one week and then two weeks after. Yet, it is possible that changes would be expected as satisfaction has been proposed to be a cognitive and emotional reaction to care (Pascoe, 1983; Linder-Pelz, 1982) which may not be stable across time. That is patients may report to be satisfied with the outcome of their care after one week, but if symptoms reoccur they may report dissatisfaction in the following week.

Some attempt was made to validate the instrument developed by addressing content validity. However, more formal methods could be used in future surveys. For instance comparisons could be made between patient satisfaction scores on questionnaires to video taped therapy sessions which would then be independently assessed by external judges, with, for example, interpersonal skills.

A further difficulty with the design of the present questionnaire, were the scales used to measure satisfaction. Previous research has shown that questions posed on various dimensions, produce various responses. For example Ware and Hays, (1988) found that those who responded to 'extremely satisfied' to 'very dissatisfied' produced similar responses, whereas those who responded to 'excellent' to 'fair' did not. Certainly, this survey failed to address this point and as a consequence the response format, possibly, did not allow for various responses to materialize. In future surveys a variety of response formats will be used.

Another possible factor is the actual position of items on the questionnaire. Ware and Hays (1988) noted that the positioning of satisfaction items in the questionnaire as a
whole made a significant difference to variation. When satisfaction items followed rather than preceded other items of a more factual nature, patients gave more varied answers. This was attempted to some degree with this present survey. However if the survey had rigidly adhered to this fact maybe, patients would have been led to give more considered appraisal to their experiences at the clinic.

Suggestions for Future Surveys

The present survey had several limitations which could be addressed in future surveys conducted at the clinic.

1. It is suggested that questionnaires should be given to all those who have received care at the clinic regardless of their health status or whether they have prematurely dropped out of treatment. In addition feedback should be sought from non-English speaking clients. By having a wider selection of respondents it is probable that further service areas would be identified by respondents as requiring improvement.

2. The open ended statements gave a wider variety of responses than the closed questions. Perhaps future surveys could utilize open ended questions further to highlight the concerns of service users further. Or perhaps to conduct a semi-structured interview which would allow for a greater freedom of expression by the recipients.

8.0 CONCLUSION

Considering that this survey was the first of its kind at the clinic many lessons have been learnt with regards to eliciting the views of consumers. From a conceptual point of view it has demonstrated the complexity of assessing, without bias, the views of consumers. Whilst from a methodological perspective, it has increased our awareness as to the difficulties in developing and administering a survey. But most important of all this
survey has had useful practical implications. It has shown the extent to which this survey has provided helpful feedback in improving the quality of the service. Whilst it has also reassured staff of the excellence of the service they provide.
REFERENCES


Bradley, C., & Lewis, K., (1990) Measures of psychological well being and treatment satisfaction developed from the responses of people with tablet treated diabetes. *Diabetic Medicine, 7, 445-51*


Dimatteo, M., Taranta, A., Friedman, H., & Prince, L. (1980). Predicting patient satisfaction from physicians' non-verbal communication skills. *Medical Care, 20, 376-87*


Please answer the following questions:

1. How would you describe your ethnic background?
(Please circle the appropriate number below)

  01 White
  02 White European
  03 Black Caribbean
  04 Black African
  05 Black Other (Please specify..................)
  06 Indian
  07 Pakistan
  08 Bangladeshi
  09 Chinese
  10 Irish
  11 Greek/Greek Cypriot
  12 Turkish/Turkish Cypriot
  13 Filipino
  14 Eritrean
  15 Somali
  16 Mixed Parentage
  17 Arab
  18 Other (please specify..................)

2. Date of Birth..............................................

3. Sex: Male or Female
The Traumatic Stress Clinic is conducting an evaluation to find out what clients think about the service they have received.

It would be much appreciated if you could complete this short questionnaire. Your answers will be kept confidential and used only for the evaluation. It is hoped that the information from this questionnaire will help us to improve the services we offer to our clients.

Please do not write your name on the form and be sure to place this form in the box provided at reception before you leave today.

For each question circle the answer that is closest to what you think.

1. Is the clinic easy to get to?
   Yes  No

2. How long did you wait for your first appointment?
   A month or less
   More than a month
   More than three months

3. Was this wait acceptable to you?
   Yes  No

4. Overall, how satisfied are you with the quality of the service received?
   Very dissatisfied
   Dissatisfied
   Satisfied
   Very satisfied
5. Did you receive any specific treatment for your current problem before coming here? (please circle the one that applies to you)

- Prescribed medication
- Counselling/Psychotherapy
- Psychiatric Services
- Hospitalization
- Religious Guidance
- Alternative Medicine
- Spiritualism
- Other.....
- Did not receive treatment

6. How helpful was it?

- Very unhelpful
- Unhelpful
- Helpful
- Very helpful

7. How punctual were your appointments?

- Usually waited less than 15 minutes
- Usually waited 15-30 minutes
- Usually waited more than 30 minutes

8. Was the therapist sensitive to your religious and ethnic background?

- Yes
- No
9. How much did you feel the therapist understood your problems?
   Not at all
   Slightly
   Moderately
   Extremely

10. In general, how satisfied are you with the comfort and attractiveness of the place where you were seen for treatment?
    Very dissatisfied
    Dissatisfied
    Satisfied
    Very satisfied

11. How competent and knowledgeable did you think the therapist was?
    Not at all
    Slightly
    Moderately
    Extremely

12. How many sessions have you had? ..............

13. How satisfied are you with the amount of help you received?
    Very dissatisfied
    Dissatisfied
    Satisfied
    Very satisfied
14. Would you recommend this service to someone with similar difficulties?
   Yes           No

15. How clearly did the therapist explain things to you?
   Not at all
   Slightly
   Moderately
   Extremely

16. Did your therapist inform you that your records are confidential?
   Yes           No

17. What were the main things that helped during sessions?
   Please give your own comments ............................................................
   ...........................................................................................................
   ...........................................................................................................
   ...........................................................................................................

18. What, if anything was unhelpful to you during sessions?
   Please give your own comments ............................................................
   ...........................................................................................................
   ...........................................................................................................
   ...........................................................................................................

19. Were you satisfied in the way your therapist explained your proposed treatment?
   Very dissatisfied
   Dissatisfied
   Satisfied
   Very satisfied
20. How helpful did you find the initial screening questionnaires that were sent to you by post?

- Very unhelpful
- Unhelpful
- Helpful
- Very helpful

21. How helpful did you find your first (debriefing) session here?

- Very unhelpful
- Unhelpful
- Helpful
- Very Helpful

22. Please write down your reasons why you found the first session helpful/unhelpful

................................................................................................................................................
................................................................................................................................................
................................................................................................................................................
................................................................................................................................................

23. Overall, how helpful did you find therapy?

- Very unhelpful
- Unhelpful
- Helpful
- Very helpful
24. Did therapy help you deal more effectively with your problems?
   Not at all
   Slightly
   Moderately
   Extremely

25. What, if anything, would you liked changed about the service?
   Please give your own comments .................................................................
   ..................................................................................................................
   ..................................................................................................................
   ..................................................................................................................
   ..................................................................................................................

26. Any other comments .................................................................
   ..................................................................................................................
   ..................................................................................................................
   ..................................................................................................................
   ..................................................................................................................

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE

clin.psych.prog/satis
Dear Sir/Madam,

RE: SURVEY, TRAUMATIC STRESS CLINIC

The Traumatic Stress Clinic is at present conducting a survey about how satisfied clients are with the service.

Specifically, this survey is asking those who have recently been discharged, what they feel and think about the clinic. For example, the survey asks whether clients are happy about waiting times for a first appointment? And, what are clients views about the treatment they received for their difficulties?

The feedback that is given would help the clinic to identify areas of the service which clients are not happy about. This information would then be used to improve services for the future.

As you have recently been discharged from the clinic, we are asking whether you would like to participate in this survey, by completing the enclosed questionnaire. This will take between 15 to 20 minutes. Before or after completing the questionnaire you may want to discuss any issues that arise from the questions. If so, then please do not hesitate to contact me.

The information you provide will be treated in the strictest of confidence. Of course you do not have to agree to take part in this survey if you do not wish to do so. Refusal to take part in the study will not jeopardize any future treatment that you may require from the clinic.

Your views would be valuable and as such we hope to hear from you in the near future.

Yours sincerely,

Clinic Administrator
TRAUMATIC STRESS CLINIC

INFORMATION FOR PATIENTS

73 CHARLOTTE STREET
LONDON  W1P 1LB

TEL: 0171-530-3666
FAX: 0171-530-3677
Introduction

The clinic is a national referral centre for people with traumatic stress reactions. It was originally set up following the Kings Cross Fire and has since helped over 1000 people who have been involved in traumatic events.

These may follow involvement in or witnessing many different types of traumatic events eg. fires, assaults, car crashes, traumatic bereavement, rape or attempted rape, sexual assault, combat, bombings, torture, or other life threatening events.

Within the clinic there are several specialised service areas:

* We offer services to children & families who have been involved in traumatic events.

* We offer services to people who have been sexually abused and/or raped. If you prefer to see a female or male therapist this will be arranged.

* We are also able to offer services to refugees and people from ethnic minorities. If you require an interpreter this will be provided.

We recognise that coming to the clinic and talking about a very painful episode can be very distressing for people and some find it very difficult to keep their appointments, preferring to avoid talking about their experience. If this is the case for you then don't hesitate to telephone us and we will be happy to discuss this with you.

What will happen when I first come to the clinic?

When you receive your appointment letter it is very important that you confirm your attendance as soon as possible. Otherwise your appointment will be given to someone else and you may have to wait some time for another.

When you arrive at the clinic you may be asked to complete a small set of questionnaires. These help us by giving us some understanding of how you are feeling at the moment. If you need any help filling in the questionnaires, our staff will be pleased to help. We will also be happy to answer any questions you may have.

You will generally be seen by a Clinical Psychologist or in some cases by a Psychiatrist. A Clinical Psychologist is someone who has typically studied Psychology for 6-7 years at University, including specialised professional training, and further training once they have qualified. They use their psychological understanding of people's behaviour, thoughts, emotions and experiences to help them find a way out of their difficulties. They are not medical doctors or psychiatrists and therefore do not prescribe any drugs.
A Psychiatrist is medically qualified and has also studied over a long period (typically 5-6 years at University and up to 6-7 years in higher professional development). A psychiatrist has the ability to prescribe medication, and also often uses psychological approaches to treatment. Within the clinic these two main professions work together as a team to offer the best approach for each individual.

At your first meeting you will be given the opportunity to talk about the traumatic event, the way your life was before it happened and what has happened to you since. This will help us build a clear picture of your problems. We understand that this may be difficult for you. That is why we usually allow a long time for a first appointment, in some cases this may be several hours. However you do not have to stay the whole time if you do not wish to. You will also have the opportunity to ask questions about your problems and the help available.

If it is felt that the Traumatic Stress Clinic is not the most appropriate place for you to get help then we will discuss alternatives with you and an appropriate referral will be made. Whatever happens, please feel free to ask whatever questions you wish. After we have seen you, a letter will then be sent to the person who referred you and to your GP.

Treatment

If it is felt that you would benefit from the type of treatment offered at the Traumatic Stress Clinic this will be discussed with you in some detail, including an explanation of what's involved and whether you wish to take part.

Our treatment plans involve talking about the painful traumatic events. We have found that some patients would rather not discuss these matters and prefer to have general supportive counselling. Generally these are options that can be provided by other services. We discuss the event in some detail with the aim of coming to terms with it and thus reducing your distress. Remember that our intention is to help people like you and we believe our specialised skills enable us to do this. Throughout the sessions you have the freedom to choose whether you wish to continue or leave. All we ask is that you let us know.

Help with Travelling Expenses

If you are claiming benefits of some kind it may be possible for you to claim your fares back, either directly from the trust finance office (eg. Income Support) or by applying to the Department of Social Security. If you could bring your benefit book, or other relevant documentation with you, we will be able to advise you.

If you are in any doubt about any aspect of this leaflet please feel free to contact the clinic. We will be happy to help you.
A SCHEMATIC CONCEPTUALIZATION OF ALEXITHYMIA: IMPLICATIONS FOR SURVIVORS OF TRAUMA

ABSTRACT

The present study was conducted to investigate whether alexithymia could be conceptualized as a pre-existing trait which is normally distributed in the general population. A high degree of alexithymia being a vulnerability factor for the development and maintenance of psychiatric illness, in this case Post Traumatic Stress Disorder. Furthermore, the study explored whether the cognitive and affective characteristics of alexithymia were related to underlying, dysfunctional schemata concerning negative beliefs about expressing emotion. The stronger the beliefs the greater the degree of alexithymia. If alexithymia is associated with a heightened negative evaluation of emotional expression, this study examined what effect that would have on post traumatic symptomatology.

The study employed two groups, those who had been clinically diagnosed with Post Traumatic Stress Disorder (N=45) and a non-clinical, comparison group (N=41). The study used the Toronto Alexithymia Scale-20 (Bagby et al., 1992), Attitudes towards Expressed Emotion Scale (Joseph et al., 1994) and the Impact of Events Scale (Horowitz et al., 1979).

The study found that alexithymia existed in both the PTSD and comparison group. However, the degree of alexithymia was significantly greater in the PTSD group. Both groups also demonstrated elevated levels of negative attitudes towards emotional expression, although the traumatized group had significantly higher scores. A strong positive relationship was demonstrated when examining the association between alexithymia and negative attitudes towards expressed emotion. This effect was demonstrated for both groups. Finally, a strong and positive association was indicated for both alexithymia and negative attitudes towards emotional expression with regards to responses to trauma.
1.0 THE EVOLUTION OF THE ALEXITHYMIA CONSTRUCT

According to philosophers such as Kuhn (1962) and Cohen (1985), in the world of science, progress is only achieved when some outstanding and generally recognized problem is attempted to be solved. Solving a problem leads to a 'paradigm' shift which subsequently changes some of the more fundamental generalizations of a scientific discipline as well as its methodology and applications.

A problem that has perplexed psychosomaticians has been what factors contribute to the aetiology and pathogenesis of disease? For the greater part of the twentieth century, psychosomatic medicine has attempted to solve this question by drawing upon classical psychoanalytic theory and Freud's theoretical model of the neuroses (Weiner, 1982). The efforts of Alexander ((1950) and Deutsch (1959) and several other psychoanalytically trained physicians emphasized the role of unconscious conflicts that are assumed to generate chronic states of emotional arousal, which might then have pathogenic effects on physiological functions and ultimately lead to tissue changes. Alexander (1950), for example, theorized that unconscious feelings of hostility are believed to trigger cardiovascular disorders (e.g. migraine headaches, hypertension) whereas unconscious feelings of dependency or desires to be loved are believed to trigger gastrointestinal and respiratory disorders (e.g. ulcers, asthma).

This theoretical model led to an era of psychoanalytically based psychosomatic research and to a psychotherapeutic approach to physically ill patients that is identical to the treatment usually recommended for patients with psychoneurotic disorders. Results from Alexander's research and studies by several other investigators provided some empirical support for the conflict based paradigm (Weiner, 1977; Taylor, 1987; Alexander, et al., 1968). Yet, recent advances in statistical techniques and methodology (Friedman, & Booth-Kewley, 1987;
Holroyd & Coyne, 1987) and the realization that many of the diseases (referred to as the 'classical psychosomatic diseases') are heterogenous (Weiner, 1977) have seriously weakened this support. Moderate evidence has been accumulated that supports an association between vulnerability to disease and the affects of depression, anger/hostility and anxiety (Friedman & Booth-Kewley, 1987; Rime et al., 1989) but it has yet to be demonstrated that such affects are necessarily generated by intra psychic conflicts.

The theoretical limitations of the conflict paradigm also became apparent during the late 1950's, when the anticipated efficacy of psychoanalytic therapy as a treatment modality for physically ill patients did not materialize (Lipowski, 1977). Some patients responded favourably to the technique of identifying and interpreting conflicts over drive related wishes with a reduction of physical symptoms, but many patients, particularly those with regressed egos or developmental arrests, were found to benefit more from supportive psychotherapy and/or behavioural interventions (Karasu, 1979; Kellner, 1975). Furthermore, the physical symptoms of some medical patients seemed to be aggravated by attempts to identify conflicting, unconscious motivations (Sifneos, 1975). These poor treatment results, plus the substantial lack of validating data, suggested a fundamental weakness in the conflict paradigm.

The alexithymia construct emerged from clinical observations that were anomalous within the traditional conflict paradigm. As early as 1948, Reusch observed that many patients suffering from classical diseases were unimaginative, manifested difficulties with the verbal and symbolic expression of emotion, and were thus distinctly different from psychoneurotic patients. He attributed these characteristics to an arrest in personality development and considered this, rather than neurotic conflict to be the core problem of psychosomatic diseases. MacLean (1949) also noted that many psychosomatic patients demonstrated an apparent inability to verbalize feelings. Using his anatomical model of the "triune brain"
MacLean speculated that instead of being relayed to the neocortex (word brain) and finding expression in the symbolic use of words, distressing emotions find immediate expression through autonomic pathways and are translated into a kind of "organ language". In the early 1950's Horney (1952) and Kelman (1952) reported their experiences with a type of patient who was difficult to treat psychoanalytically because of a lack of emotional awareness, paucity of inner experiences, minimal interest in dreams, concreteness of thinking, and externalized style of living. Such patients were prone to developing psychosomatic symptoms and often engaged in binge eating, alcohol abuse or other compulsive behaviours, seemingly to avoid experiencing feelings of inner emptiness. Although Horney and Kelman recognized that these characteristics were not restricted to any specific type of neurosis, consistent with the prevailing paradigm they attributed them to strong defences against unconscious conflicts. A decade later, however, the French psychoanalysts Marty and de M'Uzan (1963) observed a similar operational thinking style (la pensee opératoire) and mode of existence (la vie opératoire) in physically ill patients, which they attributed to deficits in personality organization rather than the neurotic defences. In the absence of an inner life of feelings and fantasies, these patients were preoccupied with physical symptoms and the minute details of external events, and they showed an affect less way of relating to other people.

The significance of the above observations and conceptualizations were not fully appreciated, however, until the early 1970's when Nemiah and Sifneos (1970) began to systematically investigate the cognitive style of patients with classical psychosomatic diseases. The results of their studies and those of subsequent investigators (Shands, 1975; von Rad et al., 1977; Vogt et al., 1977; Taylor et al., 1981) seemed to confirm, that in contrast to psychoneurotic patients, many somatically ill patients have a marked difficulty describing subjective feelings, an impoverished fantasy life, and a cognitive style that is literal, utilitarian and externally oriented. Sifneos (1973) coined the term alexithymia (from Greek roots meaning absence of words for emotions) to denote this cluster of cognitive and affective characteristics.
In recent years alexithymia has also been associated with a variety of psychiatric disorders. These have included: substance misuse (Taylor et al., 1990); panic disorder (Zeitlin & McNally, 1993; Parker et al., 1993a), personality disorders (Bach et al., 1994), eating disorders (Schmidt et al., 1993), anxiety (Hendryx et al., 1991), depression (Wise et al., 1990) violent offenders (Kroner & Forth, 1995), post traumatic stress disorder (e.g. Krystal et al., 1986) and even healthy individuals (Blanchard et al., 1981; Sifneos, 1988). This shows that alexithymia is not exclusive to psychosomatic illnesses.

The construct of alexithymia has therefore captured the interest of theoreticians, researchers and clinicians. It challenges our understanding of how physiological experiences and bodily sensations acquire mental representation as feelings and thoughts that eventually result in a language for expressing emotions. Clinically, a high level of alexithymia could be considered to be a risk factor for a variety of medical and psychiatric disorders whilst an inability to identify and express emotional states would mean that clinicians need to rethink treatment strategies.

1.1 CLINICAL FEATURES OF ALEXITHYMIA

As the early empirical findings and observational reports converged, the construct of alexithymia was formulated, which refers to a disturbance in affective and cognitive functions. The fundamental characteristic of alexithymia is a deficit in the ability to differentiate affective from somatic states, and affective states from each other. Thus alexithymics have difficulty in identifying their feelings and communicating these feelings to others. Alexithymic individuals also manifest cognitive characteristics including a paucity of fantasy, imagery and daydreaming, as well as a thought style that is relatively concrete, external and utilitarian rather than introspective (Sifneos, 1973; Taylor et al., 1991).

Externally, alexithymic individuals present themselves as being well adapted and show a high degree of social conformity and appear passive, agreeable and quiet, but in McDougall's
opinion (1974) this is a "pseudo normality". Internally, they lack awareness of their inner psychic life, and go through life in a mechanistic fashion, almost as if they are following an instruction book. Their constricted emotional functioning and inner psychic life are sometimes revealed by a stiffness of posture and lack of expressive facial movements (Nemiah et al., 1976).

Occasionally, some alexithymic individuals appear to contradict the definition of alexithymia because they experience chronic dysphoria or manifest outbursts of weeping or rage. Intensive questioning, however, reveals that they know very little about their own feelings and, in most instances, are unable to link them with memories, fantasies or specific situations (Taylor, 1984).

The recognition of emotions is important in social relationships (Rubinow & Post, 1992). However, alexithymics have shown to have impaired verbal and non verbal emotion recognition, in themselves and with others (Lane et al., 1996). Thus, alexithymics have an impaired capacity for empathy which can lead to strained interpersonal relationships and a tendency towards social isolation (Prince & Berenbaum, 1993). Moreover, unable to identify their own feelings, alexithymic individuals verbally communicate emotional distress to other people very poorly, subsequently, failing to seek support as a source of comfort from family or friends (Dunn & Brown, 1991). The importance of social support as a moderator of the relationship between life stress and physical disease have been demonstrated in several studies (Hofer, 1984; Berkman, 1995). Thus, one could assume that alexithymics experiencing life stress, and who fail to seek support will maintain and exacerbate physical and psychological stress symptoms.

It has been hypothesized that the limited ability of the alexithymic individual to process emotions cognitively so that they are experienced as conscious feeling states leads to a focusing on, and amplification of, the somatic sensations accompanying emotional arousal, and/or to physical action as an immediate response to unpleasant arousal (Barsky &
Klerman, 1983; Lesser, 1985; Lane & Schwartz, 1987). This might explain the apparent tendency of individuals who have alexithymic characteristics to develop hypochondriasis and somatization disorders, as well as their alleged tendency to regulate tension through compulsive behaviours such as binge-eating, the self starvation of anorexia nervosa (Bourke et al., 1992) or substance abuse (Taylor et al., 1990).

As suggested originally by MacLean (1949) and more recently by Martin and Pihl (1986), the failure to regulate and modulate distressing emotions at the neocortical (i.e. cognitive) level might result in exacerbated physiological responses to stressful situations, thereby producing conditions conducive to the development of somatic disease. The particular disease that might emerge is presumed to be determined by constitutional risk factors (possibly transmitted genetically) and/or environmental agents (Holroyd & Coyne, 1987). Although research is in its early phases, studies examining the stress response patterns in normal individuals with high or low presence of alexithymic characteristics have provided some evidence that persons with high alexithymic levels manifest a dissociation of the physiological and subjective responses to stress, as well as high tonic levels of sympathetic activity that are not modulated by changing environmental conditions (Martin & Pihl, 1986; Papciak et al., 1985).

1.2 VALIDATING THE ALEXITHYonia CONSTRUCT

A variety of instruments (see Table 1) have been developed to validate the qualitative facets of alexithymia as well as to enable clinicians to quantify alexithymia in varied medical and psychiatric disorders.

Of these instruments the BIQ, SSPS, MMPI(A), and TAS are the most widely used. There is evidence, however, that some of these instruments lack adequate reliability and/or validity and show little or no relationship to one another (Bagby et al., 1991; Norton, 1989; Parker
et al., 1991a; Taylor & Bagby 1988). This has raised concerns as to the validity of the alexithymia construct and thus limits the interpretability and generalizability of findings from research studies, which have demonstrated the existence of alexithymia in various psychological disorders.

<table>
<thead>
<tr>
<th>AUTHORS</th>
<th>MEASUREMENTS</th>
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<td><strong>Sineos (1973)</strong></td>
<td><strong>INTERVIEWER RATED SCHEDULES</strong></td>
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| **Krystal, Giller & Cicchetti (1986)** | • Beth Israel Hospital Psychosomatic Questionnaire (BIQ)  
| | • Alexithymia Provoked Response Questionnaire (APRQ) |
| **Faryna, Rodenhauser & Torem (1986)** | **SELF REPORT SCALES** |
| **Kleiger & Kinsman (1980)** | • Analog Alexithymia Scale  
| **Apfel & Sifneos (1979)** | • Minnesota Multiphasic Personality Inventory - A (MMPI-A)  
| **Sifneos (1986)** | • Schalling-Sifneos Personality Scale (SSPS)  
| **Bagby, Parker & Taylor (1993)** | • Schalling-Sifneos Personality Scale Revised (SSPS-R)  
| **Cohen, Auld, Demers-Desrosiers & Cathchlove (1985)** | • Toronto Alexithymia Scale - 20 (TAS-20)  
| **Acklin & Bernat (1987)** | **PROJECTIVE MEASURES** |

**TABLE 1**

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Developed by Sifneos (1973) the Beth Israel Hospital Psychosomatic Questionnaire (BIQ), is a 17 item forced-choice questionnaire completed by the clinician. It is the first and most widely used psychometric tool to measure the construct of alexithymia.

Gardos and associates (1984) found partial support for the factorial validity of the BIQ. One hundred and seventy-eight psychiatric outpatients were interviewed by one of three clinicians. Four factors were identified (1) difficulties in expressing feelings (2) impaired communication (3) educational achievements (4) paucity of dreams and psychosomatic illness, which accounted for an astounding 90 per cent of the variance. While these results are encouraging, it has been pointed out that the sample size was too small for a factor-analytic study to be considered reliable, whilst, there was no assessment of inter-rater-reliability among the three clinicians, who may have used different interviewing techniques despite detailed instructions on how to elicit alexithymic characteristics (Taylor & Bagby, 1988).

Nevertheless, some investigators have reported good inter-rater reliability with the BIQ. For example Kleiger & Jones (1980) used the BIQ to assess alexithymic characteristics in patients with chronic respiratory illness, and reported high inter-rater reliability. However, instead of a comparison of ratings from separate interviews, audiotapes of single interviews were rated independently by three judges. Taylor et al., (1981) used separate interviews to rate patients with inflammatory bowel disease and found unacceptable inter-rater reliability.

Others (Lolas et al., 1980) have questioned the test's validity in terms of the observer scoring it, stressing that the measure is highly dependent upon the interaction of the interviewer and patient, and that interviewer experience and bias are potential problems. The interview
situation itself has been the object of scrutiny, with some reports noting that the style of the interviewer may actually elicit affective material and so deviating from demonstrating the inherent inability of the patient to be in touch with feelings (Wolff, 1977; Schneider, 1977).

**Self-report measures**

In order to bypass the interactional difficulties of the BIQ, the Schalling-Sifneos Personality Scale (SSPS; Apfel & Sifneos, 1979), a 20 item self report measure was developed. The SSPS was constructed using items that reflect the substantive domain of the alexithymia construct.

Several factor analytic studies have yielded three or four factor solutions theoretically congruent with the alexithymia construct. In one investigation based on a sample of 230 college students (Blanchard et al., 1981) SSPS scores were found to be normally distributed and the following three factors were extracted (1) difficulty in expression of feelings (2) importance of feelings and (3) daydreaming/introspection. Another psychometric study of the SSPS (Martin et al., 1984) based on a sample of 430 undergraduates indicated the distribution of scores was approximately normal, that the scales factor structure was stable across samples and that the scale measured characteristics associated with alexithymia. The factors identified (ability to describe feelings, apathy, daydreaming, and relative importance of feelings and actions) were similar to those found by Blanchard et al., (1981). A third factor analytic study of the SSPS (Shipko & Noviello, 1984) revealed similar factors (1) difficulty in expression of feelings (2) value placed on feelings (3) lack of fantasy and (4) introversion. These factor analytic studies suggest that the SSPS assesses behaviours that are representative of at least some aspects of alexithymia. However, subsequent investigations (Norton, 1989; Bagby et al, 1986a; Bagby et al., 1988a) demonstrated that the SSPS has poor item-total correlations, poor internal consistency, and an unstable factor structure, whereby, very few of the SSPS items loaded significantly on any one factor, and different factor structures emerged in different studies using different samples.
Sifneos has recently presented a revised version of the SSPS (SSPS-R; Sifneos, 1986). In assessing its psychometric qualities, Parker et al., (1991a) found that although the factor structure was found to be reasonably congruent with the theoretical domains of the alexithymia construct, the scale lacked homogeneity and internal reliability. Thus offering little improvement over the SSPS.

Another widely used measurement is the 22 item sub scale of the Minnesota Multiphasic Personality Inventory- A (MMPI-A; Kleiger & Kinsman, 1980), which was developed by utilizing existing scores from the BIQ as the external criterion. The scale was derived from a sample of 112 hospitalized chronic respiratory patients who were administered the MMPI-A within 3 weeks following their admission to hospital. Kleiger & Kinsman (1980) reported that the MMPI-A could differentiate between alexithymics and non-alexithymics with 82% accuracy.

However, Federman & Mohns (1984) were unable to replicate the correlation between the BIQ and MMPI-A, reported in the original validation study (Kleiger & Kinsman, 1980), with a sample of migraine headache patients. Similar failures to replicate the significant correlation between the BIQ and MMPI-A have been reported with chronic pain patients (Demers-Desrosiers et al., 1983) general psychiatric and medical patients (Krystal et al., 1986) and patients diagnosed as hypertensive (Paulson, 1985). This is hardly surprising as the BIQ, as noted earlier, has shown to be an invalid measure. A similar pattern of non-significant correlations between the MMPI-A and other measures of alexithymia have also been reported, including the APRQ (Krystal et al., 1986), the SSPS (Krystal et al., 1986, Norton, 1989) and the TAS (Bagby et al., 1988a).

Other studies have attempted to validate the MMPI-A by examining score differences between patients with somatization disorders or physical illnesses and groups of patients without physical symptoms. Doody & Taylor (1983) for example, reported significant differences between psychoneurotic patients and patients with inflammatory bowel diseases.
(ulcerative colitis and Crohn's disease) with the latter group scoring significantly higher on the MMPI-A. Similarly, Greenberg & O'Neill (1988) reported a significantly lower percentage of alexithymics in a sample of psychiatric inpatients than in samples of patients with a variety of physical illnesses. Greenberg & Dattore (1983) however, failed to reveal differences between healthy normals, psychosomatic patients and schizophrenic patients. Still other studies with college student samples have been unable to find significant correlations between the MMPI-A and various measures of somatic complaints, including the Psychosomatic Symptom Checklist (Bagby et al., 1988a) and the Somatic Complaints Scale of the Cornell Medical Index (Norton, 1989).

Evidence from construct type validity studies, although inconsistent, have been somewhat more positive. Congruent with the hypothesis that alexithymics reveal a different pattern of psychopathology than psychoneurotic patients, Mendelson (1982) found that non-alexithymic pain patients as identified by the MMPI-A scored higher on the Neuroticism sub scale of the Eysenck Personality Inventory (EPI-N) than those categorized by the MMPI-A as alexithymic. Similarly, Norton (1989) reported a low magnitude correlation between the MMPI-A and the EPI-N with a sample of college females. Whilst, Greenberg & O'Neill (1988) found that patients identified as alexithymic on the MMPI-A produced Rorschach responses consistent with the hypothesis that alexithymics are less verbally productive and have less ability to fantasize, whereas those identified as non-alexithymic did not.

However, Doody & Taylor (1983) found that the MMPI-A scale did not correlate with measures of ability to express feelings verbally or the capacity to fantasize both of which are central to the construct of alexithymia. Bagby et al., (1991), in a study of 178 psychiatric patients, conducted a factor analysis of the seven items on the MMPI-A that supposedly measure alexithymia. Four of these scales include; poor health, somatic complaints, physical symptoms and physical mal functioning, as it is hypothesized that alexithymics are prone to somatise or experience physical illness than non-alexithymics. Whilst, hypochondriasis represents a crude index of psychological mindedness and is reflective of a lack of insight.
into emotional and physical problems (Taylor, 1984) and ego strength is a gross measure predictive of potential successful outcome to psychotherapeutic intervention (Barron, 1953) which is theoretically relevant to the alexithymia construct in that clinicians and investigators alike have repeatedly indicated that alexithymics respond poorly to insight oriented psychotherapy (Sifneos, 1975; Taylor, 1984; Krystal, 1982). However Bagby et al., (1991) found that none of the seven scales differentiated alexithymics from non-alexithymics. Three of the four scales assessing somatic complaints and/or physical problems showed that non-alexithymics had marginally higher scores on these three scales than alexithymics. Whilst on hypochondriasis and ego strength scales alexithymics were shown to be psychologically minded and appropriate for insight oriented therapy.

The Toronto Alexithymia Scale (TAS; Taylor et al., 1985) self report questionnaire, appears to be a far more promising measure of alexithymia. The initial questionnaire based on 26 items was found to have internal consistency, good test-retest reliability, convergent and divergent validity and a replicable four factor structure that was congruent with the theoretical construct of alexithymia; (1) difficulty identifying and distinguishing between feelings and bodily sensations (2) difficulty describing feelings (3) reduced daydreaming and (4) externally oriented thinking style.

Subsequent studies (Bagby et al., 1988b; Bagby et al., 1986b) have provided considerable support for the validity of the TAS and thereby also for the validity of the alexithymic construct. For example, consistent with the descriptive features of the alexithymic construct, the TAS correlated negatively with the Psychological Mindedness Scale of the California Psychological Inventory (Gough, 1969). Given that psychological mindedness generally enhances the prospects of successful psychodynamic psychotherapy (Conte et al., 1990) this finding supports the clinical impression that individuals with the alexithymic trait make poor candidates for this type of psychotherapy (Krystal, 1982; Sifneos, 1975). Additional support
came from studies with both clinical and non-clinical samples (Taylor et al., 1990, 1992) in which the TAS was found to correlate negatively with the MMPI ego-strength scale (Barron, 1953), a test that was designed to predict successful response to psychotherapy.

Early studies also verified the clinical impression that alexithymia is strongly associated with certain symptoms and syndromes. The TAS was found to correlate positively with several self report measures of somatic complaints and general dysphoria including anxiety and depression (Bagby et al., 1988a; Bagby et al., 1986b; Taylor et al., 1992). In addition, results of investigations with samples of women with anorexia nervosa (Bourke et al., 1992) men with substance use disorders (Taylor et al., 1990; Haviland et al., 1988) and post traumatic stress disorder (Zeitlin et al., 1989) supported the clinical impression of a high prevalence of alexithymia among these patient groups when compared with healthy control groups. Moreover, although alexithymia and depression are significantly correlated, factor analysis of a correlation matrix comprising items from both the TAS and Beck Depression Inventory (Beck et al., 1979) yielded evidence that alexithymia is a construct that is separate and distinct from the construct of depression (Parker et al., 1991b).

While the psychometric properties of the TAS are an improvement over those of other scales measuring alexithymia, it has recently undergone revision. Specifically, its developers noted that the items assessing daydreaming, difficulty recalling dreams, social conformity and a tendency to action instead of reflection did not emerge as essential facets of the construct. A 23 item and finally a 20 item questionnaire was constructed. The TAS-20 (Bagby et al., 1994b) demonstrated good internal consistency, and test-retest reliability, and a three factor structure theoretically congruent with the alexithymia construct; (1) difficulty identifying feelings (2) difficulty describing feelings to others and (3) externally oriented thinking. The stability and replicability of this three factor structure were demonstrated with both clinical and non-clinical populations by the use of confirmatory factor analysis (Bagby et al., 1994a).
The convergent validity of the TAS-20 was assessed by examining the relationships of the scale with the Need for Cognition Scale (NCS) and the Psychological Mindedness Scale (PMS) a new measure developed by Conte et al., (1990) which assess four facets of psychological mindedness that are considered relevant to evaluating suitability for analytically oriented psychotherapy; willingness to talk about ones problems, access to ones feelings, capacity for behavioural change and interest in why people behave the way they do. Correlations indicated that the TAS-20 and its three factors are all strongly and negatively related to both the NCS and PMS.

An additional investigation (Bagby et al., 1994b) with a sample of behavioural medicine patients, examined the level of agreement between the TAS-20 and external observers with a modified BIQ. Strong positive correlations between the TAS-20 and BIQ were found. Factor 1 (difficulty identifying feelings) correlated significantly with the BIQ sub scale assessing affect awareness and Factor 3 (externally oriented thinking) correlated significantly with the sub scale assessing operatory thinking. Factor 2 which reflects the inability to access and communicate feelings to others showed strong correlations with both sub scales of the BIQ.

The TAS has also been subjected to being examined with established measures of a standard taxonomy of personality dimensions. In earlier work, investigators, (Parker et al., 1989a) examined the relationship of alexithymia with Eysenck's three-dimensional model of personality (Eysenck and Eysenck, 1985) which encompasses neuroticism, introversion-extraversion and psychoticism. In a sample of 190 undergraduate university students subjects who scored high on the TAS also scored high on the Neuroticism scale and low on the Extraversion scale of the Eysenck Personality Scale and a low positive correlation with the Psychoticism scale.
A second study (Taylor, 1994) explored the relationship between alexithymia and five factor model of personality (Costa & McCrae, 1992). In addition to the dimensions of neuroticism and extraversion the five factor model includes the personality dimensions of (1) open to experience such as active imagination, aesthetic sensitivity, attentiveness to inner feelings, preference for variety, intellectual curiosity and independence of judgement, (2) agreeableness which includes positive or negative orientation towards others and (3) conscientiousness such as organization and self discipline. In a sample of 83 undergraduate university students, it was reported that those who were alexithymic were prone to a close of experience, had a reduced ability to experience positive emotions but an increased susceptibility to experience negative affect such as anxiety, depression and self consciousness (e.g. shame and embarrassment), and cope poorly with stress. In addition, this study identified that alexithymic individuals were non-analytical and factually oriented, had a narrow range of interests and showed a preference for the familiar. Low positive correlations were obtained for conscientiousness and agreeableness.

In summary, three of the most widely used measures (BIQ, SSPS and MMPI-A), have received considerable criticism from numerous researchers who have demonstrated that they lack validity and/or reliability. Yet this has not deterred researchers from using them. Obviously, this puts into question early studies which have reported the validity of the alexithymia construct and its relationship with diverse psychological disorders. However, with the development of the TAS and more recent TAS-20 there is increased confidence in the existence of the alexithymia construct and its relationship with certain syndromes.

1.3 CAUSAL EXPLANATIONS OF ALEXITHYMIA

The aetiology of alexithymia remains to be elucidated. Fundamentally, theoreticians are unable to agree on whether alexithymia is a pre-existing trait (primary alexithymia) or a state-dependent reaction (secondary alexithymia). In the former case there are several schools of thought about the development of alexithymia; (1) Developmental psychologists have
suggested that perhaps early infant and childhood experiences influence the cognitive processing of emotion and in turn the development of affects (Lane & Schwartz, 1987) which may arise either as a result of faulty patterns of affective interchange during childhood development (e.g. Emde & Stern, 1988; Stern, 1984) or neurological deficits (e.g. Tenhouten et al., 1986). Others have speculated about (2) genetic factors or (3) socio-cultural influences. Whilst, in more recent years, (4) others have borrowed ideas from the biomedical sciences and have suggested that alexithymia arises from deficits in the various subsystems that constitute the human emotional response system.

Lastly, (5) there are those who have observed that alexithymic characteristics arise from psychic trauma (secondary alexithymia). This alexithymia-like-phenomena has been conceptualized as defensive protection against painful affect and it appears to resolve sometimes as the individuals situation improves (Keltikangas-Jarvinen, 1987; Haviland et al., 1988).

Perhaps disagreement amongst theoreticians as to the aetiology of alexithymia, has to do with the fact that the construct of alexithymia has been hampered by conceptual and methodological limitations. Firstly, most of these discussions focus on the aetiology of psychosomatic phenomena and symptom formation, implying that this is the same as the aetiology of alexithymia (e.g. Ahrens & Deffner, 1986; Vollhardt et al., 1986). Although they seem to be associated, they are not identical. Alexithymia is not just associated with somatic illnesses but other psychiatric disorders such as depression, eating disorders and substance misuse. These observations seem to have been neglected. Subsequently, confusion occurs when this distinction is not made. Finally, like other risk factors (e.g. bereavement or poverty), alexithymia should be conceptualized as increasing an individuals general susceptibility to disease, which develops as a result of a multitude of other factors (Nemiah, 1977; Taylor, 1984).
Early proponents of alexithymia speculated about its role in somatic symptom formation with insufficient supporting data and before any attempt to verify the construct. As noted by Lesser and Lesser (1983), instead of carefully evaluating the construct, many investigators assumed that the clinical features it encompasses are conceptually related, and they interpreted their research findings as though construct validity were already established. Theoreticians who did attempt to validate the construct of alexithymia, paid virtually no attention to psychometric theory and, not surprisingly, scales such as the BIQ, MMPI-A, and SSPS, have been found to lack reliability and/or validity. Nonetheless, these instruments have been widely used in studies evaluating alexithymia. Given the psychometric deficiencies in these scales, one cannot assume that their results are reliable or generalizable.

Since most of the research studies can be faulted on methodological and/or conceptual grounds, it is no wonder that empirical research which has attempted to explain the aetiology of alexithymia has produced conflicting arguments. Consequently, the distinction between the alexithymic trait and state-dependent reactions remain to be fully elucidated. Thus, these etiological explanations remain theoretical and speculative.

1.4 PRIMARY ALEXITHYMIA

Cognitive processing and development of affect

The developmental perspective suggests that there are differences in the level of awareness of inner states and in the ability to communicate emotions symbolically. Such differences are presumed to reflect variations in the complexity of the cognitive schemata and linguistic and other symbolic representations of emotions. Indeed, by integrating concepts of symbol formation with Piaget's stages of cognitive development, Lane & Schwartz (1987) conceptualized a developmental sequence of five levels of emotional awareness ranging from a simple awareness of undifferentiated bodily sensations only (Level 1) to an awareness of complex blends of feelings and a capacity to appreciate the emotional experience of others.
The capacity to form mental representations of emotions and the ability to experience subjective feelings with ego development and ego functioning, are functions and mechanisms which appear to be absent or impaired in alexithymic individuals, who consequently appear vulnerable to mounting tension from undifferentiated states of emotional arousal. Thus the alexithymic's vulnerability to illness is attributed primarily to deficits in the cognitive processing of emotions.

The assumption that alexithymia is associated with impairment in the capacity to cognitively process emotions has been examined by several investigators with regards to emotion recognition. Findings to date have been mixed. McDonald & Prkachin (1990) observed no significant difference between alexithymic and non-alexithymic male undergraduate students in the ability to recognize posed facial expressions of emotion. However, there were only 10 subjects in each group, and alexithymia was evaluated using the SSPS, an insufficiently reliable measure of alexithymia. Mayer et al., (1990) studied 139 subjects and observed no significant association between alexithymia as measured by the TAS and the accuracy of recognition of emotions depicted in human faces, colour swatches and abstract designs. Findings for recognition accuracy of emotion in human faces were not reported separately nor was the range of TAS scores or the number of subjects meeting criteria for alexithymia. Berenbaum and Prince (1994) also studied 137 undergraduates and observed that alexithymia, as measured by the TAS, was not associated with the accuracy of recognition of the emotional content in stories.

Parker and colleagues (1993b) observed in 216 undergraduates, however that alexithymia as measured by the TAS-20 was significantly associated with decreased recognition accuracy of facial expressions of emotion. Mann et al., (1994) observed a similar association between alexithymia and decreased recognition accuracy of facial expressions of emotion in a sample of 62 medical centre employees.
A recent study by Lane et al., (1996) has given additional support to the notion that alexithymics have deficits in the cognitive processing of emotions. In a large community sample of 380 subjects, Lane and colleagues found that the ability to recognize emotions decreases as alexithymia scores increase and that this decreased ability is not only verbal as evidenced in prior studies but also non-verbal as measured by the TAS-20 and a newly developed instrument the Levels of Emotional Awareness Scale (LEAS; Lane et al., 1996). These findings, therefore suggest that the hallmark of alexithymia, the difficulty in putting emotions into words, may be just one manifestation of a more general impairment in the capacity for encoding and transforming emotional information. These findings are also consistent with the earlier theory of emotional awareness proposed by Lane & Schwartze (1987) which states that the use of words denoting emotion creates cognitive schemata that determine how emotion information is processed, whether that information is internal or external in origin or verbal or non-verbal in content.

Although the cognitive processing model seems plausible, it does raise additional questions, which proponents of the cognitive processing model have failed to address. Specifically, could it be that the cognitive deficits arise from negative childhood environments or neurophysiological malfunctions?

**Communication of affect in childhood**

Developmental psychologists have posited that the recognition and expression of emotion stems from early mother-infant relationships based upon the reciprocal responses of mother and infant to facial and vocal expressions and other spontaneous motor behaviours that signify different emotional behaviours (Emde, 1988; Stern, 1984).

Research has shown that the capacity to recognize and express several basic emotions (including joy, anger, disgust, surprise, fear and sadness) is universal and present in early infancy (e.g. Ekman & Friesen, 1982). Through a mother's attunement to these emotional
expressions in the infant, she is guided to respond with appropriate care giving and emotional expressions. These in turn help organize and regulate the emotional life of the infant (Stern, 1984). Once the child develops the capacity for symbolization and language, their level of emotional awareness gradually increases as the mother teaches words and meanings associated with somatic emotional expressions and other bodily experiences (Edgcumbe, 1984; Emde, 1984). The subjective experiencing and increasing verbalization of affects allows the child to think about and organize, feelings and needs, and so enables them to contain and tolerate the tensions they generate without always having to rely on parents. In addition, the cognitive processing of emotions and mental representation of affective experiences of the self interacting with others provide raw data for the creation of memories, fantasies and dreams, which further help in containing and modulating states of emotional arousal.

Supported by observational studies of infants and children it is argued that when the primary caregiver is emotionally unavailable or when the child is repeatedly subjected to inconsistent responses because of parental "misattunements", the child is likely to manifest abnormalities in affect development (e.g. Edgcumbe, 1984; Emde, 1984; Stern, 1984). These abnormalities include emotional constriction, reduced playfulness and a failure to acquire the sense of an "affective self".

Subsequently, theorists have speculated that alexithymia derives from early maladaptive mother-infant relationships. In essence, poor parenting negates the expression of emotion. Childhood trauma, excessive caretaker attention to a child's bodily rather than emotional needs, and caretaker emotional unavailability or inconsistency have been posited to leading to the disturbed affect representation and self-regulation of alexithymia (Krystal, 1988; McDougall, 1982). These speculations are supported by empirical studies that have observed that a history of childhood maltreatment and negative family environment are associated with deficits in the recognition and expression of emotion (Camras, Ribordy et al., 1990; Halberstadt, 1986).
To date, only two studies have examined the familial correlates associated to alexithymia. Berenbaum and James (1994) found in young adults that being brought up in homes with little or no positive communication was the best predictor of alexithymia. The results suggest that the difficulty in identifying and communicating emotion may result from an absence of a positive childhood environment in which individuals are supportive and model non-threatening expressions of emotion. Lumley and colleagues (1996) found in a group of young adults that general family psychopathology was positively associated with alexithymia. In particular, difficulty identifying feelings was related to dysfunctional family affective involvement; externally oriented thinking was related to deficient family behaviour control; and impaired imagination was related to inadequate family problem solving. Interestingly, they also reported that alexithymia characteristics of the young adults were related to maternal alexithymic characteristics.

**Interhemispheric communication**

It has been hypothesized that alexithymia may arise from a relative lack of communication between the right and left cerebral hemispheres of the brain (Buchanan et al., 1980). This theory rests on the possibility that emotion maybe localized in the right hemisphere in most normal right handed persons (Bear, 1983; Silberman & Weingarter, 1986; Tucker, 1981) and that verbal expression is localized in the left hemisphere. The hypothesized lack of communication between the hemispheres in alexithymic individuals would produce a deficit in the ability to verbally articulate emotions.

The theory that alexithymia involves problems in interhemispheric communication developed from work by Hoppe & Bogen (1977). Studying 12 patients before and after cerebral commissurotomy for intractable epilepsy (split-brain patients), they observed that post operatively these patients developed a decreased capacity for fantasy, symbolization and dreams. The similarity in the affective expression and cognitive style of alexithymic and commissurotomy patients led Hoppe (1977) to hypothesize that a 'functional
commissurotomy' or inhibition of corpus callosum activity, may be the basic mechanism underlying alexithymia. The first direct evaluation of this hypothesis was undertaken by Tenhouten et al., (1986) who compared the spoken and written responses of eight patients who had cerebral commissurotomies and those of eight matched control subjects to questions about a film that symbolically depicted death and loss. The results showed that the patients who had undergone commissurotomy were more alexithymic than the control subjects.

Kaplan & Wogan (1976/77) used subjective responses to painful stimuli and EEG monitoring to assess subjects ability to manage pain. They found that by instructing patients not to fantasize this caused the left hemisphere to activate which resulted in a reported increase in pain, whilst instructions to fantasize mobilised the right hemisphere and hence diminished reports of pain. Therefore by analogy as alexithymics are unable to fantasize they have a lower pain threshold than non alexithymics.

**Genetic factors**

A genetic explanation of alexithymia was reported by Heiberg and Heiberg (1977/78) in two twin studies. With the use of the Beth Israel Psychosomatic questionnaire, monozygous (MZ) and dyzygous (DZ) twin pairs were compared. Intrapair differences on the questionnaire were significantly different, with MZ pairs having similar scores than DZ pairs. The conclusion was that there is a strong hereditary component in alexithymia. This needs to be interpreted with caution for a number of reasons. Only 33 pairs were studied (15, MZ; 18, DZ) a rather small number on which to conclude inheritability. There were no data on sociocultural variables and since the MZ twins were presumably reared together they shared similar environments where social learning and styles of communication would influence later behaviour. Furthermore the BIQ was used to measure alexithymia, which has shown to have dubious validity.
Socio-cultural influences

Mental health professionals with a social anthropological background strongly argue that alexithymic characteristics are socially learned behaviours associated with particular cultural or social class groups (Borens et al., 1977; Kirmeyer, 1987). While some cultures undoubtedly impose constraints on the expression of emotion (Leff, 1973), research examining the relationship between alexithymia and social class has produced conflicting results. For example, while Borens et al., (1977), Lesser et al., (1979) and Smith (1983) found an association between alexithymia and lower social class, Pierloot and Vinck (1977), Mendelson (1982) and Paulson (1985) reported no such relationship.

Given that verbal expressiveness and imaginative abilities are generally associated with intelligence (Barron & Harrington, 1981), one might also expect an association between alexithymia and intelligence. There has been little attempt, however, to examine this relationship. Individuals demonstrating alexithymic characteristics sometimes appear less intelligent in clinical interview situations, although a study by Pierloot and Vinck (1977) found no correlation between objective measures of alexithymia and intelligence. Given reports of gender differences in emotional expressiveness (Hall, 1978) in that women tend to be more expressive than men, and of an increasing preoccupation with physical symptoms with advancing age (Busse & Reckless, 1961) one might expect associations between alexithymia and the variables of gender and age. However, research studies examining these relationships have yielded ambiguous results. Whereas Pierloot and Vinck (1977), Mendelson (1982) and Smith (1983) found no relationship between alexithymia and age, Kleiger and Jones (1980) and Feiguine et al., (1982) reported a positive association. Blanchard et al. (1981) and Smith (1983) reported a higher prevalence of alexithymia among men than women, but Mendelson (1982) found no gender differences.
The conflicting results from the various studies might be a consequence of the poor psychometric properties of the instruments used to measure alexithymia. Most investigators have employed the self-report Schalling Sifneos Personality Scale (SSPS; Apfel & Sifneos, 1979), the self-report Minnesota Multiphasic Personality Test alexithymia scale (MMPI-A; Kleiger & Kinsman, 1980), or the interviewer-rated Beth Israel Hospital Psychosomatic Questionnaire (BIQ, Sifneos, 1973). As already discussed in an earlier section of this review, recent reviews on the measurement of alexithymia have outlined evidence indicating that these three scales lack reliability and/or validity (Taylor & Bagby, 1988). Furthermore the SSPS, MMPI-A, and BIQ show little or no relationship to one another (Bagby et al., 1988a; Krystal et al., 1986) thus limiting the comparability and generalizability of results from the studies that use them.

As discussed earlier, a more reliable and valid instrument is the self-report, Toronto Alexithymia Scale (Taylor et al., 1985). The relationships between the TAS and the variables of age, gender, educational level, and socioeconomic status were examined in a preliminary study with a sample of 542 college students (Taylor et al., 1985). No significant relationships were found. Similarly, in a cross-cultural study with a sample of 116 normal adults living in Bangalore, India, no relationships were found between an Indian dialect (Kannada) version of the TAS and the variables of age and gender (Sriram et al., 1987). The TAS has also been used to examine the relationship between alexithymia and intelligence. In a preliminary study with a sample of 81 college students, Bagby et al., (1986b) reported that the TAS correlated negatively with the vocabulary subscale of the Shipley Institute of Living Scale (SILS; Zachary, 1986). However, this correlation was of low magnitude and accounted for very little of the total variance. In a more recent study, Parker et al., (1989b) re-evaluated the relationships between alexithymia and the variables of age, gender, education, socioeconomic status and intelligence in a community sample of 101 adults. The TAS, SILS and Standard Progressive Matrices-Short Version (SPM; Brown, 1983) both of which measure
intelligence and the Blishen Index (BI; Blishen, Carroll, & Moore, 1987) to estimate socio-economic levels were used. The results indicated that alexithymia was unrelated to age, gender, educational level, socio-economic status, vocabulary skills and general intellectual ability.

**Theory of ‘emotional dysregulation’**

In recent years, several psychosomatic investigators have used the concept of the human organism as a self-regulating cybernetic system to develop a new psychosomatic model of illness and disease (Weiner, 1989; Taylor, 1994). This view evolved from the biomedical sciences where it was realized that the various subsystems that comprise the organism regulate their own as well as others activities. Recent research, for instance, has shown that not only can the neuroendocrine system regulate immunologic functions, but also the immune system can regulate neuroendocrine functions. The regulatory mechanisms seem to include peptide hormones that are produced by both systems and interact with receptors that are common to the two systems (Blalock, 1989).

Weiner (1989) speculated that the bidirectional communication between the various subsystems of the body, not only involve chemical and electrical signals, but that language and emotional behaviour are also forms of communication signals that perform functions analogous to those of peptide hormones and neurotransmitters, and contribute to the self-regulation of biological systems as well as to the regulation of psychological states (such as mood and self esteem) and aspects of the persons environment. Weiner (1989) postulates that if disturbances occur at any level in the system, from the cellular or subcellular level (as with viral infections, sensitivity to allergens and variations in the expression of genes) to the psychological or social level (as with intrapsychic conflicts, attachment disruptions and loss of self esteem), 'dysregulation' within the living system occurs. Such disturbances may trigger disturbances at other levels; if the ensuing dysregulation is sustained it may initiate a transition from health to illness and disease.
Following in the footsteps of biomedical science, theorists (Dodge & Garber, 1991; Lang, 1984) have proposed similar models to describe emotional response systems. Borrowing from these models, Taylor (1994) proposed that they could be utilized to understand the aetiology of alexithymia.

In this instance, human emotional response systems are explicable in terms of three distinct components - the neurophysiological domain (autonomic nervous system and neuroendocrine activation), the motor-behavioural-expressive domain (e.g. facial expressions, crying, changes in posture and tone of voice), and the cognitive-experiential domain (subjective awareness and verbal reporting of feelings). Emotions can be regulated either by the activation of one domain which can then alter another domain (interdomain) or activation of one domain may modulate one response but also modulate another aspect of responding in the same domain (intradomain). Furthermore emotional regulation takes into consideration an individuals interaction within social relationships and other aspects of the environment providing 'interpersonal' regulation that may be supportive (e.g. soothing) or disruptive (e.g. arguing). Taylor proposes that alexithymia reflects deficits in all three domains.

Taylor (1994) supports his hypothesis by drawing upon past and more recent preliminary research. For example, at the cognitive-experiential domain and level of interpersonal regulation of emotion, alexithymics are unable to identify their own feelings, and verbally communicate emotional distress to others very poorly, thereby failing to enlist others as sources of aid or comfort (Dunn & Brown, 1991). Their limited ability to identify subjective feelings has been linked to developmental deficiencies that delay the construction of cognitive schemata and linguistic and other symbolic representations of emotion (Lane and Schwartz, 1987). Deficits in the motor-behavioural domain, have been demonstrated by clinical reports of restricted gestures and near expressionless faces in some alexithymic individuals (Nemiah et al, 1976), together with preliminary empirical evidence of a reduced ability to recognize posed facial expressions of emotion (Parker et al, 1993b). Finally,
Taylor reports that activation of the neuroendocrine and autonomic nervous system is likely to be inadequate. He draws upon preliminary research which has shown that high alexithymic levels correlate with dissociation of the physiologic and subjective responses to stressful stimuli as well as high tonic levels of sympathetic activity (Martin and Pihl, 1986; Papciak et al., 1985).

Although this model provides some insight into the observed characteristics manifested by alexithymic individuals, it is not clear as to how emotional dysregulation occurs. For instance, is emotional dysregulation an expression of malfunctioning neurological and biological systems, or brought on by disturbances in a child's environment or a combination of both?

1.5 SECONDARY (TRAUMA-INDUCED) ALEXITHYMIA

So far the concept of alexithymia has been understood from a variety of perspectives, ranging from developmental, neurological, socio-cultural and emotional regulation. However, a similar constriction of emotional expression has been reported in some individuals following a traumatic life event and so termed 'secondary alexithymia' (Freyberger, 1977). Alexithymic characteristics were first described with survivors of the Nazi concentration camps (Krystal, 1982) and Vietnam veterans (Hyer et al., 1986; Robert et al., 1986) which included: emotional confusion, somatization, acting out, verbal concreteness, and resistance to treatment, among others.

To date, only nine studies have directly implicated PTSD with alexithymia. These have included studies of Vietnam theatre veterans (Zeitlin, Lane, O'Leary & Schrift, 1989; Shipko et al., 1983; Hyer, Woods & Boudewyn, 1991; Kosten, Krystal, et al., 1992; Krystal, Giller & Cicchetti, 1986), survivors of sexual assaults (Zeitlin, McNally & Cassiday, 1993) the Holocaust (Yehuda, Steiner et al., 1997) and those who have suffered severe burns (Fukunishi et al., 1996; Fukunishi et al., 1994). Zeitlin et al (1989) for example, found that
60% (15/25) of their PTSD patients scored in the alexithymia range on the Toronto Alexithymia Scale. Moreover, Shipko et al (1983) found that 41% of their PTSD sample showed to be alexithymic on the Schalling-Sifneos Personality Scale (SSPS), and Hyer et al (1991) found that 86% of their PTSD patients scored on the alexithymia range on the MMPI-A.

Most of these studies are hindered by methodological problems. Firstly, many reports are anecdotal (e.g. Krystal, 1982; Hyer et al., 1986; Robert et al., 1986). Those that attempted a systematic evaluation of the alexithymia construct in traumatized populations, used measures such as the BIQ, SSPS or MMPI-A. These instruments have consistently been demonstrated as inadequate measures of the alexithymia construct (e.g. Bagby et al., 1991; Norton, 1989; Parker et al., 1991a; Taylor & Bagby, 1988). Thus, our confidence in the validity of the alexithymia construct with traumatized individuals is low. Whilst, those few studies which used more rigorously tested measures, in particular the TAS, were hampered by small samples (e.g. Zeitlin et al., 1989, 1993) thus, making it difficult to generalize their results.

This alexithymia-like-phenomenon has been conceptualized as a defensive protection against painful affect, evoked by highly stressful and traumatic experiences (Krystal et al., 1986; Shipko et al., 1983). During conditions of intense stress, for example, in combat, elevated levels of affect (e.g. fear) are not beneficial whereas purposeful activities (e.g. shooting the enemy or escaping) are. As such one might expect soldiers to constrict negative affect so as to resolve the situations with which they are confronted. Thus stress, of sufficient intensity should elicit alexithymia. Nonetheless, empirical investigations examining the association between trauma and the development of alexithymia, have produced conflicting results and raise additional questions about the aetiology of alexithymia.
Alexithymia and exposure to trauma

To begin with one would expect higher levels of alexithymia in those who have experienced multiple traumatic events in comparison to those who have experienced single episodes. In a study of victims of sexual assault, Zeitlin et al., (1993) compared scores on the TAS with 12 rape victims with PTSD, 12 rape victims without PTSD and 12, non-traumatized comparison subjects. The results indicated that individuals who had experienced repeated episodes of traumatization had higher levels of alexithymia than those who had experienced a single episode of trauma, whilst those who had PTSD had elevated levels of alexithymia in comparison to non-traumatized individuals.

In comparison, Hyer et al., (1990) evaluated the association of alexithymia with PTSD in a large group of Vietnam veterans. Comparisons were made between those who had been diagnosed with PTSD (N=76), an alcohol abuse group (N=76) and a general psychiatric group (N=75). Measuring the levels of alexithymia with the MMPI these authors reported that PTSD patients exhibited significantly higher levels of alexithymia than patients in the two control groups. Over 85% of the PTSD group scored in the alexithymia range on the MMPI-A in comparison to 62% and 39% in the alcohol and general psychiatric groups respectively.

However, Hyer et al., (1990) reported that the severity of the stressor had little to do with the levels of alexithymia, and that perhaps, alexithymia may be in response to chronic hyper arousal. For instance, in response to chronic hyper arousal PTSD patients may respond to problems in their lives with alexithymic symptoms and find it difficult to read their own emotions. Others may react primarily to their hyper arousal, focusing entirely on their physiologic state which is conducive to somatic ailments (Hyer et al., 1990).

Yehuda et al., (1997) measured alexithymia in a non-treatment seeking community of Holocaust survivors with (N=30) and without (N=26) PTSD. Scores on the TAS-20 showed
that Holocaust survivors with PTSD had a significantly greater degree of alexithymia compared to survivors without PTSD. Furthermore, the authors demonstrated a strong association between alexithymia and PTSD symptoms, particularly avoidance and hyper arousal. The findings were also consistent with those of Hyer and colleagues (Hyer et al., 1990) who demonstrated that alexithymia was not significantly correlated with the subjective experience of combat stress in Vietnam veterans. Yehuda et al., (1997) moreover, contradicted the findings of Zeitlin et al., (1989, 1993) who found that a higher degree of alexithymia existed in those who were exposed to repeated traumatization.

**Alexithymia, trauma and neurophysiological functioning**

As noted earlier in this paper alexithymia has been posited to arise from a neurophysiological dysfunction - specifically a relative lack of communication between the right and left cerebral hemispheres of the brain, resulting in a deficit in the ability to verbally articulate emotions. To date only two studies have directly looked at that association between the lack of interhemispheric communication and PTSD (Rauch et al., 1996; Zeitlin et al., 1989).

A recent positron emission tomography (PET) scan study of people with PTSD (Rauch et al., 1996) showed that when people with PTSD are exposed to stimuli reminiscent of their trauma, there is an increase in perfusion of the areas in the right hemisphere associated with emotional states and autonomic arousal. Moreover, there is a simultaneous decrease in oxygen utilization in Broca's area- the region in the left inferior frontal cortex responsible for generating words to attach to internal experience. These findings may account for the observation that trauma leads to "speechless terror" which in some individuals interferes with the ability to put feelings into words, leaving emotions to be mutely expressed by dysfunction of the body (alexithymia). Support for this notion is given by a recent study (e.g. Pennebaker, 1993) which reported that verbalization of traumatic experiences decreases psychosomatic symptoms.
Zeitlin et al., (1989) studied 25 Vietnam veterans with PTSD. To assess the functional integrity of the corpus callosum a tactile finger localization task was utilized. This is a behavioural measure of interhemispheric transfer, whereby one hand receives a stimulus and the other hand responds. For a successful performance the information must transfer across the hemispheres. Evidence that these interhemispheric connections involve the corpus callosum is based on impairment in the ability of commissurotomy patients to cross localize fingers of the two hands. The results support the notion that alexithymia, may be mediated by a functional disconnection of the two cerebral hemispheres. After controlling for IQ and dysfunction in either hemisphere, it was reported that those with PTSD and alexithymia had deficits in interhemispheric transfer.

However these studies do not elucidate the debate as to whether or not alexithymia is a pre-existing personality trait that facilitates the expression of PTSD in response to trauma (primary alexithymia) or is a state-dependent reaction (secondary alexithymia) to trauma. For example, it is not known whether in PTSD subjects both a deficit in interhemispheric transfer and alexithymia existed before trauma, whether a deficit in interhemispheric transfer existed before trauma and predisposed an individual to become alexithymic in the face of trauma, or whether a traumatic experience itself induced both a deficit in interhemispheric transfer and alexithymia.

**Alexithymia and childhood trauma**

Several theorists have speculated that alexithymia may in fact be an individual difference that increases the susceptibility of developing PTSD following a trauma. As discussed earlier, these speculations are based upon a developmental perspective whereby emotions are impeded by poor-mother-infant relationships, which result in a failure to process emotions, cognitively (alexithymia). For instance, relating this notion to psychological intimidation during infancy, McDougall (1974) speculated that disturbed early mother-infant relationship, led to an inability to form internal representations for instinctual impulses (e.g. thirst, hunger,
love and hatred) "in consequence there may be little psychic filtrage or binding through fantasy links and semantic symbols but a tendency to inappropriate somatic discharge "(p.454). In short alexithymia becomes a "strong defence against primitive terrors" which patients expressed via somatization disorders (McDougall, 1974). Similarly, Krystal (1982) suggested that infantile psychic trauma caused an arrest in affective development in which the capacity to form symbolic words is absent.

Empirical investigations associating infant trauma and constriction of emotional expression are scant. However, the work of Cicchetti and colleagues (Cicchetti & Beeghly, 1987; Cicchetti & White 1990) provides partial support for this hypothesis. These investigators have shown that maltreated toddlers use fewer words to describe how they feel and have more problems with attributing causality than do secure children of the same age. Secure children spend more time describing physiological states, such as hunger, thirst and states of consciousness, and speak more often about negative emotions, such as hate, disgust and anger. Not knowing how one feels may contribute to the impaired impulse control seen in abused children (Fish-Murray et al., 1987). Accordingly, it could be further speculated that in adolescents and adults, having problems putting feelings into words and formulating flexible response strategies may make them act on their feelings such as self destructive behaviours of substance misuse, eating disorders or self mutilation for instance.

Cicchetti & White (1990) also hypothesized that the "special difficulties that abused toddlers have expressing feelings in words may not be simply a reflection of psychological intimidation but rather a manifestation of neuroanatomical and neurophysiological changes secondary to abusive or neglectful maltreatment" (p.369). However, these authors failed to demonstrate exactly what neurological substructures were affected to produce alexithymic characteristics. Moreover, one could also assume that perhaps these neurological deficits were present prior to the child being maltreated.
In summary, the aetiology of alexithymia is not well understood. There are those who believe it arises in childhood due to maternal deprivation, and is a predisposing factor to the development of mental and physical ill health. Others, believe it to derive from life threatening situations, serving as a defence mechanism, enabling the individual to cope with overwhelming distress. In either case, the notions posed are either based on speculation, or drawn from studies utilizing psychometrically weak instruments.

1.6 IMPLICATIONS FOR THE HELPING PROFESSIONS

Alexithymia has considerable implications within a medical and/or psychiatric setting. Firstly, as alexithymics tend to amplify the bodily sensations of emotional arousal, physicians tend to mistake physical symptoms for undetected organic pathology which results in over investigation and over treatment and frequently adds an iatrogenic complication to the patients primary problem of being alexithymic (Flannery, 1977). This proposal has some empirical support. Dirks et al., (1981) found that asthmatics classified as alexithymic were more likely to be hospitalized and to be hospitalized for longer than non-alexithymic, asthmatics. Kaunhanen et al., (1994) found that alexithymia was linked with an increased likelihood of having been diagnosed with heart disease independent of the severity of atherosclerosis.

It has also been argued that even when an organic disease is present, as alexithymics have an externally oriented cognitive style, this prompts avoidance, delay or inappropriate use of care (Lumley & Norman, 1996). Kenyon et al (1991) found that alexithymics who had an acute myocardial infarction (MI) took longer to seek emergency treatment than did non-alexithymic MI patients. Theisen et al., (1995) found that alexithymia was associated with failing to notice or seek treatment for MI. Abramson et al (1991) found that diabetics with alexithymia had poorer metabolic control than non-alexithymic diabetics suggesting that
alexithymia led to less adherence to the diabetes regimen. Whilst Brown et al., (1981) found that alexithymics, minimize their reporting of physical and emotional difficulties during respiratory distress thereby falsely reassuring their physician into prescribing less effective treatments.

With regards to psychological treatments, this is often a difficult, frustrating and unsatisfying experience for both patient and clinician (Karasu, 1979) and as such alexithymics are considered to be poor candidates for psychotherapy (Pierloot & Vinck, 1977; Salinmen et al., 1980; Sifnos, 1975). Support for this proposal has been demonstrated in recent investigations which have found that alexithymics are low on psychological mindedness and ego strength, factors, which predict a successful response to psychotherapy (Bagby, et al., 1986b).

Sifneos (1975) pointed out that alexithymics may become worse as a result of anxiety provoking psychotherapeutic interventions. He stated that when alexithymic individuals are placed in a situation that requires some awareness of feelings such as an interpersonal or therapeutic situation their inability to verbalize feelings leads to increased frustration and associated physiological reaction to the stress.

Krystal (1979) disagreed with Sifneos' contention that psychotherapy is contraindicated in these patients. According to Krystal the first task is to help the patients become observers of their inner states. Next the patient must develop affect tolerance. As affects are observed by patient and therapist their frightening nature can decrease. Patients can then be taught to recognize their emotions as signals that are self limited in duration and controllable. When patients recognize and accept their emotions they can begin to verbalize their emotional states with the therapist as teacher and guide, helping the patient find the correct words to describe feelings. The therapist needs to be alert to non-verbal cues regarding emotional states (e.g. body language, flushing, crying etc) and continually bring these to the patients attention.
In addition to individual psychotherapy, other models have been suggested as useful for patients with alexithymia, either as an adjunct to individual therapy or as the sole therapeutic modality. Approaches have included group therapy (Apfel-Savitze et al., 1977; Ford & Long, 1977; von Rad & Ruppell, 1975) and as alexithymics have difficulty in verbally expressing emotion, non-verbal techniques such as relaxation therapy (Stephanos, 1975) biofeedback training (Rickles, 1981) and hypnosis (Schraa & Dicks, 1981) have also been suggested. Unfortunately, these models are only speculative, whilst those who have reported to treat alexithymic individuals, their findings are only anecdotal. Given that these approaches have yet to be systematically evaluated with alexithymic individuals their clinical efficacy is questionable.
2.0 PURPOSE OF PRESENT INVESTIGATION

Central to the alexithymia construct is the low degree of emotional expression, characterized by a diminished ability to recognize and communicate emotional states. As noted earlier, psychologists speculated that alexithymia stemmed from maladaptive socialization processes in early infancy between mother and child. Situations included: childhood maltreatment (Cicchetti & White, 1990), where positive communication was negated in the family environment (Berenbaum & James, 1994) or if the mother also had alexithymic characteristics and so emotionally unavailable to the child (Lumley et al., 1996). Such environments, have been argued to cause deficiencies in the schematic templates which organize emotional information (Lane & Schwartz, 1987), thus rendering alexithymics unable to regulate emotional arousal. This assumption has received considerable support in recent years (e.g. Lane et al., 1996; Mann et al., 1994) whereby alexithymics have been noted to have difficulties in identifying verbal and non-verbal emotional stimuli.

This project seeks to develop these ideas further. As alexithymia has been noted to exist in those with psychiatric disorders as well as healthy individuals, it is suggested that alexithymia is in fact a pre-existing personality trait. Underlying this trait are negative beliefs or schemata about expressing emotions developed in childhood. It is further suggested that alexithymia and its association with negative beliefs are vulnerability factors which predispose individuals to the development of PTSD following a traumatic life event.

Within the realm of cognitive theory, it has been suggested that personality traits are overt expressions of underlying schematic structures (e.g. Beck et al., 1979; Young, 1990). Simply, schemata are mental representations, characterized by basic rules that individuals use to organize their perception of the world and to adapt to life challenges. Schemata have been defined in a number of different ways by various authors. On the one hand, the term schema has been used to refer to a hypothesized structure of cognition, such as a mental filter or template that guides the processing of information (see Williams, et al., 1997 for a
comprehensive review). A second definition holds that they are latent, core beliefs (Young, 1990). Here schemata are identified by their content, for example, "I am a bad person" or "I am competent". In practice, clinicians tend to use both definitions alternatively. For example, when explaining that a person failed to perceive a compliment, a clinician might say "She couldn't hear that comment or incorporate it into her self image because she doesn't have the schema in which to fit such positive information ".

Schemata, specifically the negative and maladaptive variety, are of particular interest to clinical psychologists, as they may explain how people become vulnerable to emotional disorders such as depression and anxiety (e.g. Beck & Clark, 1988) or to personality disorders (Young, 1990). In this context, maladaptive schemata are characterized by three principles (1) they are not characterized by 'if.. then' propositions (e.g. "If I am successful then I am a good person") but are absolute and unconditional (e.g. "I am a bad person, period"); (2) schemata give rise to other beliefs and greatly influence a persons view of the world, self and future. For instance, a person who has the schema "I am bad" will have higher level beliefs (i.e. more situationally specific and more accessible to awareness) beliefs such as "I'll never get what I want in life because I'll just mess it up anyway", and (3) individuals rarely notice the influence schemata have on their lives.

The present study suggests that perhaps alexithymia is determined by the presence of maladaptive cognitive structures in relation to emotional expression. Preliminary work, by Joseph and colleagues (Joseph et al., 1994) have provided evidence of negative beliefs towards the expression of emotion. For instance, individuals may believe that expressing emotion is a sign of weakness or that others should not be burdened with ones problems. It is suggested that the overt characteristics of alexithymia are predetermined by mental maps or schemata related to an individuals belief about expressing emotion. Joseph et al., (1994) speculated that such schemata are pre-existing and that they are vulnerability factors for the development and maintenance of psychiatric disorders as they act to block the expression of affective states .

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If PTSD is caused by an external traumatic event, why do only some survivors develop this condition? In the National Comorbidity Survey of 8,098 subjects, (Kessler et al., in press c.f. van der Kolk et al., 1996) found a life time prevalence of 6.5% and a 30 day prevalence of 2.8%. Alexander (1993) conducted a unique longitudinal study of police involved in retrieving bodies after the Piper Alpha oil rig disaster. Most of the officers were free from psychiatric morbidity, and this appeared to be a robust finding, because pre-disaster baseline data were available on these men. The Grant Study examined the impact of combat (Lee et al., 1995). Subjects in this study were selected for their physical and psychological health and high levels of achievement at Harvard University. Although 72 had a high level of combat exposure, only 1 retrospectively satisfied the diagnostic criteria for PTSD in 1946, with another 4 having PTSD-like syndromes.

These observations suggest that the development of PTSD is the exception rather than the rule. Thus, one has to question whether individual vulnerabilities are more important aetiological factors than the objective nature (e.g. intensity) of the traumatic experience. The progression from a state of distress to more severe symptoms is influenced by a range of vulnerabilities, including a past or family history of psychiatric illness, neuroticism as a personality trait, a range of social mediators, and other events or trauma occurring after the disaster (Breslau & Davis, 1995; Breslau et al., 1992; McFarlane, 1989).

Following a traumatic event, distressing and intrusive recollections of the traumatic experience are universal and indicate an ongoing process of normal reappraisal. In this process, various representations of the trauma are entertained, and an attempt is made to integrate these with existing psychological schemata. This replaying of these memories allows the development of novel meaning structures that are not part of the individuals inner world. However, the emotional state of people with prior psychological problems, specifically schemata, may lead to difficulty in regaining homeostasis.
This present study suggests that, it is the pre-existing schemata of the individual that allows him or her to tolerate and modulate distress which are the critical determinants of the long-term outcome of psychological disorders such as PTSD. As an example, and in relation to this current investigation, if an individual has pre-existing schemata related to an internal sense of threat and loss of control in expressing negative affect, then a traumatic event would activate and perhaps even intensify these schemata. The constant and unpredictable recurrence of the memory of the trauma, takes away any safety or security of retreat in the privacy of one's mind as the memories of the trauma constantly activate pre-existing internal schemata. As suggested by Joseph et al., 1994) this could lead to the constriction of the expression of affect or in the case of this present study the manifestation of alexithymic characteristics. This results in repeated traumatization as information from the trauma fails to become integrated with existing psychological schemata.

**Research questions and hypotheses**

The following predictions will be made to assess the relationship between alexithymia and schemata between groups (PTSD vs non-traumatized comparison group).

1. Alexithymia is not restricted to those with significant trauma histories (the "PTSD" group). As a personality trait rather than a trauma response, it is hypothesised that alexithymia will also be present in the non-trauma subjects.

2. Alexithymia is more common in the PTSD group. Given that PTSD is a minority response to trauma, it is hypothesised to be one of a number of factors predisposing to the development of a significant response to a trauma experience.

3. There are significant differences between the PTSD and comparison group with schemata to do with attitudes towards expressing emotion. Specifically, there will be differences between-groups, with more maladaptive scores in the PTSD sample.
4. It is hypothesised further that negative attitudes to expressing emotion underlie the concept of alexithymia and that there will be a positive association between maladaptive schemata and alexithymia scores. This effect will be present in the sample as a whole and within-groups.

The study will also examine the following question, although no specific hypothesis will be forwarded:

5. If alexithymia is associated with a heightened negative evaluation of emotional expression what effect will that have on post traumatic symptomatology?
3.0 METHODS

Design

The study used two groups; (a) a group diagnosed with PTSD, following criteria outlined in the Diagnostic and Statistical Manual for Psychiatric Disorders (DSM IV; American Psychiatric Association, 1994); and (b) a non-traumatized comparison group. The study employed a between-groups design to detect whether alexithymia and negative attitudes towards expressed emotion existed in both and a within-groups design to explore the effect of both variables upon trauma in the PTSD group.

Participants

(a) PTSD Group

Subjects in the PTSD group were recruited from a clinic specializing in the Cognitive and Behavioural treatment of PTSD. Potential participants were asked to take part if they were over 18 years of age and suffering from symptoms of PTSD. Exclusion criteria were: (1) difficulties with written and spoken English (2) cognitive or personality disturbance as a result of head injury (3) substance and alcohol misuse (4) a history of psychosis.

(b) Comparison Group

So as to compare the degree of alexithymia and attitudes towards expressed emotion between those who are traumatized and those who are not, a comparison group was included in the study. Although it would have been preferable to have utilized a matched group (e.g. matched in age and gender) in order to make a fair comparison, this was not possible, due to time constraints. As such
participants in the non-traumatized comparison group were drawn from student populations from the University of Greenwich, Post-graduate business studies course and University College Hospital, London, undergraduate chiropody course. Subjects had to be 18 years or over. Participants were not interviewed as the clinical group. However, as part of the background information, subjects were asked if they had experienced a traumatic event and suffered from symptoms of PTSD. Subjects which did were then excluded from the study.

*(c) Sample Size*

A power analysis for a two group comparison based on an expected large effect size of .80, alpha set at 0.05 (2 tailed) and a power of 0.80 indicated the use of a minimum sample size of 60, **30 in each group** (Cohen, 1992).

3.1 MEASURES

*Background variables*

Participants were asked to provide demographic and background information (Appendix 1). These variables were used to assess whether they might influence the variables of alexithymia and attitudes towards expressed emotion which were under investigation.

**STANDARDIZED QUESTIONNAIRES**

*Diagnostic Measures*

For the PTSD group a diagnosis was reached using the Clinician Administered Posttraumatic Stress Disorder Scale 1 (Appendix 2) for current diagnosis (CAPS 1; Blake et al., 1990). The CAPS 1 is a structured interview which assesses the 17 DSM III R (and now DSM IV) symptoms of PTSD, as well as 8 associated symptoms. The frequency and
intensity of each symptom on the CAPS 1 are rated on separate 5 point scales, yielding both
dichotomous (present or absent) and continuous scores for each symptom and for the
disorder as a whole. A symptom is considered present if the severity of the CAPS 1 item
(Frequency + Intensity) is 4 or greater. The total score for the CAPS PTSD ratings
(Frequency + Intensity) can range from 0 to 136. The CAPS 1 was administered in all cases
by a qualified Clinical Psychologist.

The CAPS 1 has excellent psychometric properties. In a study by Blake et al., (1995) sixty
combat veterans were administered the CAPS 1 on two different occasions, 2-3 days apart,
by two different clinicians working independently. An additional 63 veterans were
administered a single CAPS 1. All subjects were administered the Structured Clinical
Interview for DSM III R, PTSD(SCID; Spitzer & Williams, 1985) module by a third
independent clinician. Test-retest reliability for three different rater pairs ranged from .77 to
.96 for the three symptom clusters, and .90 and .98 for all 17 items. Internal consistency
(alpha coefficients) for the severity scores (frequency + intensity) for each of three symptom
clusters ranged from .85 to .87 and internal consistency for all 17 items was .94. Against the
SCID, PTSD diagnosis, a CAPS 1 total score of 65 was found to have good sensitivity (.84)
excellent specificity (.95) and a kappa coefficient of .78. Regarding convergent validity, the
CAPS 1 total severity score correlated strongly with other indices of PTSD, including the
Mississippi Scale for Combat-related PTSD (Keane et al., 1988; r = .91) and the PK scale
of the MMPI (Keane et al., 1984, r = .77).

Research Measures

Three standardized questionnaires were administered to all subjects (ie. both groups) to
assess levels of alexithymia, attitudes towards expressed emotion and trauma
symptomatology.
1. Toronto Alexithymia Scale-20 (TAS-20; Bagby et al., 1994a,b)

Alexithymia was quantified using the most recent version of the TAS (Appendix 3). This questionnaire is a 20 item self report measure which distinguishes three distinct features of the alexithymia construct (1) difficulty identifying feelings and distinguishing them from the bodily sensations of emotion (2) difficulty describing feelings to others and (3) externally oriented style of thinking.

Subjects are asked to rate on a 5 point scale how much they agree with the statements from disagree very much (5) to agree very much (1). Scores greater than 61 indicate alexithymia, scores less than 51 indicate no alexithymia.

The TAS-20 has good internal consistency (Cronbach's alpha= 0.81) and test-retest reliability ($r=0.77; p<0.01$). The TAS-20 has also been demonstrated to have adequate internal validity with diverse cultures including Germany, Canada and the United States (Parker et al., 1993c). The stability and replicability of the TAS-20 has been demonstrated with both clinical (Kauhanen et al., 1992) and non-clinical (Parker et al., 1994a) samples. Preliminary evidence of construct validity has also been demonstrated. For example, the TAS-20 was found to correlate negatively with measures of psychological mindedness ($r=-0.68; p<0.01$) and need for cognition ($r=-0.55; p<0.01$) in a sample of college students. Consensual validity was demonstrated by a positive correlation ($r=0.53; p<0.01$) between the TAS-20 and observer ratings of alexithymia in a clinical population (Parker et al., 1994b).

2. Attitudes towards Expressed Emotion (AEE; Joseph et al., 1994)

The AEE (Appendix 4) is a 20 item self report questionnaire which seeks to distinguish those who have negative cognitive and behavioural attitudes towards emotional expression from those who have not. The AEE includes four sub scales which measure beliefs about (1) meaning, (e.g. getting upset is a sign of weakness) (2) behavioural style (e.g. bottling up
feelings when upset), (3), expression (e.g. you should always keep your feelings under control) and (4) beliefs about consequences (e.g. other people don't understand your feelings).

Subjects are asked to rate each item on a 5 point scale ranging from disagree very much (1) to agree very much (5). A total score of 45.03 or more indicates negative attitudes towards expressed emotion.

A component analysis of selected items by Joseph et al., (1994) showed that each of the sub scale items had loadings higher than 0.47 on their respective factors and lower than 0.46 on the other factors confirming that these sub scales represent separate constructs. The internal reliability of the total scale was high (Cronbach's alpha = 0.90) confirming the use of a single scale characterized by stoic attitudes, beliefs and behaviours.

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

The IES (Appendix 5) is one of the most widely used self-report assessment tools for posttraumatic symptomatology in research studies. It is a 15 item scale, specifically designed to measure the effects of traumatic events. It is comprised of two sub scales. The seven items intrusion sub-scale measures the extent to which memories of the traumatic event continue to impinge upon the mind and measures the extent to which intrusions are triggered. The eight item avoidance sub-scale measures the extent to which people try to exclude unpleasant memories from consciousness and deliberately try to avoid getting upset and avoid reminders of the event. Together these two scales give a total impact of events score, which serves as a useful indicator of the extent to which the disaster is reverberating in the mind.

The scale was originally normalized on a sample of 66 subjects admitted to an outpatient clinic for treatment of posttraumatic stress (Horowitz et al., 1979). The mean Intrusive sub scale score was 21.4 (SD = 9.6, range 0-35), and the mean Avoidance sub scale score was
18.2 (SD = 10.8, range 0-38). The average total score for men and women is 34.5 and 42.1 respectively (Horowitz et al., 1979).

The IES has acceptable test-retest reliability (.87) and internal consistency (e.g. Cronbach's alpha, .78 for the intrusion score and .82 for the avoidance items, with a split half reliability correlation of 0.86; Horowitz et al., 1979).

3.2 PROCEDURE

Prior to taking part, participants in both groups read an information letter (see Appendix 6a,b) which informed them that the study was investigating "how people identify and verbalize their feelings (e.g. anger, sadness and fear) after a traumatic event. Data are to be compared between those who have experienced a traumatic event and those who have not". Any immediate questions were answered and informed written consent was obtained (see Appendices 7a,b and 8 for the consent form and the Ethics Committee approval letter).

Participants in the PTSD group were individually tested while sitting at a desk in a consulting room. Those in the comparison group, were tested as a group, in a lecture theatre. Completion of the questionnaires took approximately, 20 minutes.

3.3 STATISTICAL ANALYSES

Data analyses were conducted using the "SPSS for Windows" statistical package. To determine homogeneity of variance, Kolmogorov-Smirnov tests were conducted. The results (Table 2) indicated that each variable for the PTSD group met the assumptions for a parametric statistical test. For the comparison group, assumptions were met for the alexithymia and expressed emotion measures, although homogeneity was skewed for the trauma scale. However, this is not surprising given that they were a non-traumatized group. As such this would not affect the use of parametric tests.
In addition, alpha coefficients were calculated to determine the internal reliability of the measures used. Taking the total number of cases (N=86) for the TAS-20 and AEE the results indicated that the alpha coefficient was 0.90 and 0.91 respectively. For the IES, the alpha coefficient was calculated for the PTSD group only (N=45). The analysis showed a reliability coefficient of 0.87. Overall the measures used in this study demonstrate high internal reliability. These results are comparable to the alpha coefficients reported by the developers of the measures.

Probability was set at 0.05. Anything less, was taken as being a non-significant trend. All analyses were two tailed unless otherwise stated.

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<tr>
<th>Measures</th>
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<th>Comparison Group</th>
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<td></td>
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<td>IES</td>
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Table 2: Scores for Kolmogorov Smirnov Test for Homogeneity.
4.0 RESULTS

Sample Descriptives

PTSD Group

The PTSD group, included 45 participants, of which 25 were women (mean age = 38.12, SD = 10.70) and 20 were men (mean age = 41.60, SD = 12.70). The socio-economic characteristics of this group are described in Table 3 (Section 4.2).

Trauma types for PTSD group

The types of trauma were defined as either single (defined by a single circumscribed event) or multiple trauma (defined by repeated and prolonged exposure) episodes. Twenty five individuals had experienced a single traumatic event. These included: physical assaults (n=9); road traffic accidents (n=10); armed robbery (n=1); industrial accident (n=1); household fire (n=1); bombing (n=1); discovery of a dead body (n=1) and a witness to a murder (n=1). Twenty participants had experienced multiple episodes of trauma. These included combat, torture, being held hostage, and childhood sexual abuse.

Diagnoses for PTSD group

Within the PTSD group, the diagnostic measures for PTSD gave the following results:

1. Clinician Administered PTSD Scale 1

Subjects scores on the CAPS 1 (Blake et al., 1990) ranged from 37 to 110 (mean score 75.4). Of the 17 items based upon the DSM III R and DSM IV diagnostic criteria for PTSD, 33 participants gained a score greater than the cut off score of 65. This indicates that they were
suffering from PTSD. Using this approach 12 participants had scores less than the cut off score of 65. However, 7 of these fulfilled the required criteria for the DSM IV diagnosis of PTSD, reporting each of the three symptom clusters; intrusions, avoidance, numbing and hyper arousal. The remaining 5 reached diagnostic criteria for 2 out of the 3 symptom clusters as indicated by the DSM manual. In this capacity they presented with partial PTSD rather than the full syndrome. Within the total PTSD group 44 participants met the criteria for re-experiencing phenomena, 40 for avoidance and numbing symptoms, whilst all met the criteria for hyper arousal.

2. Impact of Event Scale

With regards to the IES, scores indicated that the level of psychological distress in the PTSD sample is comparable to that found in other studies. Thus the mean of 50.36 (S.D.15.23) for the IES total score is higher than the figure of 39.6 reported by Horowitz and colleagues (1979). With regards to intrusion (mean = 27.11, SD = 7.69) and avoidance (mean = 23.24, SD = 9.66) again these are higher than those quoted by Horowitz et al., (1979).

Non-traumatized comparison group

A total of 41 participants were in the comparison group. Twenty six women (mean age = 25.20, SD = 4.66) and 15 men (mean age = 29.53, SD = 9.72). Demographic variables are shown in Table 3 (Section 4.2)

Reports of trauma in comparison group

Of the 41 individuals within the comparison, only 5 participants reported having experienced a traumatic event in adulthood. Three reported having experienced a road traffic accident, one physical assault and one armed robbery. The maximum score was 31 and minimum score of 9. These scores showed them not to be suffering from PTSD. As a result
all 5 participants were included in the study.

**Background Variables**

Statistical analyses were carried out to detect whether there were any differences between the PTSD and comparison group on each of the background variables (age, sex, marital status, occupation, ethnicity and religion). The results are depicted in Table 3.

With regards to **age** an independent t-test was carried out. This indicated that there was a significant difference between the two groups, whereby the comparison group were shown to be significantly younger than those in the traumatized group.

Chi analyses, detected differences between the comparison and traumatized group for occupation, status and ethnicity. With regards to **occupation**, by inspection of the cells, the difference lay between full time students in the comparison group and those who were unemployed in the trauma group. With respect to **status** the cells showed that most in the comparison group were single whilst most in the PTSD group were married. Finally, with regards to **ethnicity**, the largest ethnic groups for both the traumatized and non-traumatized group were caucasian rather than from minority groups. However, in all cases the cell sizes were too small and so makes it difficult to account for these results.

Chi-square analyses showed that there were no significant associations between the two groups with regards to the factors of **sex** or **religion**. However, it should be noted that in the case of religion there were numerous variables and yet cell sizes were small. As such any differences between the two groups could have been overseen.

It would seem that age was a confounding factor with regards to the variables of occupation and status. That is the comparison group were found to be younger and so more likely to be in full time education and single. Whilst the traumatized group were older and were found
to be divorced or separated and unemployed.

### Table 3: Demographic variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>PTSD</th>
<th>Non-PTSD</th>
<th>Analyses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>mean age 40 (SD. 11.60)</td>
<td>mean age 27 (SD.7.1)</td>
<td>t-value = 6.13; df=84; p=.000</td>
</tr>
<tr>
<td>Sex</td>
<td>Females 25 Males 20</td>
<td>Females 26 Males 15</td>
<td>$\chi^2=.550; df = 1; n.s</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>White UK/ Irish 34 (75.6%) Other 8 (17.8%) Black African/Caribbean 2 (4.4%) Asian 1 (2.2%)</td>
<td>White UK/Irish 27 (65.9%) Asian 7 (17.1%) Black African/Caribbean 4 (9.8%) Other 3 (7.3%)</td>
<td>$\chi^2=10.41; df=4; p=0.05$</td>
</tr>
<tr>
<td>Religion</td>
<td>Church of England 18 (40%) Other 13 (28.9%) Roman Catholic 9 (20%) Protestant 3 (6.7%) No religion 2 (4.4%)</td>
<td>Church of England 14 (34.1%) Other 11 (26.8%) Roman Catholic 9 (22%) Protestant 3 (7.3%) Hindu 2 (4.9%) Muslim 2 (4.9%)</td>
<td>$\chi^2=4.62; df=5; n.s.$</td>
</tr>
<tr>
<td>Status</td>
<td>Single 23 (51%) Married 16 (36%) Divorced 4 (9%) Separated 2 (4%)</td>
<td>Single 33 (80.5%) Married 7 (17.1%) Divorced 1 (2.4%)</td>
<td>$\chi^2=8.94; df=3; p=0.05$</td>
</tr>
<tr>
<td>Occupation</td>
<td>Unemployed 24 (53.3%) Full Time job 11 (24.4%) Part Time job 6 (13.3%) Part Time student 2 (4.4%) Full Time student 2 (4.4%)</td>
<td>Full Time student 30 (73.2%) Full Time job 8 (19.5%) Part Time job 2 (4.9%) Unemployed 1 (2.4%)</td>
<td>$\chi^2=49.10; df=4; p=.000$</td>
</tr>
</tbody>
</table>
Given that age was related to most of the background variables, it was used as a co-variant to determine whether age affected the outcome for the measures of alexithymia (TAS-20) and beliefs about expressing emotion (AEE). An Analysis of Covariance was conducted, controlling for the variable of age. The results indicated that age had no significant effect on either the TAS-20 (F = .38; df = 1; p = n.s) or AEE (F = 2.05; df = 1; p = n.s). What it did show that there was a significant effect between the two groups on both the TAS-20 (F = 11.50; df = 1; p = .000) and AEE (F = 7.84; df = 1; p = .000) with those in the PTSD group scoring higher on each questionnaire than those in the comparison group.

4.1 TESTING THE HYPOTHESES

Alexithymia and major trauma histories (hypotheses 1 and 2)

Although alexithymia is a dimensional construct, cut-off scores have been established permitting the categorization of respondents into alexithymic (>61), intermediate (52-60) and non alexithymic (<51) groups (Taylor, 1994 c.f. Lane et al., 1996). Within the PTSD group, 9 (20%) participants were not alexithymic, 14 (31%) were within the intermediate range for alexithymia and 22 (49%) were alexithymic. As a whole, the PTSD group demonstrated a mean of 61.27 (SD = 12.17) which shows that alexithymia is present.

In comparison the non-traumatized group received a mean score of 51.80 (SD = 11.59) which showed them to be within the intermediate range for alexithymia. Within this group, 20 (49%) showed to be non-alexithymic, 11 (27%) within the intermediate range and 10 (24%) were alexithymic.

The scores indicate that alexithymia appears to be present in both groups, although it seems to be more common in the PTSD group rather than the comparison group. To examine whether the levels of alexithymia are statistically different between-groups an independent t-test was carried out. The test indicated significant differences between both the PTSD
group and comparison group for the TAS 20 (df = 84; t = 3.68; p = <.0.001) with the PTSD group have significantly greater levels of alexithymia.

**Attitudes towards expressed emotion (hypothesis 3)**

The **PTSD group** received a mean score of 62.16 (SD = 13.66) on the AEE. The **non-traumatized group** received a mean score of 50.63 (SD = 10.87). Interestingly, the comparison group scored higher than the Joseph et al (1994) reported mean of 45.03 (SD = 12.75) in a non-clinical population for attitudes towards expressed emotion.

With regards to each of the four sub-scales for expressed emotion both groups demonstrated means which were higher than those reported by Joseph et al., (1994). Results are reported in Table 4.

Independent t-tests indicated that there were significant differences for each of the sub scales between-groups; (a) beliefs about meaning (df = 84; t = 4.30; p = < 0.001) (b) behavioural style (df = 84; t = 2.54; p = <0.001) (c) beliefs about expression (df = 84; t = 3.55; p = < 0.001) and (d) beliefs about consequences (df = 84; t = 3.44; p = <0.001). With the PTSD group having higher scores than the comparison group.

<table>
<thead>
<tr>
<th>Mean Scores</th>
<th>PTSD Group</th>
<th>Comparison Group</th>
<th>Joseph et al (1994)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beliefs About Meaning</td>
<td>13.18 (S.D.4.39)</td>
<td>9.63 (S.D.3.06)</td>
<td>6.39 (S.D. 2.73)</td>
</tr>
<tr>
<td>Behavioural Style</td>
<td>17.04 (S.D.3.63)</td>
<td>15.15 (S.D.3.27)</td>
<td>12.21 (S.D.4.60)</td>
</tr>
<tr>
<td>Beliefs About Expression</td>
<td>15.67 (S.D.4.70)</td>
<td>12.44 (S.D.3.61)</td>
<td>8.94 (S.D.3.50)</td>
</tr>
</tbody>
</table>

**Table 4: Mean scores for sub-scales on AEE measure**
In addition when comparing the total scores for negative beliefs between-groups an independent t-test indicated significant differences on the AEE (df = 84; t = 4.30; p = < 0.001). The results therefore suggest that those with PTSD presented with greater degrees of negative beliefs in expressing emotion, as measured by the AEE than the comparison group.

**Relationship between alexithymia and attitudes towards expressed emotion (hypothesis 4)**

To explore the hypothesis that alexithymia and negative attitudes are associated, Pearson Product Moment Correlations were carried out. For the total sample (N=86) a strong positive association between both variables was shown (r=.52 p = <0.01). Moreover, strong relationships were shown separately within the traumatized group (r=.62; p =<0.01) and within the comparison group (r=.59; p = <0.01). This would seem to suggest that greater levels of alexithymia are associated with greater negative attitudes about expressing emotion independent of PTSD or major trauma experience.

**The effect of alexithymia and negative attitudes towards expressed emotion upon trauma (hypothesis 5)**

Independent-t-tests were conducted to see whether any differences could be detected between trauma types (single and multiple) for the TAS-20 and AEE. The analyses failed to detect any differences on either the TAS 20 (df= 43; t = .28; p = NS) or AEE (df= 43; t = -1.44; p = NS). Thus one could assume that the amount of exposure to trauma has no relationship upon alexithymia or attitudes towards expressed emotion.

To investigate whether alexithymia or negative attitudes towards expressed emotion influenced trauma responses (utilizing the IES measure), correlation coefficients were computed within the PTSD group. As already mentioned previously, the coefficients demonstrated a significant association between alexithymia and attitudes towards expressed emotion.
emotion ($r = .62; p < .01$). In addition, positive relationships were demonstrated between alexithymia and trauma ($r = .45; p < .01$) and negative beliefs towards emotional expression and trauma ($r = .55; p < .01$).
5.0 DISCUSSION

Methodological Limitations

Before embarking on the findings of the present study and the theoretical and clinical implications involved, the methodological limitations need to be outlined. Principally, this study succeeded in recruiting a sufficient number of participants to ensure a sufficient level of statistical power. Nonetheless, there were selection biases which could have implications for the generalisability of the present findings.

Firstly, the comparison and traumatized groups were not matched according to characteristics (e.g. age, sex, occupation, status, ethnicity). Analyses found that the comparison group were significantly younger, in full time education and single. Whilst the traumatized group were shown to be older, more likely to be divorced or separated and unemployed. Given the dissimilarities between the two groups, a fair comparison could not be made with regards to the degree of alexithymia and negative attitudes towards expressed emotion between the two groups. This may have some bearing on the interpretation of the results.

Secondly, this study was conducted with a highly selected, treatment seeking, population. Standardized measures of post-traumatic stress seemed to suggest that the severity of the disturbance in this study were higher than those reported elsewhere for their 'high PTSD' groups (Thrasher et al., 1994). Thus, highly distressed subjects may have been over represented in this study. The prevalence rates of PTSD in this particular population may therefore be artificially high and may not reflect the full range of trauma reactions (e.g. those with moderate or mild trauma reactions).

A further criticism is that some patients only had partial PTSD at the time of assessment. This was mainly, due to time constraints. However, the fact that not everyone had full PTSD
may be a limitation. Secondly, therapists may have requested the participation of patients with multiple diagnoses (e.g. personality disorders, severe major depression). A high prevalence of psychiatric disorders are associated with both alexithymia and post-traumatic stress; it may be that the high levels of both variables in this group partially reflected the presence of other psychiatric conditions.

A final methodological issue relates to the measures used in this study. The TAS-20 and AEE appear to be very similar and thus it is possible they are measuring the same construct. For instance the TAS-20 measures emotional constriction by evaluating the cognitive and affective deficits of alexithymia. The AEE measures emotional constriction by focusing on negative schemata alone. Unfortunately, the sample size in the present study was not large enough to conduct a factor analysis. Perhaps future studies could bear this point in mind.

**Findings of the present study**

The present study found that alexithymia existed in both the PTSD and non-traumatized comparison group. However the degree of alexithymia was significantly greater in the PTSD group. The mean alexithymia scores for the PTSD group is comparable to those reported with a diverse group of psychiatric out-patients (Taylor, 1994). The mean scores for both males and females in the present study were 62.70 (SD = 12.36) and 60.12 (SD = 12.15) respectively. When compared to means for non-traumatized non-psychiatric controls (men: mean = 47.18; SD = 10.56, age range 27-80; women: mean = 46.13; SD = 9.75, age range, 27-72; Taylor, 1994) this suggests that those with PTSD show increased alexithymia. Survivors with PTSD showed scores that were slightly higher than those reported in a diverse group of psychiatric out-patients (men: mean = 55.27; SD, 12.24, age range 18-66; women: mean = 54.45; SD = 13.48, age range 17-75; Taylor, 1994).
The findings of this present study is also consistent with the observation that alexithymia exists in other clinical populations, notably, depression (Wise et al., 1990), anxiety (Hendryx et al., 1991) eating disorders (Schmidt et al., 1993), personality disorders (Bach et al., 1994) in addition to those with PTSD (e.g. Krystal et al., 1986).

The comparison group demonstrated an intermediate degree of alexithymia. The mean scores for both men and women were 50.40 (SD = 9.50) and 52.62 (SD = 12.75) respectively. In comparison to non-psychiatric controls (Taylor, 1994), the present sample showed to have slightly greater (within 1 standard deviation) levels of alexithymia. Although this group was screened for PTSD, they were not asked about other psychological difficulties such as depression or anxiety which have been implicated with the alexithymia construct. This may account for the degree of alexithymia found in this group. Although these results are consistent with existing data showing the existence of alexithymic characteristics in healthy individuals, (Sifneos, 1988; Blanchard et al., 1981).

As shown by this study and previous research studies, alexithymia not only manifests in those with psychiatric disorders but also healthy individuals. This would suggest that alexithymia is more likely to be a personality trait. Taylor (1994) proposed that if alexithymia is a pre-existing trait then it should be conceptualized as a dimensional construct, normally distributed in the general population. It is suggested that a high degree of alexithymia would then be a vulnerability factor for the development and maintenance of psychiatric illness. As already mentioned in section 2 (rational for study), only a minority of survivors of a disaster go on to develop PTSD and with the passage of time the symptoms usually resolve in approximately two thirds of the survivors (Kessler et al., 1996). Thus, people may be predisposed to developing PTSD due to vulnerability factors. Given the findings of this present study it could be speculated that those in the PTSD group had a high degree of alexithymia prior to the trauma which led them to develop PTSD following a
traumatic life event. This would seem to suggest that alexithymia may be a vulnerability factor which predisposes individuals to developing PTSD.

Further studies could clarify the relationship between alexithymia as a pre-existing trait and psychiatric disorders such as PTSD by conducting a longitudinal study. For example, alexithymia could be examined at different stages following trauma to determine whether alexithymia abates and/or intensifies in conjunction with remission or reactivation of PTSD. Assessment of alexithymia before the focal trauma event (e.g. before soldiers enter combat) would clarify whether alexithymia is a pre-existing trait.

At present there are no norms for the measure of attitudes towards expressed emotion for individuals with psychiatric disorders. In this case comparisons from the literature could only be made with non-clinical populations as observed by Joseph et al., (1994). Both the PTSD and comparison sample showed elevated levels of negative attitudinal styles in comparison to that observed in healthy individuals (Joseph et al., 1994). However, the traumatized group had significantly higher scores than the non-traumatized group. These findings are compatible with Joseph et al., (1994) suggestion that underlying the expression of PTSD are specific thought contents which block the processing of emotive information following a traumatic life event.

When examining the association between alexithymia and negative beliefs towards emotional expression, a strong positive relationship was demonstrated. This effect was demonstrated across the whole sample and in both groups. This suggests that the greater the degree of alexithymia the stronger the beliefs about expressing emotional states.

In addition this investigation examined the relationship between alexithymia, negative beliefs and trauma reactions. Firstly, a relationship between alexithymia and the degree of
exposure to trauma (ie. single versus multiple events) was not observed. These findings are consistent with those of Hyer et al., (1990) and Yehuda et al., (1997) who demonstrated that alexithymia was not associated with the degree of exposure to trauma in either Vietnam Veterans or survivor of the Holocaust respectively. However, this study is not consistent with the findings of Zeitlin et al., (1989) who reported a positive correlation between the amount of trauma one is exposed to and alexithymia with Vietnam veterans. The present findings are also not compatible with findings that rape survivors who had been exposed to repeated traumatization had a higher degree of alexithymia than those who had experienced a single episode of trauma (Zeitlin et al., 1993). Importantly, in these latter two studies Comorbidity of other psychiatric diagnosis was not examined in tandem with PTSD. Given the high prevalence of psychiatric disorders that are associated with alexithymia and trauma survivors, it may be that the alexithymia levels partially reflected the presence of other psychiatric conditions.

Secondly, alexithymia and negative attitudes towards expressed emotion were correlated with responses to trauma. A strong positive association was demonstrated for both variables and trauma responses. However, it is difficult to delineate which are the causal factors and which are the effects. Possibly, both alexithymia and negative beliefs have some part to play in the development of trauma responses? Alternatively, perhaps trauma is responsible for the development of alexithymia and negative beliefs about expressing emotion? Moreover, it is possible that other variables played a significant role, but which were not under investigation here. Such variables could have been familial psychiatric illness (Davidson et al., 1991), post trauma negative life events or the lack of social support (McFarlane, 1989) all of which have been implicated in the development of PTSD.

5.1 THEORETICAL IMPLICATIONS

The results of the present study provide some support for the hypothesis that alexithymia is a pre-existing trait. Not only does it exist in those with psychiatric disorders such as PTSD
but also in healthy individuals. This is consistent with previous observations. In conceptualizing alexithymia as a trait it was argued that underlying this were mental maps or cognitive schemata. This notion was supported in the present study by measuring negative attitudes towards expressed emotion. Both alexithymia and negative schemata showed a strong, positive association. Thus, in conceptualizing alexithymia as a continuum, which is driven by schema, it is plausible that the stronger the beliefs the higher the degree of alexithymia, which consequently, culminate in the development of a psychiatric illness. In this instance, the experience of a traumatic event will lead to the development and maintenance of PTSD. The following section speculates about the role that schemata have in the development of alexithymia and how schematic processes, and alexithymia contribute to the development and maintenance of PTSD.

**Alexithymia and underlying schematic processes**

In the field of psychopathology, cognitive theorists have suggested that schemata are implicated in the initiation of a variety of psychological disorders such as personality disorders (Beck & Freeman, 1990), depression (Beck et al., 1979), and anxiety (Beck & Emery, 1985). These, schemata are highly personalized, idiosyncratic structures. When activated these idiosyncratic schemata introduce a systematic bias into information processing, and so displace and probably inhibit other schemata that may be more adaptive or more appropriate for a given situation (Beck, 1976; Beck & Freeman, 1990; Freeman, 1987).

Beck & Freeman (1990) proposed that different types of schemata have different functions. For example (a) cognitive schemata are concerned with abstraction, interpretation, and recall (b) affective schemata are responsible for the generation of feelings (c) motivational schemata deal with wishes and desires (d) instrumental schemata prepare for action and (e) control schemata are involved with self-monitoring and inhibiting of directing actions. These structures may be viewed as operating in a logical linear progression, in that, the affective,
motivational, action and control schemata may be activated in sequence. So, for example, if someone is confronted by a snarling dog they will interpret the situation as dangerous (cognitive schema; "that dog is going to bite me"), consequently feels anxious (affective schema; "I'm afraid of getting hurt"), wants to get away (action or instrumental schema; "Better get out of here"). However, if the person judges that running away is counterproductive, he or she may inhibit this impulse (control schema; "If I run away, there is a greater likelihood of being bitten").

Personality traits are also attributed to similar cognitive structures which culminate in overt behaviour. Behavioural patterns that we commonly ascribe to personality traits, for example, clinging behaviour in the dependent personality trait or shyness with those who are introverted, represent interpersonal styles developed from the interaction between innate disposition (cognitive schemata) and environmental influence. So for instance, the dependent personality trait which is characterised by a clinging behaviour has an underlying schema of "I am helpless".

Broadly, borrowing from the cognitive conceptualization of personality traits, it is suggested that schemata may responsible for the affective (i.e. inability to identify and communicate emotional states) and cognitive (i.e. externally oriented thinking style) deficits covertly and overtly expressed by the alexithymic individual.

Specifically, a personality trait can be influenced by changes in a single schema or a few schemata which then determine behaviour. Of relevance to this investigation are control schemata which operate in conjunction with the action schemata to modulate, modify or inhibit impulses. The impulses are made up of "wants", whilst the control schemata constitute the "dos " or the "do nots" (Beck, 1976). It is suggested here that for the alexithymic, control schemata are prominent in the cognitive hierarchy. As an alexithymic person encounters and cognitively interprets personally meaningful or distressing situations the control schemata are activated. Schemata may include beliefs about meaning (e.g. that
showing emotion is a sign of weakness), behavioural style (e.g. that one should hide their feelings), beliefs about expression (e.g. one should keep in control of their feelings) and beliefs about negative consequences of showing emotion (e.g. others will reject you if you show your feelings). Once the control schema has been activated it will automatically command the action schema to inhibit any expression of affect (see figure 1).

As illustrated by the model (Figure 1) the schematic processes are broad and all encompassing for the alexithymic leading to the covert (cognitive) and overt (affective) manifestations characteristics of the construct. Firstly, within the cognitive domain, control schemata would prohibit an introspective thought style as it would make these people feel uncomfortable at entertaining thoughts of why they feel distressed. This may account as to why alexithymics have an externally oriented thinking pattern and so are unable to identify specific thoughts that lead to their emotional distress. Also, it would influence the affective domain leading. If to the inhibition of emotional expression. This may explain why alexithymics are unable to identify or distinguish different affective states. Finally, if the control schemata prohibit the expression of emotion then this could in turn effect motor-behavioural functions such as facial expressions, for example, smiling when happy or crying when sad, characteristics which appear to be lacking with alexithymic individuals.
Figure 1: Schematic processes and alexithymia
Moreover, not only do control schemata determine how alexithymics regulate inner-directed functions but also functions involved with relating to the external, primarily social environment. Control schemata would account for the marked social inhibition observed with alexithymics. For instance the difficulty they have in seeking solace from family and friends when emotionally distressed (Dunn & Brown, 1991), seeking help from professionals (Lumley & Norman, 1996) or being emotionally intimate with partners which often leads to disrupted relationships (Prince & Berenbaum, 1993).

These beliefs or rules form the basis for setting standards (i.e. "I must never show my feelings), expectations (i.e. "If I show my feelings people won't like me") and plans of actions (i.e. "When I am upset I will bottle up my emotions") for themselves. These rules become rigid and so the alexithymic cannot operate according to a practical, more flexible rule such as "Perhaps if I spoke to someone about how I feel it would help me".

**The development of schemata in alexithymia**

Cognitive theorists (Beck and Freeman 1990; Young, 1990) proposed that schemata develop in childhood through socialization processes within the family and with peers. Simply, these experiences produce a stored body of knowledge which interacts with encoding, comprehension and retrieval of information within its domain, by guiding attention, expectancies, interpretation and memory searches (see reviews by Graesser & Nakamura, 1982; Alba & Hasher, 1983). Clinically, it is presumed that individuals who are prone to depression or anxiety have an extensive database concerning negative experiences of loss or danger and have a greater ease to access such a database.

Borrowing from Becks work it is suggested that those schemata which underlie the trait of alexithymia constitute a body of knowledge relating to the expression of emotion, possibly
learnt in childhood. As observed in previous studies, alexithymia may develop through maladaptive socialization processes in childhood. Such experiences would include being maltreated for expressing affective states (Cicchetti & White, 1990), where family members were not permitted to act openly or express their feelings directly or the absence of a positive childhood environment in which individuals are supportive and model non threatening expressions of emotion (Berenbaum & James, 1994) or when the mother is emotionally unavailable to the child (Lumley et al., 1996).

It is plausible therefore that such environments foster the development of a knowledge base whereby the expression of emotion is construed as negative. Thus, whenever a problematic situation arises the alexithymic will retrieve information of past negative experiences whereby emotion has been negated and so the control schema is activated. However, this may be true in times of emotional crises, for instance after a traumatic event. However, the alexithymia trait appears to ever present whether a crises occurs or not. It is probable therefore that with a specific trait, such as alexithymia, schemata are part of normal everyday processing of information (Beck and Freeman, 1990), and so emotional inhibition becomes an automatic reaction.

**Schematic processes, alexithymia and PTSD**

The schematic model advanced in this paper has been applied in broad terms to the alexithymia trait. This section will apply the schematic conceptualization of alexithymia to traumatized people. Future studies would need to examine whether this model would be applicable to other psychiatric disorders which have also been associated with the alexithymia construct, such as anxiety, depression, and eating disorders.

Processing, disturbing emotions, expressed either through internal (self disclosure) or external (confiding in others) channels is considered to be psychologically and physically beneficial. This is particularly true when individuals seek to understand the impact of a
traumatic life event. On a strict interpersonal level discussing a major life event allows for social comparison (e.g. Wortman & Dunkel-Schetter, 1979) and coping information from others (e.g. Lazarus, 1966). From a cognitive perspective, talking about or in some way confronting a traumatic event, may help the individual to organize (Meichenbaum, 1977) assimilate (Horowitz, 1986) or give meaning (Silver & Wortman, 1980) to the trauma. These approaches assume that expressing emotions should then help the individual categorize the experience into a meaningful framework.

Theoretically, two schools of thought have been associated with the processing of trauma. One information based (Horowitz, 1986) and the other emotion based (Foa & Kozak, 1986; Lang, 1985). Recent developments (e.g. Chemtob et al., 1989; Lidz & Keane, 1989) have evolved where information and emotional processing are highly interrelated. All, however, share their emphasis on the importance of meaning in the processing of information or emotions.

The best known model is that by Horowitz (1986) who places a major emphasis on information processing and cognitive theories of emotion. He advocates that catastrophic events involve massive amounts of internal and external information, most of which cannot be matched with the persons cognitive schemata due to the fact that it lies outside the realm of normal experience. The result is information overload: the person experiences ideas, affects and images which cannot be integrated with the pre-existing schemata. Since a person experiencing extreme traumatization cannot process the information, it is shunted out of awareness. It therefore remains in an unprocessed, active or raw form. Denial and numbing are employed as defensive manoeuvres to keep the traumatic information unconscious. Subsequently the traumatized person oscillates between intrusive repetition of the trauma and denial or numbness until the information is fully processed. Thus recovery occurs once the individual has integrated the personal meaning of the stressor within the personality and when the persons original cognitive schema and trauma stimuli reach accord.
Following a traumatic event the alexithymic, would be bombarded with emotive information, leading to the development of trauma symptoms. However, the pre-existing cognitive schemata (internal control system) will prohibit the processing of highly, emotionally charged information (action system). Subsequently, the psychological components of the event remain in memory where they continue to foster trauma symptoms which in turn activates the control system which then activates the action system and the vicious cycle continues (see Figure 2). In essence, for the alexithymic, pre-existing cognitive schemata will not incorporate stressor or emotional information in any meaningful fashion. Accordingly, a traumatized individual with alexithymia, is in a constant state of deadlock.

Over time, other emotions may evolve which are secondary responses to the stressors; multiple conditioned stimuli and responses which exists as a result of indirect learning (stimulus generalization). In this 'secondary' context, emotional responses are largely adaptive and are related to the individual's effort to control the internal sequelae of the traumatic event. The secondary emotions then, are 'false fronts' which never represent the actual trauma. The alexithymic therefore has to contend with further controlling and inhibiting such states.

Being unable to formulate flexible response strategies and so having no outlet for the emotional intensity produced by a traumatic event, this may make the alexithymic act on their feelings (e.g. impaired impulse control). Several studies of traumatized alexithymic individuals have observed self-destructive behaviours such as substance misuse (Krystal et al., 1986) and self-harm (Hyer et al., 1991). Hyer et al (1991) found that suicidal gestures appear to coexist with alexithymia. Of seventy patients who had served in Vietnam, 39 attempted suicide, averaging 2.4. gestures per person. Given the firmly entrenched and resistant schemata the alexithymic would certainly have problems accessing, understanding and defusing such intensive and extensive emotional states. Thus it could be said that alexithymics are at greater risk of developing and suffering from chronic PTSD.
Pre-existing Schemata

Control Schema

Action Schema

Alexithymia

Traumatic Event
e.g. Car Accident

Emotional Information

“I could have been killed”

“I may never have seen my family again”

TRAUMA RESPONSE
Intrusions
Avoidance/Numbing
Hyperarousal

Figure 2: Schematic processes, alexithymia and PTSD
Furthermore, the alexithymic not only has to contend with increasing psychological distress, such as chronic PTSD following trauma, evidence has accumulated indicating that low levels of emotional expression, over a long period of time may be related to physical health (Pennebaker, 1985; Pennebaker & Beall, 1986). According to this notion, the act of inhibiting or otherwise restraining ongoing behaviour, thoughts and feelings requires physiological work. Fowles (1980) has provided compelling evidence indicating that behavioural inhibition is specifically linked to skin conductance activity, whereas behavioural activation is associated with increased cardiovascular action. When individuals must restrain naturally occurring behaviour, electro dermal activity increases whereas other autonomic nervous system activity is not directly affected (Pennebaker & Chew, 1985). Thus, according to the inhibition disease framework, short term inhibition is associated with brief increases in specific autonomic activity, long term inhibition, places additional stress on the body, resulting in increased rates of illness and symptom reports.

Support for this notion is provided by research which has indicated that individuals classified as inhibitors, repressors or suppressors demonstrate higher cancer rates (Kissen, 1966), elevated blood pressure (McClelland, 1979) and more physical disease in general (Blackburn, 1965). Relative to trauma, it has been documented that rape victims who do not discuss their experiences in detail also report a large number of health problems in the year following the assault (e.g. Kilpatrick, Resick & Vernone, 1981). Adults who reported having experienced one of several types of childhood traumatic events (e.g sexual or physical abuse, death or divorce of parents) were more likely to report current health problems if they had not disclosed the trauma to others than if they had divulged it (Pennebaker & Hoover, 1986; Pennebaker & Susman, 1988). Similarly, a survey of spouses of suicide and accidental death victims revealed that those individuals most likely to become ill in the year following the death were the ones who had not confided in others about their experiences (Pennebaker & O’Heeron, 1984). If as suggested here that low levels of emotional expression lead to physical ill health this may explain why traumatized, alexithymic individuals suffer from multiple somatic complaints.
The present study has suggested that alexithymia is a pre-existing trait, possibly caused by deficits in the cognitive processing of emotions due to dysfunctional schemata learnt in childhood. Essentially, the control schemata prohibit impulses in the action system, thus acting as a counterforce to the expression of affect. However, this is only one perspective to explaining the aetiology of alexithymia, several alternative interpretations could be suggested. Firstly, it is possible that alexithymia may be related to a class of personality traits described as emotional constriction (King et al., 1992) which is itself described as a subset of a higher order personality dimension they label as inhibition. In fact, Bonanno and Singer (1990) have questioned whether the concept of alexithymia "has any independence or whether it may be reflecting a facet of the better measured repressive style" (p.460). It could also be argued that difficulties in communicating emotion may be due to deficiencies in the development of cognition. As Lane & Schwartz (1987) suggested, alexithymic individuals may have no internal mental maps or schematic structures in order to identify or communicate emotion.

Alternatively, alexithymia may develop as a means of avoiding painful affect following adverse life events (secondary alexithymia). For instance, several theorists have observed that alexithymia may be closely related to the symptoms of avoidance and numbing of PTSD following a trauma (Funkunishi et al., 1996). The principle features of individuals who have emotional numbness include a "wooden" expression and lifeless appearance. Numb individuals commonly experience themselves to be robotic, like automatons who merely go through the emotions of social interaction. They may also demonstrate flippant and socially inappropriate behaviours because of their indifference and lack of concern for other people's feelings and sensibilities. Finally, the may appear to be angry or sad and yet be totally unaware of that facial expression and deny experiencing the corresponding mood or feeling. These features are similar to the concept of alexithymia. However, traumatized persons are able to describe emotional numbness in terms of "shutdown" "ice cold" "dead" or "empty", descriptions, which are absent to traumatized individuals who are alexithymic.
Dissociation has also been described as a universal response to traumatic experiences, enabling the survivor to manage distressing emotions. Dissociation occurs both at the time of the traumatic event (Bremner et al., 1992), and posttraumatically, as a long term consequence of traumatic exposure (Saxe et al., 1993). Thus, dissociation and alexithymia may be associated because some individuals may develop dissociative and secondary alexithymic characteristics after trauma (Krystal et al., 1986; Freyberger, 1977).

5.2 CLINICAL IMPLICATIONS

If schemata play a role in the development and maintenance of alexithymia various clinical implications could be proposed. Some of these suggestions are already addressed with existing psychological interventions. However, the aim would be to place greater emphasis on factors relating to the cause of alexithymia. The following implications are suggested:

1. Measurement of the extent of alexithymia (measured by the TAS-20; Bagby et al., 1992) and the underlying schemata (Attitudes towards expressed emotion: Joseph et al., 1994) should be undertaken within treatment. This would allow an assessment of the initial level of alexithymia and schemata and whether they decrease as therapy proceeds. It may also help to isolate reasons for possible lack of progress across sessions.

2. Treatment should address the maintaining role of underlying beliefs and assumptions. Beliefs such as those relating to a perceived need to remain in control of emotions could be particularly targeted.

3. Predictions of the feared consequences of expressing emotion could also be discussed and tested using behavioural experiments. For example the fear of being rejected by others if they express feelings could be tested with a close family member or initially with the therapist.
4. More specific beliefs about the need to control emotions could be tested within the session by asking the client to attempt not to think about thoughts and feelings related to a distressing event. The difficulty of this task may serve to demonstrate the counter productive effects of inhibition.

5. Once the patient has started the process of modifying schemata, it may be useful to have the client examine how a belief originated and became maintained through the years. The therapist would help the patient search for evidence that seemed to support schemata and to uncover evidence that contradicted it.

6. Apart from being made aware of the schematic processes which derive in the characteristics of alexithymia, clients need to be made aware of feelings and to verbalize feeling states. This process could be accomplished by focussing on the primary affects so that eventually the client can use signals to access the emotional schemata.

General cognitive-behavioural principles of intervention could include (a) bringing a distressing event to memory, for example, a road traffic accident (b) direct attention to the bodily sensations that arise from the memory (e.g. beating heart, sweating, difficulty breathing), (c) analyse the emotional expressions (e.g. teach the client to recognize that bodily sensations are expressions of anxiety) (d) refocus on sensation of anxiety, intensifying the experience so that affect tolerance can be developed (e) cognitively evaluate the emotional experience. For example the therapist may ask the client what comes to mind when they have these sensations? The client may respond that the emotions remind him/her of the accident and the fact that they nearly died or that they fear losing control (e.g. going insane, dying) when they experience the emotion (f) reframe the cognition (g) refocus on the memory, sensation of anxiety and reframed cognition.

7. Special attention should be paid to the development of a trusting and collaborative therapeutic relationship. Such a rapport would facilitate the process of working with the
underlying beliefs. The gradual process of exploring alternatives to over control would be aided by an atmosphere of trust between the client and the therapist.

8. The overall aim would be to decrease the prominence of chronic and habitual control and inhibition of emotional expression both overtly and covertly. Hopefully, this would remove inhibition with normal emotional processing and facilitate the rate of recovery.

6.0 DIRECTIONS FOR FUTURE RESEARCH

The present study had a variety of limitations which could be addressed in future research. These will be outlined in this closing section.

1. Further studies of the association between alexithymia and schemata will need to employ larger sample sizes than the one used here. This would allow a more powerful test of the hypotheses under investigation and so circumvent Type 1 and Type 2 statistical errors.

2. Having a larger sample size would also allow future researchers to conduct a factor analysis to examine whether facets of alexithymia overlap with schemata which prohibit the expression of verbal and non-verbal emotion.

3. Future studies could also examine whether the association between alexithymia and negative attitudes towards expressed emotion is demonstrated with other psychiatric disorders.

4. Longitudinal studies of trauma survivors could examine the relationship between alexithymia and PTSD. Assessments could be conducted pre-trauma, post-trauma and at a 1 year follow up to see whether the degree of alexithymia increases or decreases with the reactivation or remission of PTSD.

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5. Treatment studies, utilizing a cognitive approach, could evaluate whether reframed and so more adaptive schemata could cause the levels of alexithymia to abate.
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PERSONAL QUESTIONNAIRE

Subject No___________

Please answer the following questions about yourself by writing in the space provided or ticking the appropriate choice

1. What is your date of birth? _____________________________

2. What sex are you?  Male □  or  Female □

3. What is your marital status?
   Married □  Single □  Separated □  Divorced □

4. What is your occupational status?
   Full Time Employment □  Part Time Employment □  Unemployed □
   Full Time Student □  Part Time Student □

5. How would you describe your ethnic background?
   White UK/Irish □  Black African/Caribbean □
   Asian □  Other (please specify) ___________

6. How would you describe your religion?
   Church of England □  Roman Catholic □  Protestant □
   Methodist □  Muslim □  Hindu □
   Jewish □  Other (please specify) ___________
7. Have you ever experienced a traumatic event?

Yes ☐  No ☐

8. If you answered 'Yes' to question 7, what type of traumatic event did you experience?

Surgical ☐  Road Traffic Accident ☐  Mugging ☐

Armed Robbery ☐  Physical Assault ☐  Sexual Assault ☐

Rape ☐  Fire ☐  Train Crash ☐

Industrial Accident ☐  Witnessed a Suicide ☐  Bombings ☐

Train/Ship/Plane Accident ☐  Torture ☐  Witnessed a murder ☐

Shooting ☐  Childhood Sexual Abuse ☐  P.O.W ☐

Combat ☐  Other (Please specify)...............................................

9. When did this event occur (month and year).............................................

Thank you for answering these questions
PERSONAL QUESTIONNAIRE

Subject No___________

Please answer the following questions about yourself by writing in the space provided or ticking the appropriate choice

1. What is your date of birth ? _____________________________

2. What sex are you ? Male □ or Female □

3. What is your marital status ?
   Married □ Single □ Separated □ Divorced □

4. What is your occupational status ?
   Full Time Employment □ Part Time Employment □ Unemployed □
   Full Time Student □ Part Time Student □

5. How would you describe your ethnic background ?
   White UK/Irish □ Black African/Caribbean □
   Asian □ Other (please specify)___________

6. How would you describe your religion ?
   Church of England □ Roman Catholic □ Protestant □
   Methodist □ Muslim □ Hindu □
   Jewish □ Other (please specify)________________
7. Have you ever experienced a traumatic event?
   
   Yes □ No □

8. If you answered ‘Yes’ to question 7, what type of traumatic event did you experience?
   
   Surgical □ Road Traffic Accident □ Mugging □
   
   Armed Robbery □ Physical Assault □ Sexual Assault □
   
   Rape □ Fire □ Train Crash □
   
   Industrial Accident □ Witnessed a Suicide □ Bombings □
   
   Train/Ship/Plane Accident □ Torture □ Witnessed a murder □
   
   Shooting □ Childhood Sexual Abuse □ P.O.W □
   
   Combat □ Other (Please specify)..........................................

9. When did this event occur (month and year)..................................................

10. Have you ever received psychological/psychiatric treatment as a result of these events?
    
    Yes □ No □

11. If you answered ‘yes’ to question 10, what type of treatment did you receive and for how long?
    
    Thank you for answering these questions
CRITERION A

1. Has the person experienced, witnessed or been confronted with an event(s) that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others?

   YES/NO

2. Did the person's response involve intense fear, helplessness, or horror?

   YES/NO
CRITERION B
National Center for PTSD
CLINICIAN-ADMINISTERED PTSD SCALE (CAPS-1)

Traumatic event

The traumatic event is persistently reexperienced.

(1) recurrent and intrusive distressing recollections of the event

**Frequency**
Have you ever experienced unwanted memories of the event(s) without being exposed to something that reminded you of the event? How often in the past month?

0  Never
1  Rarely, once or twice a month
2  Occasionally, once or twice a week
3  Frequently, several times a week
4  Constantly, daily of almost every day

**Intensity**
At their worst, how much distress or discomfort did these memories cause you? Have you actively avoided remembering the event(s)? Did these memories cause you to stop what you were doing? Are you able to dismiss the memories if you try?

0  None
1  Mild, minimal distress
2  Moderate, distress clearly present but still manageable
3  Severe, considerable distress, marked discomfort
4  Extreme, overwhelming or incapacitating distress

PRESENT = YES/NO

(2) intense psychological distress at exposure to events that symbolize or resemble an aspect of the traumatic event, including anniversaries of the trauma

**Frequency**
Have you ever gotten upset when you were exposed to events that symbolize or resemble an aspect of the event(s)? [For example, particular males for rape victims, tree lines or wooded areas for combat veterans] How often in the past month?

0  Never
1  Rarely, once or twice, a month
2  Occasionally, once or twice a week
3  Frequently, several times a week
4  Constantly, daily or almost every day

**Intensity**
At its worst, how much distress or discomfort did exposure to these reminders cause you? Were you able to remain in the situation? For how long?

0  None
1  Mild, minimal distress with no escape behaviour
2  Moderate, distress clearly present but still manageable, and some escape behaviour may be present
3  Severe, considerable distress, marked discomfort and escape behaviour likely to be present
4  Extreme, overwhelming or incapacitating distress and marked
escape behaviour is definitely present

PRESENT = YES/NO

(3) Sudden acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusion, hallucinations, and dissociative [flashback] episodes, even those that occur upon awakening or when intoxicated)

**Frequency**
- Have you ever suddenly acted or felt as if the event(s) were happening again? How often in the past month?
  - 0 Never
  - 1 Rarely, once or twice a month
  - 2 Occasionally, once or twice a week
  - 3 Frequently, several times a week
  - 4 Constantly, daily or almost every day

**Intensity**
- At its worst, how much did it seem that the event(s) was happening again? How long did it last? What did you do while this was happening?
  - 0 Not at all
  - 1 Mild, slightly more realistic than just thinking about the event
  - 2 Moderate, definite dissociative quality, but still very aware of surroundings; daydreaming quality
  - 3 Severe, strongly dissociative (reports images, sounds, smells), but retained some awareness of surroundings
  - 4 Extreme, complete dissociation (flashback), no awareness of surroundings, possible amnesia for the episode (blackout)

PRESENT = YES/NO

(4) Recurrent distressing dreams of the event

**Frequency**
- Have you ever had unpleasant dreams about the event(s)? How often in the past month?
  - 0 Never
  - 1 Rarely, once or twice a month
  - 2 Occasionally, once or twice a week
  - 3 Frequently, several times a week
  - 4 Constantly, nightly or almost every night

Occasionally, once or twice a week
Frequently, several times a week
Constantly, nightly or almost every night
**Intensity**
At their worst, how much distress or discomfort did these dreams cause you? Did these dreams wake you up? [If yes, ask Did you notice any physical symptoms when you awoke? How long does it usually take to get back to sleep?]

0  None
1  Mild, minimal distress
2  Moderate, distress clearly present but still manageable
3  Severe, considerable distress, marked discomfort
4  Extreme, overwhelming or incapacitating distress

**PRESENT = YES/NO**
(5) Physiologic reactivity upon exposure to events that symbolize or resemble an aspect of traumatic event

**Frequency**
Have you ever experienced any physical reactions when you were faced with situations that reminded you of the event(s)? [Listen for report of symptoms such as heart racing, tremulousness, sweating, or muscle tension, but do not suggest symptoms to patient] How often in the past month?

0  Only once
1  Once or twice
2  Once or twice a week
3  Several times a week
4  Daily or almost every day

**Intensity**
At their worst, how strong were these physical reactions?

0  No physical reaction
1  Mild, minimal reaction
2  Moderate physical reaction clearly present, reports some discomfort
3  Severe, marked physical reaction, reports strong discomfort
4  Extreme, dramatic physical reaction, sustained arousal, panic symptoms

------------------------ current symptoms for Criterion B (≥ 1)?

**CRITERION B MET ?**  YES/NO
**CRITERION C**

**Persistent avoidance of stimuli associated with the trauma or numbing of general responsiveness (not present before the trauma)**

(6) **efforts to avoid thoughts, or feelings or conversations associated with the trauma**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you ever tried to avoid thinking about what happened or tried to avoid feelings related to the event(s)? How often in the past month?</td>
<td>How much effort did you make to avoid thoughts or feelings related to the event(s)? [rate all attempts at cognitive avoidance, including distraction, suppression, and reducing awareness with alcohol or drugs]</td>
</tr>
</tbody>
</table>

<p>| | |</p>
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No effort</td>
</tr>
<tr>
<td>1</td>
<td>Mild, minimal effort</td>
</tr>
<tr>
<td>2</td>
<td>Moderate, some effort, avoidance definitely present</td>
</tr>
<tr>
<td>3</td>
<td>Severe, considerable effort, marked avoidance</td>
</tr>
<tr>
<td>4</td>
<td>Extreme, drastic attempts at avoidance</td>
</tr>
</tbody>
</table>

**PRESENT = YES/NO**

(7) **efforts to avoid activities places or people that arouse recollections of the trauma**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you ever tried to stay away from activities (see above) that reminded you of the event(s)? How often in the past month? Rarely, once or twice a month</td>
<td>How much effort did you make to avoid activities or situations related to the event(s)? [rate all attempts at behavioural avoidance, e.g., combat veteran who avoids veteran activities, war movies, Asians, etc.]</td>
</tr>
</tbody>
</table>

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Never</td>
</tr>
<tr>
<td>2</td>
<td>Occasionally, once or twice a week</td>
</tr>
<tr>
<td>3</td>
<td>Frequently, several times a week</td>
</tr>
<tr>
<td>4</td>
<td>Constantly, daily or almost every day</td>
</tr>
</tbody>
</table>

<p>| | |</p>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No effort</td>
</tr>
<tr>
<td>1</td>
<td>Mild, Minimal effort</td>
</tr>
<tr>
<td>2</td>
<td>Moderate, some effort, avoidance definitely</td>
</tr>
<tr>
<td>3</td>
<td>Severe, considerable effort, marked avoidance</td>
</tr>
<tr>
<td>4</td>
<td>Extreme, drastic attempts at avoidance</td>
</tr>
</tbody>
</table>

**PRESENT = YES/NO**
(8) inability to recall an important aspect of the trauma (psychogenic amnesia)

**Frequency**
Have you been unable to remember Important parts of the event(s) (e.g., names, faces, chronology of events)? How much of the event(s) have you had difficulty remembering in the past month?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>None, clear memory of event(s)</td>
</tr>
<tr>
<td>1</td>
<td>Few aspects of event(s) not remembered (less than 10%)</td>
</tr>
<tr>
<td>2</td>
<td>Some aspects of the event(s) not remembered (approximately 20-30%)</td>
</tr>
<tr>
<td>3</td>
<td>Many aspects of the event(s) not remembered (approximately 50-60%)</td>
</tr>
<tr>
<td>4</td>
<td>Most of event(s) not remembered (more than 80%)</td>
</tr>
</tbody>
</table>

**Intensity**
How much difficulty did you have recalling all important aspect(s) of the event(s)?

<table>
<thead>
<tr>
<th>Intensity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No difficulty at recalling event(s)</td>
</tr>
<tr>
<td>1</td>
<td>Mild, minimal difficulty recalling event(s)</td>
</tr>
<tr>
<td>2</td>
<td>Moderate, some difficulty, could recall event(s) with concentration</td>
</tr>
<tr>
<td>3</td>
<td>Severe, considerable difficulty recalling the event(s)</td>
</tr>
<tr>
<td>4</td>
<td>Extreme nearly complete inability to recall the event(s)</td>
</tr>
</tbody>
</table>

**PRESENT = YES/NO**

(9) markedly diminished interest in significant activities

**Frequency**
Have you been less interested in important activities that once gave you pleasure, such as sports, hobbies, or social activities? As compared to before the event(s), how many activities in the past month have you had less interest in?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No loss of interest</td>
</tr>
<tr>
<td>1</td>
<td>Few activities (less than 10%)</td>
</tr>
<tr>
<td>2</td>
<td>Several activities (approx 20-30%)</td>
</tr>
<tr>
<td>3</td>
<td>Many activities (approx 50-60%)</td>
</tr>
<tr>
<td>4</td>
<td>Most activities (more than 80%)</td>
</tr>
</tbody>
</table>

**Intensity**
At its worst, how strong was your loss of interest in these activities?

<table>
<thead>
<tr>
<th>Intensity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No loss of interest</td>
</tr>
<tr>
<td>1</td>
<td>Mild, only slight loss of interest, probably would enjoy after starting activities</td>
</tr>
<tr>
<td>2</td>
<td>Moderate, definite loss of interest, but still has some enjoyment of activities</td>
</tr>
<tr>
<td>3</td>
<td>Severe, marked loss of interest in activities</td>
</tr>
<tr>
<td>4</td>
<td>Extreme, complete loss of interest, intentionally does not engage in activities</td>
</tr>
</tbody>
</table>
### (10) feelings of detachment or estrangement from others

**Frequency**
As compared to before the event have you felt distant or cut off from those around you? How much of the time have you felt this way in the past month?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>None</td>
</tr>
<tr>
<td>1</td>
<td>Very little of the time (less than 10%)</td>
</tr>
<tr>
<td>2</td>
<td>Some of the time (approx 20-30%)</td>
</tr>
<tr>
<td>3</td>
<td>Much of the time (approx 50-60%)</td>
</tr>
<tr>
<td>4</td>
<td>Most or all of the time (more than 80%)</td>
</tr>
</tbody>
</table>

**Intensity**
At their worst, how strong were you feelings of being distant or cut off from others? Who do you feel closest to?

<table>
<thead>
<tr>
<th>Intensity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No feelings of detachment or estrangement</td>
</tr>
<tr>
<td>1</td>
<td>Mild, occasionally feels 'out of sync' with others</td>
</tr>
<tr>
<td>2</td>
<td>Moderate, feelings of detachment clearly present, but still feels some interpersonal connection or belonging with others</td>
</tr>
<tr>
<td>3</td>
<td>Severe, marked feelings of detachment or estrangement</td>
</tr>
<tr>
<td>4</td>
<td>Extreme, feels completely detached or estranged</td>
</tr>
</tbody>
</table>

### (11) restricted range of affect. e.g., unable to have loving feelings

**Frequency**
Have you had periods where you felt emotionally numb, or had trouble experiencing feelings such as love or happiness? Is this different from how you felt before the event(s)? How much of the time have you felt this way in the month?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>None</td>
</tr>
<tr>
<td>1</td>
<td>Very little of the time (less than 10%)</td>
</tr>
<tr>
<td>2</td>
<td>Some of the time (approx 20-30%)</td>
</tr>
<tr>
<td>3</td>
<td>Much of the time (approx 50-60%)</td>
</tr>
<tr>
<td>4</td>
<td>Most or all of the time (more than 80%)</td>
</tr>
</tbody>
</table>

**Intensity**
At their worst, how strong were your feelings of emotional numbness? [In rating this item include observations of range of affect in interview]

<table>
<thead>
<tr>
<th>Intensity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No emotional numbing</td>
</tr>
<tr>
<td>1</td>
<td>Mild, slight emotional numbing</td>
</tr>
<tr>
<td>2</td>
<td>Moderate, emotional numbing clearly present, but still able to experience emotions</td>
</tr>
<tr>
<td>3</td>
<td>Severe, marked emotional numbing in at least two primary emotions (e.g., love, happiness)</td>
</tr>
<tr>
<td>4</td>
<td>Extreme, feels completely unemotional</td>
</tr>
</tbody>
</table>
PRESENT = YES/NO

(12) sense of a foreshortened future, e.g., does not expect to have a career, marriage, children, or a long life

Frequency
Have you had times when you felt that there is no need to plan for the future, that somehow your future will be cut short? [If yes, rule out realistic risks such as life-threatening medical conditions] How long do you think you will live? Is this different from how you felt before the event(s)? How much of the time in the past month have you felt this way?

0 None of the time
1 Very little of the time (less than 10%) Some of the time (approx 20-30%)
3 Much of the time (approx 50-60%)
4 Most or all of the time (more than 80%)

Intensity
At its worst, how strong was this feeling that your future will be cut short? How convinced were you that you will die prematurely?

0 No sense of a foreshortened future
1 Mild, slight sense of a foreshortened future
2 Moderate, sense of a foreshortened future definitely present
3 Severe, marked sense of a foreshortened future
4 Extreme, overwhelming sense of a foreshortened future

--------------------------- current symptoms for Criterion C(>3)?

CRITERION C MET = YES/NO
CRITERION D
Persistent symptoms of increased arousal (not present before the trauma)
(13) difficulty falling or staying asleep

Frequency
Have you ever had any problems falling or staying asleep? Is this different from the way you were sleeping before the event(s)? How many nights in the past month?

0 No nights of disturbed sleep
1 Rarely, once or twice a month
2 Occasionally, once or twice a week
3 Frequently several times a week
4 Constantly, nightly or almost every night

Intensity
[Ask probe items and rate overall sleep disturbance] How long did it take you to fall asleep? How many times did you wake up in the night? How many hours total did you sleep each night?

0 No sleep problems
1 Mild, takes slightly longer to fall asleep, or minimal difficulty staying asleep (up to 30 minutes loss of sleep)
2 Moderate, definite sleep disturbance, with clearly longer latency to sleep or clear difficulty staying asleep (30 to 90 minutes loss of sleep)
3 Severe, much longer latency to sleep or marked difficulty staying asleep (90 minutes to 3 hours loss of sleep)
4 Extreme, very long latency to sleep or profound difficulty staying asleep (greater than 3 hours loss of sleep)

PRESENT = YES/NO

(14) irritability or outbursts of anger

Frequency
Have there ever been times when you felt very irritable, or expressed feelings of anger and acted aggressively? Is this different from how you felt and/or acted before the event(s)? How often in the past month?

0 Never
1 Rarely, once or twice a month
2 Occasionally, once or twice a week
3 Frequently, several times a week
4 Constantly, daily or almost every day

Intensity
How angry were you? In what ways did you express/show anger?

0 No irritability or anger
1 Mild, minimal irritability, raises voice when angry
2 Moderate, irritability clearly present, easily becomes argumentative when angry, but can recover quickly
3 Severe, marked irritability, becomes verbally or physically aggressive when angry
4 Extreme, pervasive anger, easily
provoked to physical violence

PRESENT = YES/NO

(15) difficulty concentrating

**Frequency**
Have you found it difficult to concentrate on what you were doing or on things going on around you? Has your concentration changed since the event(s)? How much of the time have you had concentration difficulties in the past month?

<table>
<thead>
<tr>
<th>.Score</th>
<th>Frequency Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>None of the time</td>
</tr>
<tr>
<td>1</td>
<td>Very little of the time (less than 10%)</td>
</tr>
<tr>
<td>2</td>
<td>Some of the time (approx 20-30%)</td>
</tr>
<tr>
<td>3</td>
<td>Much of the time (approx 50-60%)</td>
</tr>
<tr>
<td>4</td>
<td>Most or all of the time (more than 80%)</td>
</tr>
</tbody>
</table>

**Intensity**
How difficult was it for you to concentrate? [in rating this item include observations of concentration in the interview]

<table>
<thead>
<tr>
<th>.Score</th>
<th>Intensity Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No difficulty with concentration</td>
</tr>
<tr>
<td>1</td>
<td>Mild, only slight effort needed to concentrate</td>
</tr>
<tr>
<td>2</td>
<td>Moderate, definite loss of concentration, but could concentrate with effort</td>
</tr>
<tr>
<td>3</td>
<td>Severe, marked loss of concentration, even with effort</td>
</tr>
<tr>
<td>4</td>
<td>Extreme, complete inability to concentrate</td>
</tr>
</tbody>
</table>

PRESENT = YES /NO

(16) hypervigilance

**Frequency**
Have there ever been times when you were especially alert or watchful, even when there was no obvious need to be? Is this different from how you felt and acted before the event(s)? How much of the [pertinent] time in the past month?

<table>
<thead>
<tr>
<th>.Score</th>
<th>Frequency Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>None of the time</td>
</tr>
<tr>
<td>1</td>
<td>Very little of the time (less than 10%)</td>
</tr>
<tr>
<td>2</td>
<td>Some of the time (approx 20-30%)</td>
</tr>
<tr>
<td>3</td>
<td>Much of the time (approx 50-60%)</td>
</tr>
<tr>
<td>4</td>
<td>Most or all of the time (more than 80%)</td>
</tr>
</tbody>
</table>

**Intensity**
How much effort did you make to try to be aware of everything around you? [in rating this item include observations of hypervigilance during the interview]

<table>
<thead>
<tr>
<th>.Score</th>
<th>Intensity Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No hypervigilance</td>
</tr>
<tr>
<td>1</td>
<td>Mild, minimal hypervigilance, slight heightening or awareness</td>
</tr>
<tr>
<td>2</td>
<td>Moderate, hypervigilance clearly present, watchful in public (e.g., chooses safe place to sit in a restaurant or movie theatre</td>
</tr>
<tr>
<td>3</td>
<td>Severe, marked hypervigilance, very alert, scans environment for danger, exaggerated concern for safety of self (and home and family)</td>
</tr>
<tr>
<td>4</td>
<td>Extreme, excessive hypervigilance, efforts to ensure safety consume significant time and energy, and may involve extensive safety-checking behaviours, marked guarded</td>
</tr>
</tbody>
</table>
behaviour during interview

PRESENT = YES/NO

(17) exaggerated startle response

**Frequency**
Have you ever experienced strong startle reactions to loud, unexpected noises (e.g., car backfires, fireworks, door slams, etc) or things that you saw (e.g., movement in the corner of your eye)? Is this different from how you were before the event(s)? How often has this happened in the past month?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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<tbody>
<tr>
<td>0</td>
<td>Not once</td>
</tr>
<tr>
<td>1</td>
<td>Once or twice</td>
</tr>
<tr>
<td>2</td>
<td>Once or twice a week</td>
</tr>
<tr>
<td>3</td>
<td>Several times a week</td>
</tr>
<tr>
<td>4</td>
<td>Daily or almost every day</td>
</tr>
</tbody>
</table>

**Intensity**
At their worst, how long were these startle reactions?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No startle reaction</td>
</tr>
<tr>
<td>1</td>
<td>Mild, minimal reaction</td>
</tr>
<tr>
<td>2</td>
<td>Moderate, definite startle response, feels 'jumpy'</td>
</tr>
<tr>
<td>3</td>
<td>Severe, marked startle response, sustained arousal following initial reaction</td>
</tr>
<tr>
<td>4</td>
<td>Extreme, excessive startle response, panic symptoms, overt coping behaviour (e.g., combat veteran who 'hits the dirt')</td>
</tr>
</tbody>
</table>

---------- current symptoms for Criterion D (>2)?

CRITERION D MET YES/NO

CRITERION E

Duration of disturbance

(18) Have the symptoms reported above lasted more than 1 month YES/NO

CRITERION F

Distress or impairment

(19) Does the disturbance cause clinically significant distress? YES/NO

(20) Does the disturbance cause impairment in social, occupational or other important areas of functioning (specify) YES/NO
### SUMMARY

<table>
<thead>
<tr>
<th>CRITERION</th>
<th>A MET</th>
<th>YES/NO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>YES/NO</td>
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<td></td>
<td>C</td>
<td>YES/NO</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>YES/NO</td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>YES/NO</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>YES/NO</td>
</tr>
</tbody>
</table>

**PTSD?**  
YES/NO

**ACUTE/CHRONIC?**  
(< 3 months) (> 3 months)
Pages Missing not Available

Appendix 1.2.
<table>
<thead>
<tr>
<th>Question</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Very Much</th>
</tr>
</thead>
<tbody>
<tr>
<td>Looking for hidden meanings in movies or plays distracts from their enjoyment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Find examination of my feelings useful in solving personal problems.</td>
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<tr>
<td>Can feel close to someone, even in moments of silence.</td>
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<tr>
<td>It is difficult for me to reveal my innermost feelings, even to close friends.</td>
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<tr>
<td>Prefer to watch &quot;light&quot; entertainment shows rather than psychological dramas.</td>
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<tr>
<td>Prefer talking to people about their daily activities rather than their feelings.</td>
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<tr>
<td>Other don't know why I am angry.</td>
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<tr>
<td>Don't know what's going on inside me.</td>
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<tr>
<td>People tell me to describe my feelings more.</td>
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<tr>
<td>Find it hard to describe how I feel about people.</td>
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<tr>
<td>Being in touch with emotions is essential.</td>
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<tr>
<td>Have feelings that I can't quite identify.</td>
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<tr>
<td>Prefer to just let things happen rather than to understand why they turned out that way.</td>
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<tr>
<td>Others puzzled by sensations in my body.</td>
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<tr>
<td>When I am upset, I don't know if I am sad, frightened, or angry.</td>
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<tr>
<td>Prefer to analyse problems rather than just describe them.</td>
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<tr>
<td>Am able to describe my feelings easily.</td>
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<tr>
<td>Have physical sensations that even doctors don't understand.</td>
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<tr>
<td>It is difficult for me to find the right words for my feelings.</td>
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<tr>
<td>Often confused about what emotion I am feeling.</td>
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</tbody>
</table>

20. 20. 19. 18. 17. 16. 15. 14. 13. 12. 11. 10. 9. 8. 7. 6. 5. 4. 3. 2. 1. 0.
<table>
<thead>
<tr>
<th>Question</th>
<th>Agree</th>
<th>Very Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Very Disagree</th>
<th>Strong Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I don't feel comfortable showing my emotions.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>If a person asks for help it is a sign of weakness.</td>
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<tr>
<td>People will reject you if they know your weakness.</td>
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<tr>
<td>When I get upset I usually show how I feel.</td>
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<tr>
<td>If other people know what you really like they will think less of you.</td>
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<tr>
<td>I should always have complete control over my feelings.</td>
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<tr>
<td>It is shameful for a person to display his or her weakness.</td>
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<tr>
<td>Turning to someone else for advice or help is an admission of weakness.</td>
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<tr>
<td>I seldom show how I feel about things.</td>
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<tr>
<td>When I'm upset I usually try to hide how I feel.</td>
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<tr>
<td>You should always hide your feelings.</td>
<td></td>
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<tr>
<td>My bad feelings will harm other people if I express them.</td>
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<tr>
<td>Other people will reject you if you express them.</td>
<td></td>
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<tr>
<td>You should always keep your feelings to yourself.</td>
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<tr>
<td>When I'm upset I bottle up my feelings.</td>
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<tr>
<td>I think other people don't understand your feelings.</td>
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<tr>
<td>I think getting emotional is a sign of weakness.</td>
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<tr>
<td>I think you ought not to burden other people with your problems.</td>
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<tr>
<td>I think you should always keep your feelings under control.</td>
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</tr>
</tbody>
</table>

**Attitudes Towards Emotional Expression**

APELLIC: A.4
IMPACT OF EVENTS SCALE

On the ________________________________, you were involved in ________________________________

Below is a list of comments made by people after stressful life events. Please read each item, indicating how frequently these comments were true for you IN THE PAST SEVEN DAYS. If they have not occurred since then, please mark the ‘not at all’ column.

<table>
<thead>
<tr>
<th></th>
<th>NOT AT ALL</th>
<th>RARELY</th>
<th>SOMETIMES</th>
<th>OFTEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) I thought about it when I didn’t mean to.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2) I avoided letting myself get upset when I thought about it or was reminded of it.</td>
<td></td>
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<tr>
<td>3) I tried to remove it from memory.</td>
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</tr>
<tr>
<td>4) I had trouble falling asleep or staying asleep because pictures or thoughts about it came into my head.</td>
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<tr>
<td>5) I have waves of strong feelings about it.</td>
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</tr>
<tr>
<td>6) I had dreams about it.</td>
<td></td>
<td></td>
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<tr>
<td>7) I stayed away from reminders of it.</td>
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</tr>
<tr>
<td>8) I felt as if it hadn’t happened or it wasn’t real.</td>
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<tr>
<td>9) I tried not to talk about it.</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>10) Pictures about it popped into my mind.</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>11) Other things kept making me think about it.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12) I was aware that I still had a lot of feelings about it, but I didn’t deal with them.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13) I tried not to think about it.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14) Any reminder brought back feelings about it.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15) My feelings about it were numb.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
INFORMATION SHEET

Title of the Study: Emotion and Post Traumatic Stress Disorder

Name of Investigator: Nicoletta Capuzzo, Chartered Clinical Psychologist

Thank you for your interest in participating in this research project. The Traumatic Stress Clinic is a national referral center for both adults and children who have either experienced or witnessed a traumatic event. Such events would include for example, war, state organized violence and torture, physical and sexual assaults, and transportation accidents. The clinic has two main functions: to treat people who have experienced traumatic events and to undertake research in the area of traumatic stress.

At present a study is being conducted to investigate how people identify and verbalize their feelings (e.g. anger, sadness, fear) after a traumatic event. Data is to be compared between those who have experienced a traumatic event and those who have not. It is hoped that this information from this study will increase our understanding of those who have difficulty in expressing their emotions and how this affects their mental well being.

The study would involve you completing some questionnaires. This will take between 15-20 minutes. After completing the questionnaires you may want to discuss any issues that arise from the questions you have answered. If so, you may contact the clinic, and an appointment will be made for you with the psychologist conducting the study.

YOU DO NOT HAVE TO AGREE TO TAKE PART IN THIS STUDY IF YOU DO NOT WISH TO DO SO. IF YOU DO AGREE TO TAKE PART IN THE STUDY, YOU MAY WITHDRAW AT ANY TIME WITHOUT HAVING TO GIVE A REASON. REFUSAL TO TAKE PART IN THE STUDY OR WITHDRAW FROM THE STUDY WILL NOT JEOPARDISE YOUR FUTURE TREATMENT IN ANY WAY.

After you have completed the questionnaires, you will be given a full explanation of the research and an opportunity to ask further questions about it. If you would like to find out more about the study please contact Nicoletta Capuzzo, Clinical Psychologist, at the Traumatic Stress Clinic, 73 Charlotte Street, London, W1P 1LB. Telephone: 0171 530 3666

All proposals for research using human subjects are reviewed by an ethics committee before they can proceed. This proposal was reviewed by the Camden and Islington Community Health Services NHS Trust Local Research Ethics Committee.
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The study would involve you completing some questionnaires. This will take between 15-20 minutes. After completing the questionnaires you may want to discuss any issues that arise from the questions you have answered. If so, you may contact the clinic, and an appointment will be made for you with the psychologist conducting the study.

YOU DO NOT HAVE TO AGREE TO TAKE PART IN THIS STUDY IF YOU DO NOT WISH TO DO SO. IF YOU DO AGREE TO TAKE PART IN THE STUDY, YOU MAY WITHDRAW AT ANY TIME WITHOUT HAVING TO GIVE A REASON.

After you have completed the questionnaires, you will be given a full explanation of the research and an opportunity to ask further questions about it. If you would like to find out more about the study please contact Nicoletta Capuzzo, Clinical Psychologist, at the Traumatic Stress Clinic, 73 Charlotte Street, London, W1P 1LB. Telephone: 0171 530 3666

All proposals for research using human subjects are reviewed by an ethics committee before they can proceed. This proposal was reviewed by the Camden and Islington Community Health Services NHS Trust Local Research Ethics Committee.
CONSENT FORM

Title of the Study: Emotion and Post Traumatic Stress Disorder
Investigator: Nicoletta Capuzzo

To be completed by the patient/volunteer

1. I have read the information sheet about this study

2. I have had an opportunity to ask questions and discuss this study

3. I have received satisfactory answers to all my questions

4. I have received sufficient information about this study

5. Which health professional have you spoken to about this study

6. I understand that I am free to withdraw from this study:
   * at any time
   * without giving a reason for withdrawing
   * without affecting future medical care

7. I understand that the questionnaires used in this study are for research only and will not be used for legal purposes.

8. Do you agree to take part in this study?

Signed.........................................................Date...........................................

Name in Block Letters.................................................................

Health Professional.................................................................
CONSENT FORM

Title of the Study: Emotion and Post Traumatic Stress Disorder
Investigator: Nicoletta Capuzzo

To be completed by the patient/volunteer

1. I have read the information sheet about this study  
   YES/NO

2. I have had an opportunity to ask questions and discuss this study  
   YES/NO

3. I have received satisfactory answers to all my questions  
   YES/NO

4. I have received sufficient information about this study  
   YES/NO

5. Which health professional have you spoken to about this study .................................................................

6. I understand that I am free to withdraw from this study:
   *at any time
   *without giving a reason for withdrawing

8. Do you agree to take part in this study?  
   YES/NO

Signed............................................................................Date..................................

Name in Block Letters. ..............................................................

Health Professional. ..............................................................
LOCAL RESEARCH ETHICS COMMITTEE
Medical Directorate, Vezey Strong Building, 112 Hampstead Road, London NW1 2LT
Tel: 0171 530 3055 Fax: 0171 530 3018
E-mail: sue.rodmell@dial.pipex.com

27 September, 1996

Ms Nicoletta Capuzzo
Clinical Psychologist
Traumatic Stress Clinic
73 Charlotte Street
LONDON W1P

Dear Ms Capuzzo

Application No: 96/85
Title: Alexithymia and post traumatic stress disorder - A pilot study

The Local Research Ethics Committee considered the above application at its meeting on 23 September 1996 and I am pleased to say it has agreed to approve this project. However, the Committee would like confirmation that if the control group does include undergraduates, that College approval is obtained.

Please note that the following conditions of approval apply:

• It is the responsibility of the investigators to ensure that all associated staff including nursing staff are informed of research projects and are told that they have the approval of the Ethics Committee.
• If data are to be stored on a computer in such a way as to make it possible to identify individuals then the project must be registered under the Data Protection Act 1984. Please consult your department data protection officer for advice.
• The Committee must receive immediate notification of any adverse or unforeseen circumstances arising out of the trial.
The Committee must receive notification: a) when the study is complete; b) if it fails to start or is abandoned; c) if the investigator/s change and d) if any amendments to the study are made.

The Committee will require details of the progress of the research project periodically (e.g. annually).

With best wishes.

Yours sincerely

Stephanie Ellis
Chairperson
THE PHENOMENOLOGY OF WORRY

ABSTRACT

The present study, using a non-clinical population was conducted to look at the qualitative dimensions of worry such as, for example, domains of worry, coping strategies, and behavioural consequences of the worrying process. The study also investigated, qualitative differences, between identified high and low worriers. Three questionnaires were utilized; these being the Worry Domains Questionnaire (Tallis et al., 1992), Penn State Worry Questionnaire (Meyer et al., 1990), and a 56 item questionnaire developed for the present study.

It was found that worry content can be divided into several domains. These reflect problems encountered in everyday life. Worry is conceptual-verbal in nature and has a narrative quality. The study further identified the positive and negative consequences of worry. In the latter instance, worry was found to be difficult to control, was shown to be associated with a rebound effect, indecision and doubt, and perceived ill-health. With respect to positive consequences, worry was found to have a problem solving function. Those who were identified as high worriers, differed from low worriers, in that they were unable to control worrisome episodes, experienced indecisiveness and doubt, which subsequently blocked problem solving abilities, thus preserving the worry state.
1.0 INTRODUCTION

The term 'worry' is the most common emotional problem reported by patients visiting General Practitioner surgeries (Goldberg, Bridges, Duncan-Jones and Grayson, 1987) it is frequently referred to in textbooks, problem pages in magazines and in every day speech, e.g. "I'm worried sick". So, what do we mean when we say we are worried? The Oxford English Dictionary describes worry as a phenomenon which is 'continuously or intermittently troublesome' as well as it being of a 'repetitive' nature. Borkovec et al.(1983a) gave the first working definition of the phenomena: "Worry is a chain of thoughts and images, negatively affect-laden and relatively uncontrollable. The worry process represents an attempt to engage in mental problem-solving on an issue whose outcome is uncertain but contains the possibility of one or more negative outcomes. Consequently, worry relates closely to fear process."

Yet, in spite of the fact that the term worry has been defined and is frequently referred to in everyday life, the academic study of the phenomena has been neglected for several reasons. In the first instance, it was argued that as worry is an internal mental process it does not lend itself readily to experimental study. However, the rise of contemporary cognitive clinical psychology (Beck, 1967: 1976,) allows self report measures to be considered legitimate.

Breznitz (1971) attributes such neglect to an inadequate definition, due to there being a considerable overlap between worry and anxiety. O'Neill, (1985) argued that there is functionally no difference between worrying and anxiety, and that worry is merely a cognitive manifestation of anxiety. However, Tallis, Eysenck and Mathew (1992) point out that O'Neill's (1985) argument is illogical. If worry is the cognitive component of anxiety, then manifestly worry is not the same thing as anxiety. Further, Davey et al.(1992) have demonstrated clearly that worry and anxiety can be considered separate constructs, in that worrying is associated with adaptive problem solving and information
seeking-coping strategies, whilst trait anxiety is independently associated with psychological processes and coping strategies that are considered maladaptive. The independence of worry from other mental phenomena, has not only been shown with regards to anxiety. For example, Gross and Eifert (1990) report that worry and intrusive thoughts load onto separate factors during factor analysis, whilst Turner, Beidel and Stanley (1992) on summarising two literatures, argue that worry and obsessions can be distinguished, insofar as worries are more likely to be triggered, show content differences, are not 'resisted' in the same way as obsessions are resisted, and are considered more acceptable by the worrier.

In the last decade, there has been an increasing interest in the subject of worry, (Barlow, 88; Wisocki, 1988; Craske et al., 1989; Borkovec and Hu, 1990; Borkovec and Inz, 1990; Gross and Eifert, 1990; Mathews, 1990; Tallis, Eysenck and Mathews, 1990a,b,c.), as well as worry being included as the central definitional feature of Generalized Anxiety Disorder in DSM III-R (APA; 1987). Yet, in spite of the ubiquity of worry, there is a relatively small literature concerned with the nature and function of worry. If the concept of worry is to be of any value in clinical settings, then it is essential that the unique characteristics of the experience of worry are described. Questions such as, what do people mean when they say they are worried, and in what respects is worry similar too, and different from, other mental phenomena are of great importance.

The first specific attempt to systematically study the phenomena of worry was in the test-anxiety literature (cf. Deffenbacher, 1980 for a review). By employing factor analytical techniques to anxiety states (Hamilton, 1959), it was suggested that anxiety consists of cognitive and somatic components. This distinction was translated into Worry and Emotionality by various questionnaire studies (Liebert and Morris, 1967; Osterhouse, 1972), in which the worry factor represents the cognitive aspects of anxiety such as inward attention focusing and concern over one's performance, whereas the Emotionality
factor refers to an awareness of feeling states and physiological activity. However, such work is difficult to assess in a broader context for a number of reasons. Firstly, although the test anxiety literature gives a good account of thought content in test situations, these descriptions add little to our understanding of anxious thought content as it arises elsewhere. The content of everyday worry is considerably more varied than items included on test anxiety inventories, (Borkovec, Robinson, Pruzinsky and DePree, 1983; Wisocki, 1988; Tallis, Eysenck, and Mathews, 1992). Extremely common worries, for example those relating to interpersonal problems, financial difficulties, illness or political developments, seem only remote relatives of the Liebert and Morris type items.

Further, the test anxiety literature employs the term worry to describe mental events that seem only loosely related to everyday worry, for example, the worry items on the Liebert and Morris inventory appear to tap an altogether more static class of cognition (e.g."I'm not feeling confident about my performance"). Negative automatic thoughts (Beck and Emery, 1985) or intrusive thoughts (Rachman, 1981) might be more accurate descriptive terms than worry.

One study to date that has successfully investigated the qualitative dimensions of worry is that of Craske, Rapee, Jackel and Barlow,(1989). Using Generalized Anxiety Disorder (GAD) patients and non-anxious controls, they found that clinical and non-clinical worriers differed in several respects. In the first instance GAD patients worried more about threats to physical safety (e.g. illness and injury) and miscellaneous 'minor' issues than controls. Consistent with other work (Sanderson and Barlow, cited in Barlow 1988; Tallis, Eysenck and Mathews, 1992; Eysenck and Van Berkum, cited in Eysenck, 1992), worries volunteered by both groups could be categorised according to several domains (e.g. Relationships, Finances, Work and Illness). Sixty Four per cent of the GAD group, and 88% of the non-clinical group worried in response to recognisable precipitants. GAD patients considered their worry to be less controllable, less realistic, and less successfully reduced when attempts were made to engage in corrective actions.
Approximately 65% of worries were 'resisted' in both groups. Moreover, 53% of the GAD group and 71% of the non clinical group engaged in preventative or ritualistic action as a result of worrying. The worries recorded by the two groups 'did not differ in terms of level of maximum anxiety, level of maximum aversiveness, degree to which the content of the worry was considered likely or probable, and level of anxiety when attempting to resist worrying.

Some researchers have suggested that worry has a problem solving function, (Borkovec, 1985; Mathews, 1990; Davey et al.,1992). For example Borkovec (1985) suggests that "the worry sequence seems to be initiated by a fear stimulus (environmental and/or imaginal) which elicits mental-problem solving activity designed to prevent the occurrence of traumatic future events and/or to devise coping strategies for such events." However, Mathews (1990) also suggests that those mental processes that we label as worrying are the unsuccessful attempts at problem solving; thus worry results in the constant rehearsal of threatening outcomes, and in some cases generates imaginary threat scenarios which actively hinder successful problem solving. Borkovec et al.(1983a) reported that worriers appeared to be very poor at generating successful solutions or effective coping responses but very good at defining problems, while Davey (1990) found that worrying in exam-anxious subjects was associated with defining more problems about the exam and generating fewer helpful exam strategies. Borkovec (1985) summarizes that if worrying is an attempt at problem solving it may be restricted either to defining problems or to cognitive avoidance of anticipated negative events.

Davey et al.(1992) have demonstrated that worrying is related to defining problems, by implementing cognitive processes which are unique to worrying and independent of trait anxiety. One such process is information seeking, for instance, worriers may adopt an information seeking cognitive style when dealing with potentially threatening events. Such a strategy may lead worriers to attempt a thorough analysis of the potential threat by asking the perpetual "What if...?" question that is characteristic of worriers (Borkovec, Metzger and Pruzinsky , 1986), and which, subsequently, is likely to uncover further potential threats, requiring further processing. However, it should be pointed out that
such strategies are only likely to reduce anxiety if the problem is potentially controllable. There is clear evidence that those individuals who adopt such a strategy become more anxious when the situation is an uncontrollable one (Miller and Mangan, 1983; Phipps and Zinn, 1986), presumably because the tendency to seek information in such uncontrollable situations merely confirms the situation as threatening without providing any obvious means of dealing with it.

Although worry is clearly a cognitive phenomenon, (Davey, 1992; Borkovec et al., 1983a, 1986; and Borkovec, Shadick and Hopkins; 1990c) the quality of this cognition has only recently been subject to academic inquiry. Borkovec & Inz (1990) give convincing evidence that worry is primarily a conceptual process, in which there is a predominance of verbal linguistic activity over imagery, which is a crucial factor with respect to the role of worry in the maintenance of anxiety states (Borkovec and Hu, 1990).

A further distinctive feature of worry is that it has a narrative quality, which Borkovec et al. (1986) originally described as 'a chain of thoughts and images. This concept is taken further by being described in terms of a series of 'What if?....then' questions, (Borkovec, Metzger and Pruzinsky, 1986). These accounts reflect an underlying belief that worry is not simply a string of negative and largely automatic thoughts, but a dynamic process in which themes progress and are duly developed. It was suggested by Schonpflug (1989) that worries can be analysed in a similar way to stories, and proposed that the techniques of story representation, from cognitive psychology, should be adopted for this purpose. Schonpflug (1989) suggests that three formal features determine the structure of worry plots (I) time perspective, (ii) branching, and (iii) concreteness. Moreover, he makes a distinction between condensed and elaborated stories. Condensed stories can be very brief (e.g. 'A truck will hit me'), providing a means of including 'fleeting' worries with his system of analysis. Again, although there has been considerable speculation with respect to the narrative quality of worry, there have been no attempts to establish the existence of this feature formally.
2.0 MODELS OF WORRY

The growing interest in the phenomenon of worry has not only led to the investigation of the dimensions of worry but also to the development of theoretical models, so as to explain, for example, the initiation and maintenance of worry. The main theoretical formulations will be discussed at some length here (Borkovec et al., 1986; 1990, Barlow, 1988; Tallis and Eysenck, 1992).

**Borkovec, Metzger & Pruzinsky (1986): Frustrative non-reward and Avoidance: A Two Factor Theory of Anxiety**

Borkovec et al.(1986) proposed a tri-partite model of worry, comprised of three tiers; learning theory, cognitive theory and self-theory.

For the first tier Mowrer's (1947) two-stage theory of fear is used. Briefly, Mowrer's first stage refers to classical conditioning whereby should a neutral stimulus be present at the time of an aversive event it becomes feared when encountered again. The second stage refers to instrumental learning whereby conditioned aversive stimuli are subsequently avoided and avoidance responses are rewarded by fear reduction. However, applying Mowrer's theory in order to understand the development of clinical anxiety, is problematic, in that highly aversive conditioning events cannot always be identified in anxious patients. As such Borkovec et al.(1986) propose instead that individuals who encounter situations in which the attainment of valued goals are thwarted experience 'Frustrative non-reward' anxiety. It is at this point that Borkovec et al.(1986) introduce the concept of worry which is viewed as an attempt to avoid negative outcomes by anticipating all possibilities. The cognitive process of worry is according to Borkovec et al.(1986) analogous to Mowrer's (1947) second stage of behavioural avoidance.
The second tier describes two memory mechanisms which initiate worry. Firstly, there exists in memory a permanently primed worry area; therefore, a worry related stimulus which is represented in the primed area will be given priority for processing, subsequently a worrisome intrusion would occur. Secondly, worry can also be initiated when an individual approaches a situation for which there is no appropriate course of action stored in production memory.

Finally, the third tier, proposes an approach-avoidance dilemma whereby goal-directed behaviour can be blocked due to anxiety as a consequence of 'frustrative non-reward' which has developed from past situations. Subsequently a self-evaluation state develops leading to an awareness of the discrepancy between where one is and where one wants to be. Such a discrepancy is likely to be threatening and this generates worry.

The tri-partite model although stimulating, argues well beyond the data available. For example the authors propose that the approach-avoidance dilemma is a key factor with regard to the initiation of worry. However, no explanation is given as to why this should be given special consideration. Further, a history of non-reward is also problematic in that why should a history of frustration lead to renewed goal-directed activity rather than helplessness. Tallis and Eysenck (1992) put forward the argument that the model does not make clear how worry in the cognitive processing theory is analogous to behavioural avoidance in the learning theory. Although worry may lead to cognitive avoidance, worry is generally associated with increased anxiety, whereas behavioural avoidance is associated with decreased anxiety. As a consequence, it is difficult to regard the consequences of worrying as rewarding in the same way as behavioural avoidance.

For all its difficulties, the tri-partite model was reformulated in 1990. This time, Borkovec et al.(1990) put greater emphasis on the notion that worry could be regarded as a form of cognitive avoidance, with respect to distressing images and associated physiological arousal. Borkovec and Inz (1990) demonstrated that worry was primarily
a conceptual-verbal activity, in that during a worry episode, anxious subjects reported an increase in thought, rather than imagery in comparison to non-anxious controls. This is further supported by the findings of Carter et al. (1986) who discovered that worrying lead to a greater shift towards left frontal activation, and language is predominantly a left hemisphere function.

In 1979, Lang, proposed a Bio-informational theory of anxiety, whereby, mental images are associated with increased physiological activation. For example, if a spider phobic where to imagine a spider, then this would cause increased heart rate. Borkovec (1990) adapted Lang's theory, so as to include the concept of worry. He claimed that when individuals worry, images of the worrisome thought are suppressed, and subsequently, are less likely to have physiological activation. For example, if a spider phobic generates worrisome conceptual activity, they suppress the images, and as a consequence experience less somatic anxiety. In short, worry serves the function of avoidance of an aversive image and the physical consequences of those images. As such, the worry process, is negatively reinforcing, hence, the worrisome activity is maintained. However, little evidence has been given in support of this (Deffenbacher, 1980; Karterolitises and Gill, 1987). Borkovec et al. (1983b) discovered only marginal differences between worriers and non-worriers during either rest or worry periods. However, Hoehn-Saric, McLeod and Zimmerli (1988) discovered that female GAD patients had reduced skin conductance responses and reduced variability of skin conductance and heart rate than non-anxious controls during cognitive stress tests. During rest, the two groups differed physiologically only with respect to elevated muscle tension in the patients. A limitation of this study is that it is not clear that the physiological differences during stress were due to group differences in the amount of worry.

The strongest evidence that worry can reduce physiological activity was reported by Borkovec and Hu (1990). A group of subjects with a phobia of public speaking were
required to form an image of a scene involving public speaking on several occasions with short intervals in between each image formation. There intervals were devoted to relaxed, neutral or worrisome thinking about public speaking. They found that heart rate increased for those in a relaxed thinking mode, intermediate heart rate for those in a neutral mode, and no increase at all for those who experienced worrisome thoughts.

Borkovec's reformulated model is still hampered by difficulties. If worry is rewarding in the way proposed by Borkovec et al. (1990), then it is difficult to account for the fact that it is generally regarded as aversive. Apart, from the study conducted by Borkovec and Hu (1990), whereby subjects in the worry group displayed decreased heart rate in response to a phobic image, there is little supportive evidence to suggest that worry is associated with reduced somatic physiological activity. For example, worry has been found to produce a significant increase in cardio-vascular activity and in reported somatic symptoms (York, Borkovec, Vasey and Stern, 1987). Worry generally has rather small effects on somatic physiological activity, and does not consistently reduce such activity. But for all its problems Borkovec's model does have some positive features. The view that worry primarily involves verbal-linguistic activity is probably correct and deserves to be emphasised. Also Borkovec, has directly addressed the issue of how worry is maintained, that is, why some people devote a considerable amount of time worrying, more than almost anyone else.

**Barlow (1988): Anxious-Apprehension Model**

Barlow (1988), has suggested that worry occurs as a consequence of a complex chain of events:

1. Certain situations or unexplained arousal lead to the evocation of anxious propositions stored in memory and produce a state of negative affect.
2. Negative affect causes an attentional shift from the external environment to an internal self-evaluative focus.
3. Self evaluative focus leads to a state of increased arousal.

4. Increased arousal activates an apprehensive hypervalent cognitive schema. This produces a perceived inability to predict and/or to control current or future situations, hyper vigilance, and attentional narrowing. Attentional narrowing is especially important, because it prevents attention being directed to ongoing events unrelated to worry.

5. Activation of the apprehensive hypervalent cognitive schema produces worry.

6. Worry leads to dysfunctional performance; this can increase negative affect and thus activate the above sequence of events in a more severe form.

Wegner and Guilian (1980) provide empirical evidence for a link between arousal and self focused attention. In their study subjects were requested to either lay down and relax, sit in a chair or run on the spot in order to induce different levels of arousal. After which, they were given sentences with words missing, and instructed to complete the sentences. The most aroused subjects (i.e. those who had run on the spot) used the greatest number of self-relevant words, and the least aroused subjects (i.e. those who had relaxed) used the smallest number.

With regards to perceived uncontrollability and unpredictability in anxiety, Mineka and Kihlstrom (1978) reviewed the animal literature, with its many paradigms for creating anxiety. They concluded that anxiety is caused in every paradigm because "environmental events of vital importance to the organism become unpredictable, uncontrollable, or both".

Support for the hypothesis that arousal leads to attentional narrowing and worrying, Barlow, believes, is given by Easterbrook's (1959) theory, whereby the narrowing of attention, increases the salience of negative content, providing a second feedback loop which might lead to further intensification of the emotional state; this in turn leads to intense worry. However, it would appear that Barlow actually misinterpreted
Easterbrookes intentions, suggesting that the narrowing of attention was due to mood congruent material, in fact Easterbrook's (1959) hypothesis is not concerned at all with mood-congruent effects!

Barlow's (1988) theory has both positive and negative features. In the former instance Barlow, has attempted to identify possible factors that initiate and maintain worry. It would also seem that he is correct in proposing that memory and attention both play important roles in the worrying process, as well as giving adequate explanation as to why intense worry is so difficult to control, in that an internal focus on oneself and one's worries combined with a narrowing of attention means that attention cannot be re-directed to external stimuli.

However, Barlow's model focused on the intense worries experienced by anxious patients, which may not be entirely relevant to worry in normals. For example, he contends that high arousal is an antecedent of worry, and that worry is always dysfunctional. These contentions may be largely correct when applied to clinical worries, but seem implausible with respect to the every day worries of normal individuals.

**Tallis & Eysenck (1992) Model**

A comprehensive model of worry is proposed by Tallis and Eysenck (cited in Eysenck, 1992) that explains the function of worry, factors responsible for the onset, maintenance and cessation of worry, and why some people worry more than others.

To begin with, worry serves three functions; (i) an alarm function, that is, information with regards to a threatening event is brought into conscious awareness, (ii) a prompt function in which threat related thoughts and images are re-presented into awareness and (iii) a preparation function, whereby repeated presentations result in habituation.
Evidence for the third function is ambiguous. Janis (1958) proposes that the 'work of worry' will allow individuals to decrease their anxiety about the worrisome thought. For example, his study found that patients who were informed of the effects of surgery beforehand, reported more post-operative fear than those not informed, but less anger on the day of the operation and less disturbance when recalling the operation. In comparison, Ridgeway and Mathews (1982) discovered that pre-operative information about surgery and its effects actually increased the number of days of pain and also the use of pain-relieving drugs.

However, the prompt and alarm functions are significant in that they are survival processes, that is, processes which force the individual to attend to a potentially threatening cue. The threatening cue may be in the form of an environmental stimulus or it may be in the form of activated information in long-term memory. Most of the time worry is probably initiated at least in part by some external stimulus. Craske et al. (1989) found that 88% of the occasions on which normal individuals were worrying there was a recognizable specific precipitant, compared to 64% of worry occasions for GAD patients.

It is this threatening cue which is a major determinant of whether worry will be initiated, and if so, how long the worrisome period will last. According to Tallis and Eysenck (1992), threat is determined by four factors.

The first factor is related to the subjective probability of the aversive event occurring; that is a future aversive event is seen as more threatening if it is thought to be more likely to occur, rather than an event which is not likely to occur. For example, Mathews (1990), found in a self report study that subjective probability correlates highly with worry.

Tallis and Eysenck (1992) proposed that a future aversive event which is imminent is subjectively seen as more threatening than one which is distal in the future. Several
studies support this notion, (Monat, 1976; Butler and Mathews, 1983; Spiegler, Morris and Liebert, 1968). Monat (1976) demonstrated that subjects faced with the most imminent threat of receiving an electrical shock, showed the highest levels for heart rate, galvanic skin response, and self-reported anxiety in comparison to those subjects with the least imminent threat.

Perceived aversiveness is the third factor, but this depends on an individual's motivations or goals, which Paterson and Neufeld,(1987) describe as "being made up of three dimensions: the importance of the desires or goals likely to be blocked by event occurrence, the number of goals blocked, and the intensity of the deprivation" [p.406].

The final factor is in relation to post-event coping strategies. Although there is little evidence to suggest whether individuals acknowledge whether or not they possess appropriate strategies, there is substantial evidence to demonstrate that coping and control strategies are effective in reducing stress (e.g. Neufeld and Paterson, 1989). Borkovec et al.(1986) postulate that worry is initiated by 'frustrative non-reward' of important goals. Thus, those individuals who have the least confidence in controlling themselves and the environment in order to achieve their goals are more vulnerable to worry. Tallis and Eysenck (1992) emphasise various personality dimensions such as self-efficacy (Bandura, 1989) and trait anxiety. High trait-anxious individuals characteristically lack confidence at an interpersonal level and are very sensitive to social evaluation. Since other people are of great importance in the achievement of most major goals, it follows that the characteristics of high trait-anxious individuals make them highly susceptible to worry.

This leads to the issue of individual differences with regards to the amount of worrying. To date there are relatively few studies comparing high and low worriers. However, Tallis and Eysenck (1992) argue that if worry correlates highly with trait anxiety, and as already discussed worry is the cognitive component of such a mental state, then one can assume that normals high and low in trait anxiety differ in the amount they worry.
Tallis and Eysenck propose that in groups of high worriers (normals high in trait anxiety and GAD patients), worry can be initiated in two ways. Firstly, high worriers selectively attend to threatening cues. Evidence of this has been found in both clinical and non-clinical populations (i.e. Eysenck et al., 1987; MacLeod and Mathews, 1988; MacLeod et al., 1986; Mogg et al., 1991). Further, high worriers are more likely to interpret ambiguous stimuli in a threatening manner, than low worriers (e.g. MacLeod, 1990).

Secondly, high levels of stress, as a consequence of threatening events, are evident in high worry groups. According to Tallis and Eysenck, this may be due to higher subjective probability, higher perceived aversiveness of the event, fewer perceived post-event coping strategies or imminence of the threatened event. Most of the research has focused on subjective probability. There is good evidence that highly worried groups have elevated subjective probability judgements when deciding on the likelihood of negative events happening to them. This has been found to be the case in high trait anxious subjects (Butler and Mathews, 1987; MacLeod, Williams, and Bekerian, 1991) in GAD patients (Butler and Mathews, 1983), and in chronic worriers (MacLeod, 1990; MacLeod et al., 1991). The reason for such elevated subjective probability judgements is highlighted by MacLeod et al. (1991), in short they showed that worriers had increased accessibility to reasons why a negative event would happen to them, than to reasons why it would not.

Tallis and Eysenck finally posit that a threatening stimulus will initiate worry depending on an individuals worry structures, mood state and sensitivity to environmental threat. Since, high trait-anxious individuals have elaborate worry structures, frequently experience anxious mood states and are sensitive to environmental threats, it is not surprising that they worry considerably more than low trait-anxious individuals.

Worry episodes may be of a longer duration for high worriers, due to the amount of evidence required, before making a decision. This notion was investigated by Tallis,
Eysenck and Mathews (1991). In their study subjects had to decide whether a target letter was present or absent. They found that worriers took significantly longer than non-worriers to make decisions on target-absent trials. Metzger et al. (1983) found that worriers took longer than non-worriers to respond, especially when the task stimuli were ambiguous. It is suggested that elevated requirements in worriers may prevent them from implementing problem solving strategies to their worries that non-worriers would accept.

Eysenck (1984) suggested that worry was maintained due to 'worry clusters', which consist of tightly organized anxiety or worry-related information stored in long-term memory and that such clusters differed in number and structure amongst high and low worriers, for example low trait anxious individuals had shorter episodes of worry due to their having a relatively smaller number of worry clusters, in comparison, to those with high trait anxiety.
3.0 PURPOSE OF THE STUDY

This study attempts to specify the qualitative dimensions of worry for example, what triggers a worry episode, how long do worry episodes last and how do individuals stop worrying. As worry is a relatively undocumented phenomenon, it was decided to investigate a non-clinical population so as to learn something of its occurrence in normal populations before examining its occurrence in abnormal populations. Without doing so, it is virtually impossible to elucidate the important processes that contribute to the development of a clinical disorder. For example, Obsessive Compulsive Disorder was once largely defined according to the presence of intrusive and bizarre thoughts. However, in 1978, Rachman and De Silva demonstrated that obsessional-type cognition is relatively common in non-clinical groups. This simple finding has had a profound impact on contemporary models of Obsessive-Compulsive Disorder, which now emphasise an individual's response to obsessional thoughts, rather than the presence of the obsessional thoughts alone (Salkovskis, 1985).

Although the present study focuses on non-pathological worry, comparisons between high and low worriers within the present group are reported. It may be the case that continuities exist between non-clinical and clinical populations, and inferences about the phenomenology of worry within Generalized Anxiety Disorder can therefore be made. However, there may in fact be several discontinuities and the reader is cautioned in this regard. A further difficulty should be noted with respect to self-report data. Clearly, the accuracy of self-report data can be legitimately questioned; however, a phenomenological investigation is, by its very nature, dependent on subjective information.
4.0 METHODOLOGY

Subjects

One hundred and twenty eight subjects took part in the study. Fifty two were male (40.3%) and 76 female (59.9%). Eighty one (65.3%) subjects were undergraduates. Forty seven (36.7%) subjects were largely in employment but attending an undergraduate summer school. Ages for the total sample ranged from 18 to 59; however, 58.6% of the sample were aged 22 years or less. Seventy per cent of the sample were single, 5% divorced and 25% married.

Procedure

a. **Administration of questionnaires:** Three questionnaires were given out in an academic setting to one hundred and fifty undergraduates attending the Open University Summer School, and, City University, London.

b. **Questionnaires used:** Each subject completed the following questionnaires:

(i) **Penn State Worry Questionnaire,** (Meyer, Miller, Metzger and Borkovec, 1990, See Appendix I) a trait measure of pathological worry. It is made up of 16 items which are designed to give information with regards to the frequency and intensity of worry in general. The PSWQ has been shown to have good internal consistency, and scores on the PSWQ are highly correlated with measures of trait anxiety, state anxiety and depression (Meyer et al., 1990). GAD Ss score significantly higher on the PSWQ than Ss who meet only some of the criteria for GAD diagnosis (Meyer et al., 1990), and GAD Ss also score higher than Ss with other anxiety disorders (Brown, Antony and Barlow, 1992).

(ii) **Worry Domains Questionnaire,** (See Appendix II) developed by Tallis et al.(1992) is also a trait measure, but more sensitive than the PSWQ to adaptive aspects of worry (Davey et al., 1993). The WDQ gives a global score from 5 sub-scales or
'domains', with regards to the content of worry. These sub-scales are, relationships, lack of confidence, aimless future, work incompetence and financial concerns. The WDQ has been shown to exhibit an acceptable level of internal consistency and is highly correlated with the STAI Y-2 measure of trait anxiety (Tallis et al., 1992).

(iii) In addition, each subject completed a 56 item questionnaire (14 pages), (See Appendix III) designed to elicit information on the phenomenology of worry. The majority of questions required answers in the form of ratings on 0-8pt scales, ten of these questions required the respondents to give answers in their own words. The purpose being to gather qualitative information to supplement responses given on the 0-8 pt scales. The remaining questions required subjects to endorse a particular statement given a multiple choice. Qualitative data was collated by categorising individual responses or items using an arbitrary scheme. If any one subject produced two responses that might be included in the same category, only one response was recorded. However, if a single response could legitimately be placed in more than one category then this was done. Any ambiguous responses were omitted. Only the most salient features of this analysis are reported with respect to most frequently endorsed categories. Note that the number of respondents (between 50% and 75% of the sample) who participated in the qualitative sections of the questionnaire was significantly lower than those who completed the quantitative sections of the questionnaire.

The phenomenology questionnaire provided information with respect to the following areas.

1. Self-perceived worry status
2. The content of worry
3. Frequency and duration of worry
4. The formal qualities of worry (e.g. narrative)
5. The precipitants of worry (e.g. environmental triggers)
6. The temporal focus of worry (i.e. past, present, future) and associated mood disturbance.
7. Perceived justification and subsequent accuracy of worry.
8. Acceptability of worry
9. Uncontrollability of worry, control strategies and their consequences.
10. Negative consequences of worry (e.g. work impairment, health impact).
11. Positive consequences: Perceived function and adaptivity
12. Behavioural concommitants of worry
13. Coping style
14. Exacerbating and Associated factors
15. Meta-worry (i.e worry about worry)
5.0 RESULTS AND ANALYSIS

The number of missing cases per question analysis was negligible, mostly between 2-7. The maximum number of missing cases was 13.

Questionnaire measures:

1. **Worry Dimensions Questionnaire**: Mean Score was 29.40, Standard Deviation, 12.97.

2. **Penn State Questionnaire**: Mean Score was 44.07, Standard Deviation, 12.56.

3. **Phenomenology Questionnaire** provided information as follows:

   (1) **Self Perceived Status**: Subjects were asked to describe the degree to which they saw themselves as worriers. This was indicated on a 0-8 pt scale which ranged from 'Not at all' to 'Always'. The mean for the sample was 3.06 (2.22), which falls between value labels of 'Rarely' and 'Sometimes'. The frequency histogram generated from these data was skewed favouring relatively low self perceived worry status. For example, 54.8% of the sample endorsed values including and between 'Not at all' and 'Rarely' on the scale. Only 11.9% of subjects endorsed values in the range corresponding with 'Definitely' to 'Always'.

   Self perceived worry status was significantly correlated (p < .001) with WDQ (r = .51) and PSWQ (r = .70) measures.

   (2) **Content**: Subjects were asked to write down (i) their most frequent and (ii) their most upsetting worries. For frequency the data showed that worries could be divided into two superordinate categories, those that were self-relevant (i.e. of direct personal concern) and those that were self-irrelevant (i.e. environmental concerns). Percentages were calculated using the total number of individual endorsements as the base. Only 2%
of responses were not directly relevant to respondents. The most frequently endorsed themes were those pertinent to Competence at work (17%), Academic performance (11%), Health issues (10%), Financial circumstances (10%) and Intimate relationships (9%). It should be noted that the presence of 'academic' worries reflects the composition of the sample. All of the most upsetting worries were self-relevant. The most frequently endorsed themes were those pertinent to Intimate relationships (20%), Physical threats, for example accidents (18%), Death of self or significant others (17%), and Health issues (15%).

(3) Frequency and Duration

(i) Frequency: Subjects were asked to endorse statements, given a multiple choice, reflecting varying frequencies of the occurrence of worry ranging from 'I never worry' to 'I worry continuously'; 19.4% suggested that they worried 'Maybe once every 2 or 3 days'. The next most endorsed statement was 'About once a month' (15.3%). However, collapsing categories revealed that 38% of the sample worried at least everyday and more.

(ii) Duration: Subjects were then given a multiple choice of 20 time durations ranging from 'fleeting' to 'more than 12 hours' on which to indicate the average length of a worry episode. The average duration of a worry episode for the sample was 'Five to 10 minutes'; 48.2% reported worrying between 1 and 30 minutes and 10.8% of the sample reported that worry could be fleeting. Similarly, 10.8% suggested that worry could last up to 2 hours.

(4) Formal qualities of worry

(i) Thoughts vs imagery: The difference between thoughts and images was described before subjects were requested to indicate the composition (with respect to these two components) of their worry on an 8 pt scale. The mean was 2.39 (1.85), corresponding with 'Mostly thoughts and some images' on the scale; 71.3% of the sample
reported a predominance of thought, rather than images, with 14.8% reporting thoughts only. There were no respondents reporting worry in the form of images.

(ii) **Narrative quality:** Three descriptions of worry were given, each reflecting an increasing degree of narrative and elaboration. Subjects were requested to endorse the description which best reflected their experience of worry; 19.3% of respondents suggested that their worry consisted of a single repeated phrase whereas 33.6% reported that their worry consisted of a few phrases; however, 47.1% suggested that their worry consisted of several phrases resembling a story.

(iii) **Sensitisation and habituation:** Subjects were given a range of descriptions, each reflecting a different pattern of worrying with respect to sensitisation and habituation parameters. For example: 'I start worrying, but my worry doesn't get better or worse', or, 'I start worrying, it builds up for a while, but then usually gets considerably better'. No clear pattern emerged from the frequency histogram generated by this data. However, the most endorsed statement was: 'I start worrying, it builds up to a maximum level, but then it usually gets a little better' (27.2%).

(5) **Precipitants**

(i) **Time of day:** Respondents were asked if worry episodes occurred at particular times of the day. Forty two percent of the sample were aware of specific times. These subjects were then given a multiple choice of 3 hour time periods (eg. noon -3 p.m.) on which to indicate their principle worry times. The most endorsed time periods were 9pm - midnight (32.8% of responders) and midnight-3.00 am. (25%).

(ii) **Location:** Subjects were asked to describe the location where they worried most.

The data showed that the responses given could be divided into two superordinate categories: 'At home' (65%) for example the bedroom or 'Outside home' (35%) for example at work or at the dentists. Percentages were calculated using the total number
of individual endorsements as the base. With respect to worry in the home, 57% of subjects endorsed the bedroom. Other locations were reported with low frequency and with approximately equal emphasis. It is worth noting that many respondents stressed that worry was a solitary activity.

(iii) **Situations:** On a 0-8 pt scale subjects were requested to indicate the degree to which their worrying was triggered by particular events or people. A frequency histogram was skewed favouring environmental triggers; 71.4% of the sample suggested that worry was triggered by events or people, with 65.3% of these suggesting that this occurred from 'sometimes' to 'often'.

Subjects were then asked to describe the situations that most often triggered worry. Percentages were calculated using the total number of individual endorsements as the base. The most endorsed situations were Social situations (20%), situations at work (14%), Relationship situations (12%) and Academic situations (11%). The presence of academic situations clearly reflects the composition of the sample. Other situations were varied (e.g. 'travelling', 'new situations') with uniformly low levels of endorsement.

(6) **Temporal focus and associated mood disturbance.**

Subjects were requested to indicate the temporal focus of worry on a percentage scale, which ranged from 0% to 100%, and then to rate on a 0-8 pt scale associated depression and anxiety/tension. The mean percentage estimates for past, present, and future concerns were 27.94% (24.21), 49.60 (27.82), 38.95% (24.09) respectively. Results are displayed in Table 1.

It was expected that worry over past events would be associated with more depression than worry over anticipated events. Conversely, worry about future events was expected to be associated with more anxiety/tension than worry about past events. Although the data are consistent with predictions, mean ratings cluster around 3 on the 8 pt scales. This corresponds with 'more than slightly' but 'less than definitely'. Therefore the
personal significance of mood disturbance appears to be relatively minor.

**TABLE 1**

Temporal focus of worry and associated mood disturbance.

<table>
<thead>
<tr>
<th>Temporal focus</th>
<th>Past</th>
<th>Present</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>27.94%</td>
<td>49.60%</td>
<td>38.95%</td>
</tr>
<tr>
<td>Depression</td>
<td>2.96(2.03)</td>
<td>3.09(1.79)</td>
<td>2.66(1.92)</td>
</tr>
<tr>
<td>Anxiety/Tension</td>
<td>2.51(1.83)</td>
<td>3.66(1.88)</td>
<td>3.17(1.87)</td>
</tr>
</tbody>
</table>

Of greatest interest is that the sample estimated that most of their worry focused on current events and it is this temporal class of worry that is associated with greatest overall mood disturbance. However, the reader is reminded that means reflect only minor mood changes.

(7) **Perceived justification and subsequent accuracy of worry**

(i) **Response to real vs imagined problems:** On a 0-8 pt scale subjects were requested to indicate the degree to which they understood their worry to be a response to real problems as opposed to imagined. The frequency histogram generated from this data was skewed favouring worry as a response to real problems; 34.9% of respondents suggested that this was 'sometimes' the case and 24.6% suggested that this was 'often' the case. Less than 8.7% responded in such a way as to indicate that their worry was related to imaginary, or largely imaginary problems.
Realistic vs unrealistic worry: Subjects were requested to indicate on a 8 pt scale the likelihood of worrying about unpleasant events actually occurring. Only 3.2% believed that they worried about things which had no likelihood of occurring; 59.5% reported that their worry content reflected negative outcomes that were between 'a little likely' and 'quite likely' to happen.

Accuracy: Subjects were requested to rate on an 8 pt scale the degree to which past worries were accurate, with '0' representing outcomes 'No where near as bad' as expected and '8' representing outcomes 'Much worse' than expected. The mean for the sample was 2.68 (1.70), corresponding roughly with 'Not as bad as expected' on the scale (a data point endorsed by 40.5% of the sample). The frequency histogram was skewed favouring outcomes being less negative than expected; however, 12.7% claimed that their worry was accurate. Those who reported negative outcomes being worse than expected were in a very small minority.

The effect of worry on appraisal: On a 0-8 pt scale, in which '0' corresponds with 'strongly disagree' and '8' corresponds with 'strongly agree', subjects were requested to indicate whether they thought that worrying made things seem worse than they actually were. The mean for the sample was 5.73 (1.66), representing 'Agree' on the scale. Indeed, 67.6% of responders felt that worry had the effect of making things seem worse.

Acceptability of Worry

Subjects were required to rate the degree to which they found their worries unacceptable on a 0-8 pt scale ranging from 'Not at all unacceptable' to 'Completely unacceptable'. The frequency histogram generated for these data was skewed favouring the general acceptability of worries. The mean for the sample was 2.08 (1.89), corresponding with only 'a little unacceptable on the scale; 44.7% of the sample reported feeling that their worries were within the range from 'Not at all unacceptable' to only a 'little unacceptable'.

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(i) **Termination of worry:** Subjects were asked to indicate on a 0-8pt scale the frequency with which they attempted to stop a worry episode. The scale ranged from 'Not at all' (0) to 'Always' (8). The mean for the sample was 4.96 (1.99), falling between 'sometimes' and 'often'. Although 33.1% tried 'often' to stop themselves from worrying, as many as 20.2% only tried 'sometimes' and 13.7% never or 'rarely' attempted to stop.

(ii) **Difficulty stopping:** On a 0-8 pt scale ranging from 'Not at all difficult' to 'Extremely difficult subjects were required to rate the degree to which they found their worry difficult to stop'. The mean for the sample was 2.68 (1.76), falling roughly between 'Slightly difficult' and 'Quite difficult' on the scale. The majority of the sample endorsed points between and including these value labels (61.4%). However, 7.3% had 'No difficulty' stopping worry, while only 0.8% had 'Extreme difficulty'.

(iii) **Control strategies:** Subjects were asked to write in their own words what strategies they employed to stop worrying. The most favoured strategies were cognitive strategies, in particular 'Problem solving' (36%) and 'Distraction'(27%). A strategy within the problem solving domain that featured quite significantly was attempting to impose a realistic perspective on worry content. 'Relaxation' (9%) and 'Talking to others' (10%) were the only other clearly discernable and cohesive strategies. The remaining strategies were varied (eg. 'crying', 'sleeping', 'praying') and showed low levels of endorsement.

(iv) **The affective consequences of successful control:** Subjects were required to indicate on a 0-8 pt scale the degree to which successful termination of a worry episode resulted in increased discomfort. The value labels ranged from 'Not at all' (0) to 'Always' (8). The mean for the sample was 1.69 (1.85), corresponding with 'Rarely' on the scale. However, 78.8% reported that termination of a worry episode never or only 'Rarely' results in increased discomfort; 33.9% of these endorsed 'Not at all'.
Paradoxical effects of thought suppression and control: Subjects were asked if successful termination of a worry episode resulted in their return at a later date (rebound effect). Answers were requested on a 0-8 pt scale ranging from 'Not at all' to 'Always'. The mean of the sample was 4.20 (1.85) corresponding with 'Sometimes' on the scale; 25% reported that terminated worries often return, and approximately 75% reported at least some degree of return.

Severity of rebound: Subjects were required to indicate on a 0-8 pt scale the degree to which 'rebound' worries were more troublesome, intrusive, or upsetting. The value labels ranged from 'Not at all' (0) to 'Always' (8). The mean for the sample was 2.56 (1.93), corresponding most closely with 'Rarely' on the scale; 54.1% experienced returning worries as no more, or rarely more troublesome after termination of a worry episode. However, 18% suggested that returning worries could 'Sometimes' be more upsetting, but only 10.7% found them 'Often' to 'Always' more upsetting.

Reparative and preventive behaviour: Subjects were given a description of reparative and preventive behaviour, for example 'you may believe that thinking, or doing something will be 'lucky'. Subjects were required to indicate on a 0-8 pt scale the degree to which they engaged in behaviours 'to make things right' when worrying. Value labels ranged from 'Not at all' (0) to 'Always'(8). The mean for the sample was 2.00 (2.14) corresponding with 'Rarely' on the scale. In terms of percentages, 63.7% reported no engagement or rare engagement in reparative and preventive behaviours. Indeed, as many as 39.5% described none at all.

Typology of reparative and preventive behaviour: Respondents who had reported reparative and preventive behaviours in response to worry were asked to describe them. Again, irrational, superstitious and habitual qualities were stressed. It should be noted from the outset that a large number of respondents either interpreted this question rather literally with respect to superstitious practices, or simply reported unremarkable control strategies. This later group are not worthy of comment. A wide range of irrational reparative and preventive behaviours were reported. The majority
simply reflected traditional superstitious practices eg. 'Touching wood' (23.3% for the sub-sample), 'use of lucky charms' (17%), and 'crossing fingers' (7%); however, several individual respondents reported habits that were clearly of a more obsessional nature (eg. 'Not saying things to tempt fate', 'adding up numbers', 'throwing pen in the air several times', 'having a bath', 'changing coats'). Nevertheless, it should be recognised that this latter group represented a tiny minority of the total sample (4%).

(ix) **Efficacy of reparative and preventive behaviour:** Subjects were required to indicate on a 0-8 pt scale the degree to which reparative and preventive behaviours were effective ie. with respect to whether or not they made respondents feel any better. The mean for the sample was 3.47 (2.53), indicating that subjects felt 'No different' after their behaviour was executed. The frequency histogram generated by this data did not show any marked trends; however, the most endorsed point on the scale was 2, indicating that behaviours made respondents feel 'A little better' (26.4%). Only 72 subjects responded to this question (56.25% of the total sample). It should be noted that qualitative descriptions of reparative and preventive behaviours suggest that these findings do not reflect the presence of obsessional rituals.

(x) **Duration of relief after reparative and preventive behaviours:** Subjects were given a multiple choice of 20 time durations ranging from 'fleeting' to 'more than 12 hours' on which to indicate the average length of relief associated with reparative and preventive behaviour. The average duration of relief was '46 to 60 minutes'. However, this is misleading, as it only reflects the endorsement of 10.5% of the sample. No clear trend emerged from inspection of the frequency histogram; however, 26.3% of respondents suggested that their behaviours could be effective in providing relief for 12 hours or more, whereas 10.5% suggested that effectiveness was fleeting. As suggested above, it is unclear whether the concept of irrational reparative and preventative behaviours was understood by the sample. No conclusions can be drawn with respect to the presence of obsessional phenomena.
Negative consequences

(i) **Negative consequences:** Subjects were asked whether or not they felt that worrying make things worse in general: 71.1% reported that worrying, in general, made things worse. These responders were then asked to describe in their own words how worry made things worse. The responses given were then placed on a 50 item Likert scale (0-5 pt) type questionnaire. All synonyms were rejected. This was then distributed to a sample of 127 undergraduate students. Results were factor analyzed using the SPSS PC factor package.

This analysis provided a four factor solution as follows:- **FACTOR 1** accounted for 48.6% of the variance. It captured 7 items reflecting themes of 'Pessimism and negative outlook'. The most discriminatory items were 'Continued worry makes me lose track of all the good things that happen' (.77), 'Worrying stops me living for the moment' (.73), and 'I think about all the possible outcomes but I believe the worst scenario will happen, causing me to have a negative attitude, diminished self-confidence and low self-esteem' (.67). Unfortunately this was the least semantically cohesive factor. **FACTOR 2** accounted for 4.8% of the variance, and captured 8 items, largely about 'Problem exaggeration'. The most discriminating items were 'Worrying blows situations out of proportion' (.70), 'Worrying exaggerates reality' (.65), and 'Worrying puts things out of perspective' (.62). **FACTOR 3** captured 7 items and accounted for 3.9% of the variance. These items reflected the theme of 'Performance disruption'. The most discriminating items were 'Worrying stalls decisive action' (.72), 'Worrying stops me from thinking straight' (.66), and 'Worrying stops me from dealing with certain situations' (.66). Finally, **FACTOR 4** accounted for 3.4% of the variance and captured 6 items. These were largely related to 'Emotional discomfort'. The most discriminating items were 'Worrying makes me focus on the wrong things' (.62), 'Worrying gets me worked up' (.61), and 'Worrying increases my anxiety' (.51). All items are reported in Appendix IV.
(ii) **Impairment of everyday functioning:** Subjects were required to rate the degree to which worrying caused impairment in three domains: work, domestic, and social/leisure. A 0-8 pt scale was used for each, ranging from 'Not at all' (0) to 'Severe' (8). All three frequency histograms were skewed favouring 'Slight' to 'No impairment', with 62.1%, endorsed for work, 75.4%, for domestic and 54.8%, for social domains.

(iii) **The effect of worry on health:** On a 0-8 pt scales subjects were requested to indicate the degree to which excessive worry had caused their health to suffer. The mean for the sample was 4.54 (2.19), which fell roughly between 'Neither agree nor disagree' and 'Agree' value labels. However, the frequency histogram was skewed favouring the belief that worry does indeed have an adverse effect on health; 47.2% of the sample responded within the range 'Agree' to 'Strongly agree'.

(iv) **Nature of health problems:** Subjects were then requested to list health problems that they have experienced in the past which were associated with excessive worry. Percentages were calculated using the total number of symptom endorsements as the base. The most frequently reported problems were anergia (19%), headaches (12%), insomnia (11%), colds (9%), loss of appetite/weight loss (8%), and stomach ache (7%). A wide range of other problems were reported (e.g. dermatological, respiratory); however these received relatively few endorsements.

(11) **Positive consequences: Perceived function and adaptivity**

(i) **Worry as problem solving:** Subjects were required to indicate on a 0-8 pt scale the degree to which they believed that when worrying, they were in fact problem solving. Value labels ranged form 'Not at all' (0) to 'Always' (8). The mean for the sample was 5.02 (1.84), falling between 'Sometimes' and 'Definitely' on the scale. It is interesting to note that 46% of respondents suggested that worrying was an attempt to solve problems, occupying the range between 'Definitely' and 'Always' on the scale. Inspection of the frequency histogram for this data is clearly skewed favouring worry as an attempt to engage in problem solving.
(ii) **The efficacy of worry as problem solving:** Subjects were required to indicate on a 0-8 pt scale the frequency with which worrying resulted in the production of 'a reasonable' solution to a recognised problem. Value labels ranged from 'Not at all' (0) to 'Always' (8). The mean for the sample was 4.66 (1.32), falling roughly between 'Sometimes' and 'Definitely' on the scale; indeed, 83.3% of the sample endorsed value labels in this range. The frequency histogram generated for these data was clearly skewed favouring the efficacy of worry as a problem solving activity. Only 0.8% suggested that their worry was totally unproductive and only 6.3% of the sample endorsed data points in the 'Rarely' to 'Not at all' productive range.

(iii) **The nature of helpful worry:** Subjects were asked to explain how worry was a helpful process, in particular with respect to solving problems: Responses were then placed on a 50 item Likert scale (0-5 pt) type questionnaire. All synonyms were rejected. This was then distributed to a sample of 86 undergraduate students. Note that this sample was different than that used for the negative consequence factor analysis. Results were factor analyzed using the SPSS pc Factor package. This analysis provided a two factor solution. **FACTOR 1** accounted for 42.6% of the variance. It captured 6 items reflecting worry as a source of 'Motivation'. The most discriminatory items were 'Worrying acts as a stimulant' (.71), 'Worrying challenges and motivates me, without them I would not achieve much in life' (.71), and 'In order to get something done I have to worry about it' (.69). **FACTOR 2** accounted for 6.9% of the variance and captured 6 items. These items reflected 'Preparatory and analytic thinking'. The most discriminating items were 'Worrying makes me reflect on life by asking questions I might not usually ask when happy' (.68), 'Worrying gives me the opportunity to analyze situations and work out the pros and cons' (.64), and 'Worrying starts off a process of preparing me to meet new situations' (.59). All items are reported in Appendix V.

(iv) **Insoluble problems:** Subjects were requested to indicate on a 0-8 pt scale the frequency with which they worried about insoluble problems (e.g. death, serious illness), ranging from 'Not at all' (0) to 'Always'(8). The mean for the sample was 3.06 (2.22), falling between 'Rarely' and 'Sometimes'. Although 25.4% endorsed the 'Sometime' value
label, the frequency histogram was skewed suggesting relatively rare worry about insoluble problems.

(12) **Behaviour**

Subjects were asked to describe in their own words any behaviour that they engaged in while worrying. A few examples were given as a rough guide (e.g. pacing, smoking and biting lower lip). Percentages were calculated using the total number of individual endorsements as the base. Thirty Six percent of the responses, accounted for mild self injurious behaviour, which included scratching, biting, picking, and pulling various parts of the body. However, the most significant activity was 'nail biting'(17% ). These behaviours are perhaps closely related to a second cluster of items reflecting physical restlessness, in particular, pacing and general fidgeting (15%). A group of addictive or appetitive behaviours (i.e. smoking, drinking and eating) also received a large number of endorsements (29%). A few subjects reported more adaptive behavioural responses (e.g. relaxation, talking to others, reading); however, these seem to reflect control strategies rather than immediate behavioural consequences.

(13) **Coping style**

(i) **Information seeking coping style:** Subjects were asked to indicate on a 0-8 pt scale the degree to which they attempted to find out as much as possible about worrisome problems. The scale ranged from 'Not at all' (0) to 'Always' (8). The mean for the sample was 5.37 (1.76) falling between 'Sometimes' and 'Definitely'. Moreover, 89.7% of subjects endorsed data points within the range from 'Sometimes' to 'Always'.

(ii) **Avoidance coping:** Subjects were required to indicate on an identical scale to that described above, the degree to which they avoided anything that reminded them of a worrisome problem. The mean for the sample was 3.09 (1.96), falling between 'Rarely' and 'Sometimes'. The frequency histogram generated by these data did not favour the presence of significant levels of avoidance coping. In fact, 41.3% of the sample suggested
that they did not, or only rarely avoided worry relevant information. However, 25.4% did endorse the 'Sometimes' value label.

(iii) **Worry as active prevention:** On a 0-8 pt scale subjects were asked to indicate the degree to which worry was an attempt to prevent something bad from happening. The mean for the sample was 4.03 (2.19), corresponding with the 'Sometimes' value label. The frequency histogram showed no discernable pattern; roughly equal numbers agreed and disagreed.

(14) **Exacerbating and associated factors**

(i) **Uncertainty of outcome:** Subjects were required to rate on a 0-8 pt scale the degree to which uncertainty of outcome was a feature of their worry. The scale ranged from 'Not at all' (0) to 'Always' (8). The mean for the sample was 4.76 (1.80) corresponding to a value between 'Sometimes' and 'Definitely'; 31.5% of the sample endorsed the value corresponding with the value label 'Sometimes'. However, 85.5% of the sample endorsed values ranging from 'Sometimes' to 'Always', skewing the frequency data histogram with respect to the presence of uncertainty.

(ii) **Personal relevance:** Subjects were requested to indicate on a 0-8 pt scale the degree to which they worried more about things if they were of greater personal relevance. An example was given of 'job' as opposed to 'starvation in the third world'. The scale ranged from 'Not at all' to 'Always'. The mean for the sample was 6.06 (1.63) corresponding with 'Definitely' on the scale, which was also the most endorsed value label (47.6%); 81.8% of respondents endorsed values within the range corresponding with 'Definitely' to 'Always', skewing the distribution of the frequency histogram in favour of personal relevance.
(iii) **Imminence:** Subjects were requested to indicate on a 0-8 pt scale the reliability with which imminence of anticipated events increased worry. The scale ranged from 'Not at all' (0) to 'Always' (8). The mean for the sample was 5.33 (1.96), falling between 'Sometimes' and 'Definitely' on the scale; 53.2% of the sample endorsed values including and between 'Definitely' to 'Always'. Only 9.5% of the sample endorsed values from 'Not at all' to 'Rarely'.

(iv) **Indecisiveness and doubt:** Subjects were requested to indicate on a 0-8 pt scale the degree to which their worry is usually associated with indecision and doubt. The scale ranged from 'Not at all' (0) to 'Always (8). The mean for the sample was 4.34 (1.90) corresponding with 'Sometimes', a value label endorsed by 31.5% of respondents. However, 76.6% of the sample endorsed values including and between 'Sometimes' and 'Always', skewing the frequency histogram in favour of the presence of indecision and doubt.

(15) **Meta-worry**

(i) **Worry about not worrying:** Subjects were requested to indicate on a 0-8 pt scale the degree to which they worried about not worrying. The scale ranged from 'Not at all' (0) to 'Always (8). The mean for the sample was 1.21 (1.83), which falls between 'Not at all' and 'Rarely'; 59.5% of the sample suggested that they never worry about not worrying. Indeed, 79.4% of the sample endorsed values including and between 'Not at all' and 'Rarely'.

The characteristics of high and low worriers

A series of pairwise comparisons between high and low worriers were conducted, using the scores obtained from the Worry Domains Questionnaire (Tallis et al 1992). The two groups were determined by a median split, thus respondents who scored 27 and below were placed within the low worriers group and those who scored 28 and above were within the high worriers group. The Worry Domains Questionnaire was favoured over
the Penn State, (Meyer et al., 1990), in that it is essentially a measure of non-pathological worry and is associated with more of the adaptive components of worry (Davey et al., 1991). However, a median split and pairwise comparisons were also conducted on the sample using the Penn State Questionnaire to determine group membership. The results showed that fewer significant differences between groups were found using this method and all of these were captured by the Worry Domains Questionnaire analysis. There was only one significant difference between groups captured by the Penn State Questionnaire analysis that failed to reach significance in the Worry Domains Questionnaire analysis; this was with respect to avoidance coping (p < .001). Inspection of means showed that high worriers, identified in the Penn State Questionnaire, 'Sometimes' avoided information relevant to their worries, whereas low worriers 'Rarely' did so.

Forty six pairwise comparisons were undertaken; because of the statistical problems associated with establishing significance using multiple t-tests, a conservative alpha level of P < .002 was determined. All tests were two tailed. The maximum number of cases missing for any single comparison was 16; however, most analyses rarely exceeded the loss of 5 or 6 cases.

(1) **Self-perceived worry status**

High and low worry groups differed significantly on this measure (p < .001).

(2) **Frequency and Duration**

High and low worriers differed significantly with respect to the frequency of self reported worry episodes (p < .001). Means corresponded with value labels of 'About once a day' for high worriers and 'About once a week' for low worriers.
(3) **Temporal focus and associated mood disturbance**

High worriers suffered significantly more mood disturbance (depression and anxiety/tension) than low worriers with respect to worrying with past, present, and future temporal foci (p < .001).

(4) **Uncontrollability of worry, control strategies and their consequences**

(i) **Difficulty stopping**: High worriers reported significantly more difficulty stopping worrying compared to low worriers (p < .001). Means corresponded with value labels of 'Slight' and 'Quite' difficult for low and high worriers respectively.

(ii) **Paradoxical effects of thought suppression and control**: Higher worriers reported significantly more rebound after successful termination of a worry episode than low worriers (p < .001). Means corresponded with value labels 'Sometimes' and roughly between 'Sometimes' and 'Often'. The Penn State Questionnaire did not reach significance on this measure.

(5) **Negative consequences of worry**

(i) **Impairment of everyday functioning**: High worriers differed from low worriers significantly (p < .001) with respect to perceived impairment in work, domestic, and social domains.

(ii) **The effect of worry on health**: High worriers and low worriers differed significantly (p < .001) with respect to perceived negative consequences of excessive worry on health. The Penn State Questionnaire did not show significant differences on this measure.
(6) **Exacerbating and associated factors**

(i) **Indecisiveness and doubt:** High worriers reported more indecision and doubt while worrying compared to low worriers (p < .002). The PSWQ did not show significant differences on this measure.
From the present study it is now possible to provide a description of the phenomenological features of non-pathological worry. However, the study has relied upon self report measures, and some consideration should be given to the limitations of the technique before discussing the present studies results, in relation to past research, the general implications of the study with regards to existing theories and suggestions for further research.

To begin with there is general agreement that people cannot report very successfully how they perform skilled motor tasks, such as riding a bicycle, or in verbalising the knowledge needed for complex decision making (Berry and Broadbent, 1984; Broadbent, Fitzgerald and Broadbent, 1986). Similar limitations apply to our knowledge of our own feelings and internal states, such limitations have been demonstrated by several researchers (Nisbett and Wilson, 1977; Wilson, 1985). One argument is that people have no direct knowledge of their internal states but infer them from self observation (James, 1970, original work published 1890). Thus, in the famous example, people are supposed to infer that they are afraid from the fact that they are running away. Other theorists have suggested that the labelling of internal states such as fear is based on the perception of physiological arousal coupled with an appraisal of environmental events (Schachter and Singer, 1962).

Ericsson and Simon (1980) have proposed that the accuracy of self reports depends on a number of factors, such as whether the information is present in short term memory and whether the report is of a current or past experience. The more people have to base their report on memories of past experiences, the less accurate reports will be. These limitations obviously apply to those reports that effectively consist of making guesses about appropriate labels for internal states such as "feelings". In the present study respondents were asked to give descriptions of the content of their worries. Thus, it could be said that such descriptions could only be accurate if relevant stimuli were readily observable, (e.g. "I'm worrying because I have a driving test this afternoon"), in that it
would enable respondents to accurately label that particular internal state as 'worry', by relating the relevant stimulus (cause) to the worry (effect). On the other hand, if respondents were not experiencing worry at the time of completing the forms, and were relying upon past experiences to give descriptions of worry as well as the desire to be seen as doing their duty in the name of science, then such reports are less likely to be accurate.

In spite of the difficulties posed by self report methods, it should also be pointed out that such techniques are in constant use in contemporary cognitive clinical psychology, for example, in identifying depression (e.g. Beck Depression Inventory; Beck, 1967) and are considered to be legitimate.

From the phenomenology questionnaire, the most frequently endorsed themes for content were finance, work, academic performance, health issues and intimate relationships. These domains largely correspond with those already evident in content based worry measures such as the Worry Domains Questionnaire developed by Tallis, Eysenck and Mathews (1992). The most upsetting worries were Intimate relationships, Physical threats, (for example death of self or significant others), accidents and health issues. These domains are clearly beyond the immediate control of the individual.

With regards to frequency, 38% of the present sample claimed to worry at least everyday and more. Similar results were obtained by both Sanderson and Barlow (1990), and Craske et al. (1989), their samples reported feeling worried 50% or more in a typical day. Duration of a worry episode lasted between 5 and 10 minutes; and roughly 50% reported worrying between 1 and 30 minutes. Authors such as Borkovec et al. (1983), and Breznitz (1971) found similar effects in their studies, and attributed this to habituation. It could be suggested from the present study that fifteen minutes results in incubation and 30 minutes for extinguishing the worry episode. Therefore 30 minutes would be sufficient time to reach a solution to a problem causing worry. However, when the current respondents were asked to describe a pattern of worrying with respect to sensitization and habituation, no clear pattern emerged, with only 27.2% stating that "I
start worrying, it builds up to a maximum level, but then it usually gets a little better".

The present study demonstrated that worry comes in the form of conceptual-verbal activity; 71.3% of the sample reported that worry episodes came predominantly in the form of thoughts which were narrative in nature (47.1%). This finding is very much in line with results reported by Parkinson and Rachman (1981) in which they found that 96.8% of their normative sample had thoughts rather than images (66.7%), whilst worrying, and Borkovec and Inz (1990) who demonstrated that non anxious controls showed a predominance of thought over imagery (44% and 26% respectively), whilst Generalized Anxiety Disorder clients reported an increase in thought (38%) and reduction of imagery (20%).

Worry was found to occur in either the latter part of the evening (9pm-midnight) or the early hours (midnight-3am) of the morning. Subsequently many individuals worry in bed. This phenomenon corresponds with Borkovec's (1979) finding of the relationship between worry and insomnia, in that insomniacs routinely complain of higher levels of cognitive intrusions at bedtime, and reduction in reports of such intrusions parallels both subjective and objective sleep improvement under relaxation trials.

Most respondents indicated that their worries were triggered by events or people (71.4%). Work and social situations being the most endorsed themes (14% and 20% respectively).

In 1986 Borkovec et al suggested that worry content was primarily concerned with future events. However, the present study seems to indicate that worry content is related to present concerns (49.60%) and only 27.94% and 38.95% with past and future concerns respectively. In order for the data to be meaningfully interpreted a distinction needs to be made between events that are to occur in the near future (i.e. having to sit an exam in the next week) and those that are to occur in the distant future (i.e. having to take an exam in a year's time). Mathews (1990), points out that if worry is considered a response to perceived threat, either physical or social, then worry must be oriented towards future events, because all threats, by definition, are located in the future. Clearly, when the
present respondents suggested that most of their worry content is focused on events 'happening in the present' they do not mean that their worry is focused on events happening, so to speak 'right now'. It is more likely to refer to triggers more closely associated with ongoing events and their immediate negative consequences i.e. having a job interview in the next week, rather than events which are to occur some distance in the future (e.g. a driving test in six months time). Respondents also claimed that worry was associated with a slight to moderate degree of mood disturbance.

Worry was considered by the respondents in this study to be real rather than imagined, and that such worry reflected negative outcomes, 59.5% of respondents reported that such outcomes had a moderate likelihood of occurring. However, worry has the effect of inflating the perceived magnitude of expected negative events. This is consistent with laboratory evidence demonstrated by Jones and Davey (1990) who reported that UCS(trauma) rehearsal may affect the CR (fear) strength by altering the subjects evaluation of the UCS. That is, rehearsal of the UCS may inflate the aversive evaluation of the UCS.

Over 60% of the sample felt that worry had the effect of making things worse, and nearly 50% of the sample reported that worry was unacceptable. 33.1% attempted to terminate a worry episode 'often', however, an equal number of respondents only attempted to stop worrying 'sometimes' or 'rarely'. A large proportion of the sample (61.4%) found it moderately difficult to stop worrying and only a tiny proportion of the sample reported extreme difficulty (0.8%). The most popular strategies for controlling worry were cognitive in nature i.e. problem solving and distraction, other strategies such as sleeping and praying had low levels of endorsement.

When subjects were asked to report whether successful termination of a worry episode resulted in increased discomfort, a large majority (78.8%) responded 'rarely', however, 75% of the respondents did report at least some degree of return of worry content. From the present data it is impossible to determine whether the return of worry is best attributed to a rebound/suppression effect, or more simply, the reallocation of attention
to an unresolved problem. Subjects were then asked the degree to which rebound worries were troublesome, intrusive or upsetting. More than 50% of the sample reported that rebound worries were 'rarely' troublesome.

With regards to reparative and preventive behaviour, the study showed that 63.7% reported no such engagement, indeed, as many as 39.5% described none at all. This is inconsistent with results of Craske et al. (1989) who showed that 70.6% of their respondents engaged in corrective, preventative or ritualistic actions whilst experiencing a worry episode. There is no obvious reason for this discrepancy, save the different demand effects associated with two different questionnaires. The minority of respondents who reported having ritualistic type behaviours e.g. 'not saying things to tempt fate' indicated that such behaviours afforded moderate levels of relief. However, the duration of this relief was extremely variable, ranging from minutes to hours. It should be noted that the qualitative descriptions of reparative and preventive behaviours are not comparable to obsessional type behaviours.

Subjects indicated that worry caused slight impairment in everyday functioning in work, domestic, and social domains. However, the majority of the sample believed that excessive worry has a deleterious effect on health. This is consistent with other work by, Hodgson, Tallis and Davey, (1993) who found that independent of other mental states i.e. anxiety, depression and other related phenomena (e.g. negative life events), there was a relatively close association between excessive worry and compromised psychological health status. The qualitative data shows that the nature of health problems associated with excessive worry include fatigue, insomnia, headaches, stomach aches, and colds. These findings are not compatible with those of Borkovec et al. (1983a) who found that awareness of tension and upset stomach were found to be more associated with worry than other somatic variables.

Items reflecting the negative consequences of worry produced by the factor analysis included 'Pessimism and negative outlook', 'Problem exaggeration', 'Performance disruption' and 'Emotional discomfort'. The items provide a good summary of perceived
negative consequences of worry. Unfortunately, the first factor, which accounted for most of the variance was not as semantically cohesive as the other factors.

The study also demonstrated that worry had positive consequences. For example, worry was shown to be associated with problem solving processes. The vast majority of individuals (83.3%) indicated that worry episodes can produce reasonable solutions to problems. Qualitative responses show that worry can help individuals to focus on problems and generate alternative approaches to problem solution. Responders also indicated that they rarely avoided reminders of problems, but instead favoured the gathering of relevant information. This is consistent with previous work showing non-pathological worrying to be associated with problem focused coping strategies and an information seeking cognitive style (Davey et al., 1992). Perhaps the most important aspect of worry revealed in the present study is its ability to motivate individuals. Factor analysis of qualitative responses produced a grouping of items clearly linked by a recognition of worry as a motivating force. Of less importance, but nevertheless relevant, was a second factor comprised of items stressing the preparatory and analytic function of worry. Taken together, the motivational and preparatory functions of worry share much in common with Janis’ (1958) early concept of the 'Work of worrying'.

Data from the present study also indicated that worry had immediate behavioural consequences, which involved a general state of restlessness, characterised by mild self injurious behaviours which can be explained from an analytical, biological and cognitive perspective. Firstly, from an analytical view point, Challman (1974) suggests that the worry process is an attempt at redemption through suffering in the form of self punishment. Self injurious behaviours may also represent the release of fixed action patterns triggered in anxiety states. Rapoport (1990) makes reference to this notion with respect to obsessional states, in that, excessive washing represents the inappropriate activation of grooming programmes in the basal ganglia. As for the cognitive approach, it could be suggested that in order for individuals to control, uncontrollable worry episodes, they may inflict pain, for example, the use of 'thought stopping' as demonstrated in the treatment of obsessional ruminations (Stern, 1970), or self-
administered electrical aversion (Falloon and Talbot, 1981).

Interesting differences emerged when the total sample was divided into high and low worriers. The study indicated that high worriers experienced significantly more worry episodes, which once initiated, were more difficult to terminate. Subsequently, this group experienced longer durations of worry, in comparison to the low worry group. Although the duration comparison did not prove significant, it certainly approached significance (p = .004). High worriers were also found to experience a greater likelihood of worries returning after the successful termination of a worry episode compared to low worriers. This suggests the presence of a suppression/rebound effect. A greater degree of mood disturbance was also experienced by high worriers in comparison to low worriers, as well as indecision and doubt. It is possible that these mood and trait variables have a disruptive effect on problem solving and thus maintains the worry state (Tallis, Mathews and Eysenck, 1991). High worriers experience a greater degree of impairment with respect to everyday functioning compared with low worriers. Further, high worriers indicated that they suffered more ill health with respect to physical and psychological effects.

Finally attention should be paid to discussing the general implications of the present studies findings in relation to existing theoretical models (Borkovec, Metzger and Pruzinsky, 1986; Borkovec et al, 1990, cited in Rapee and Barlow 1990; Tallis and Eysenck, 1992; Barlow, 1988).

Results from the present study were found to be consistent with particular elements proposed by Borkovec and his colleagues (1986; 1990). For example, with regards to duration of worry the present sample reported worry episodes to last 30 minutes, this is consistent with Borkovec's proposal that incubation occurs in the first 15 minutes of the worry period which is followed by a further 15 minutes for the extinction of the worry episode. The present study also confirms that worry is predominantly made up of thoughts rather than images as proposed by Borkovec and Inz (1990). Further, the study also confirms Schonpflug's (1989) notion that worry is made up of condensed and
elaborated stories. Nearly 50% of the sample reported that their worrisome episodes consisted of several phrases which resembled a story (elaborated stories), whilst over 30% described their worry content as consisting of a few phrases (condensed stories). We can therefore conclude that worry has a relatively unique 'narrative quality', which distinguishes it from other mental events such as negative automatic thoughts or intrusive thoughts.

Inconsistent with Borkovec's model was the result in relation to temporal focus. The present study found that worry content is related to present concerns. Borkovec et al (1986) suggested that worry content was primarily concerned with future events. But, as already discussed [p56-57], distinctions have to be made between near and distal future events for a meaningful interpretation of the results in relation to Borkovec's model. It is possible that the present sample meant that their worries were focused upon events in the near rather than distant future as opposed to events occurring in the 'here and now', as they had described.

Tallis and Eysenck (1992) outlined in their model that a major determinant of worry is threat, which is determined by four factors; subjective probability, perceived aversiveness, subjective imminence of a threat and post-event coping strategies. With regards to subjective probability,(whereby an event which is subjectively perceived as more likely to occur than not, is more threatening), nearly 60% of the sample reported that their worry content reflected negative outcomes that were moderately likely to occur. Also, over 80% of the sample reported that they worried more about things if they were of greater personal relevance. This is in line with Tallis and Eysenck's perceived aversiveness factor. In short worry is more likely to be initiated if the threat is perceived as more aversive in relation to personal cost (e.g. losing your job as opposed to threat which is external to personal cost such as starvation in the third world). Finally, Tallis and Eysenck's model postulates that a future aversive event which is imminent is generally more threatening than one which lies further in the future. This proposal is consistent with the finding in that over 50% reported that imminence of anticipated events caused greater worry.
Differences between high and low worriers were also found in the study and which could possibly be explained in terms of the model proposed by Tallis and Eysenck (1992). The present study found that frequency was greater for those in the high worry group than those in the low worry group thus as Tallis and Eysenck point out if worry is correlated with trait anxiety, and as already outlined in the introduction, worry is the cognitive component of anxiety, then it is possible that normals high and low in trait anxiety will differ in the amount they worry, as demonstrated in the current study. It is also possible that such an explanation would be in line with the studies finding in relation to differences between high and low worriers with respect to terminating worries, in that high worriers found terminating worry episodes more difficult than low worriers due to higher trait anxiety.

Further those in the high worry group experienced greater indecision and doubt. This would be explicable in terms of Tallis and Eysenck's (1992) notion of elevated evidence requirements, in that high worriers take longer to make decisions than low worriers since they require a greater amount of evidence. The model further suggests that elevated evidence requirements in high worriers, prevents them from implementing problem solving strategies to their worries. This explanation is in line with the studies finding that high worriers have greater difficulty in terminating a worry episode than low worriers.

With regards to Barlow's (1988) model, only the final stage was found to be consistent with the present study, in that worry causes dysfunctional performance. This is demonstrated by the factor analytical study of the negative consequences of worry, in which one of the factors reflected the theme of 'Performance disruption', for example respondents claimed that "worry stops me thinking straight" or "worrying stops me from dealing with certain situations". Further, those identified as high worriers reported impairment of everyday functioning in relation to work, domestic and social domains.

With respect to Barlow's initial stages, that is how the process of anxiety and apprehension brings worry about, there is little if any circumstantial evidence from the present study's findings to support his hypothesis. However, this is for a number of
reasons. Firstly, the study was not directly involved in investigating anxiety or apprehension, questions such as whether individuals experienced increased arousal (e.g. autonomic arousal) as a consequence of an attentional shift to self evaluative focusing were not asked. Secondly, one cannot make spurious claims with regards to the association of one element of a process to another. For example, Barlow proposes that situational contexts which are capable of tapping the propositions of anxiety, will elicit negative affect. Although the present study can identify situational cues e.g. work or relationship situations and negative affect such as the inability to accurately predict outcome of a concern, the study cannot demonstrate their relationship with regards to cause and effect.

Finally, recommendations should be outlined for future research. Firstly, the study should be replicated with a clinical sample for example to look at the qualitative dimensions of worry in Generalised Anxiety Disordered patients. Further, if continuities exist in both clinical and non-clinical groups, for example, the fact that worry does impair everyday functioning, then perhaps future research could be oriented towards developing an assessment package which is able to firstly, tap the degree to which worry has a deleterious effect upon work, social and domestic domains and the cause of such dysfunctions such as maladaptive coping styles. Subsequently possible treatments could be suggested, for example, adaptive problem solving strategies.
7.0 CONCLUSION

To conclude, the present study has shown that the phenomenon of worry in a non-clinical sample has several qualitative dimensions. Firstly, with respect to content, worry is made up of domains encountered in everyday life e.g. financial concerns, work, family issues and that such worrisome ideas may be triggered by situations encountered, for example at work or within relationships. Although the respondents reported that it was acceptable to worry, it was also moderately difficult to control and even if the worrisome problem was terminated, it was likely to result in intrusion at a later stage. The study has shown that worry is predominantly conceptual-verbal in nature and that it has a narrative quality and subsequently requires time for development. Everyday worry was found not to be associated with significant levels of mood disturbance and did not interfere with everyday functioning.

The worry process had both negative and positive consequences. In the former instance the study indicated a close association with health such as fatigue, headaches and insomnia, and, in the latter case, worry was found to be adaptive, enabling individuals to engage in problem solving activities, although some experience of indecision and doubt was encountered.

The comparison analysis between high and low worriers gives some indication as to what variables are important with respect to the development of pathological worry. The primary variables found in high worriers were poor control of worrisome thoughts and indecisiveness. It could be assumed that an inability to control worry will result in it being more frequent with subsequent negative consequences. Indecision and doubtfulness might retard the selection of an appropriate coping strategy, block the progress of systematic problem solving, thus preserving the worry state. Consideration should be given to the fact that the two groups may have differed with regards to control and indecisiveness due to mood differences e.g. depression may have been higher in the high worry group, which clinical research has shown can affect problem-solving abilities (Williams, 1992).
REFERENCES


Oxford English Dictionary.


Please indicate, by circling the appropriate number, how much you think the following statements are typical of you. (1=not at all typical of me; 2=rarely typical of me; 3=sometimes typical of me; 4=often typical of me; 5=very typical of me).

<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<th>5</th>
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<tbody>
<tr>
<td>1. If I do not have enough time to do everything, I do not worry about it.</td>
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<td>2. My worries overwhelm me.</td>
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<td>3. I do not tend to worry about things.</td>
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<td>4. Many situations make me worry.</td>
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<td>5. I know I should not worry about things, but I just cannot help it.</td>
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<td>6. When I am under pressure I worry a lot.</td>
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<td>7. I am always worrying about something.</td>
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<td>8. I find it easy to dismiss worrisome thoughts.</td>
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<td>9. As soon as I finish one task, I start to worry about everything else I have to do.</td>
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<td>10. I never worry about anything.</td>
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<td>11. When there is nothing more I can do about a concern, I do not worry about it any more.</td>
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<td>12. I have been a worrier all my life.</td>
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<td>13. I notice that I have been worrying about things.</td>
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<td>14. Once I start worrying, I cannot stop.</td>
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<td>15. I worry all the time.</td>
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<td>16. I worry about projects until they are done.</td>
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## APPENDIX II

### Worry Questionnaire

Please tick an appropriate box to show how much you WORRY about the following:

<table>
<thead>
<tr>
<th>I worry...</th>
<th>Not at all</th>
<th>A little</th>
<th>Moderately</th>
<th>Quite a bit</th>
<th>Extremely</th>
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<tbody>
<tr>
<td>1. that my money will run out</td>
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<td>2. that I cannot be assertive or express my opinions</td>
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<td>3. that my future job prospects are not good</td>
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<td>4. that my family will be angry with me or disapprove of something that I do</td>
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<td>5. that I’ll never achieve my ambitions</td>
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<td>6. that I will not keep my workload up to date</td>
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<td>7. that financial problems will restrict holidays and travel</td>
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<td>8. that I have no concentration</td>
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<td>9. that I am not able to afford things</td>
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<td>10. that I feel insecure</td>
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<td>11. that I can’t afford to pay bills</td>
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<td>12. that my living conditions are inadequate</td>
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<td>13. that life may have no purpose</td>
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<td>14. that I don’t work hard enough</td>
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<td>15. that others will not approve of me</td>
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<td>16. that I find it difficult to maintain a stable relationship</td>
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<td>17. that I leave work unfinished</td>
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<td>18. that I lack confidence</td>
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<td>19. that I am unattractive</td>
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<td>20. that I might make myself look stupid</td>
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<td>21. that I will lose close friends</td>
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<td>22. that I haven’t achieved much</td>
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<td>23. that I am not loved</td>
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<td>24. that I will be late for an appointment</td>
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<td>25. that I make mistakes at work</td>
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APPENDIX 4

Negative consequences of worrying. Items captured by factors 1-4 (loadings >.45).

FACTOR 1 (48.6% of Variance)
Pessimism and negative outlook
1. Continued worry makes me lose track of all good things that happen (.77).
2. Worrying stops me living for the moment (.73).
3. I think about all the possible outcomes but I believe the worst scenario will happen causing me to have a negative attitude, diminished self-confidence and low self-esteem (.67).
4. Worrying makes me expect the worst and therefore prevents me from solving the Problem (.62).
5. Worrying distorts the problem I have so I am unable to solve it (.61).
6. Worry weakens me by affecting my levels of energy in response to those events that worry me (.57).
7. Deep down I know I do not need to worry that much but I can't help it (.53).

FACTOR 2 (4.8% of Variance)
Problem Exaggeration
1. Worrying blows situations out of proportion (.70).
2. Worrying exaggerates reality (.65).
3. Worrying puts things out of perspective (.62).
4. Problems are magnified when I dwell on them (.61).
5. Worrying makes me think things are getting on top of me (.60).
6. I become paranoid when I worry (.57).
7. Worrying makes me obsessed with the problem and makes it worse (.56).
8. Worrying gives me a pessimistic and fatalistic outlook (.54).
FACTOR 3 (3.9% of Variance)

Performance Disruption

1. Worrying stalls decisive action (.72).
2. Worrying stops me from thinking straight (.66).
3. Worrying stops me from dealing with certain situations (.66).
4. Worrying obscures my thoughts (.55).
5. Worrying causes depression therefore making it harder to concentrate and get on with things (.55).
6. Worry decreases my self confidence (.53).
7. Worrying increases my anxiety and so decreases my performance (.52).

FACTOR 4 (3.4% of Variance)

Emotional Discomfort

1. Worry makes me focus on the wrong things (.62).
2. Worrying gets me worked up (.61).
3. Worrying increases my anxiety (.51).
4. Worrying causes me stress (.50).
5. Worrying makes me tense and irritable (.46).
6. Worrying makes me nervous and irrational (.45).
APPENDIX 5

Positive consequences of worrying. Items captured by Factors 1 and 2 (loadings >.5).

FACTOR 1 (42.6% of Variance)

Motivation
1. Worrying acts as a stimulant (.71).
2. Worrying challenges and motivates me, without them I would not achieve much in life (.71).
3. In order to get something done I have to worry about it (.69).
4. Worrying increases my awareness thus increasing my performance (.62).
5. Worrying makes me do things by increasing my adrenaline levels (.57).
6. Worrying clarifies thoughts and concentration (.51).

FACTOR 2 (6.9% of Variance)

Preparatory and Analytic thinking
1. Worrying makes me reflect on life by asking questions I might not usually ask when happy (.68).
2. Worrying gives me the opportunity to analyze situations and work out the pros and cons (.64).
3. Worrying starts off as a process of preparing me to meet new situations (.59).
4. Worrying allows me to work through the worst than can happen, so when it doesn't happen things are better (.57).
5. Worrying adds to the problem and as such leads me to explore different possibilities (.53).
6. By worrying I reorganise and plan my time better, if I stick to it, it makes me feel better, if I don't I worry more (.51).