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BULLYING AND WORK RELATED POST TRAUMATIC STRESS IN NURSES

Karen Doherty
Degree of Doctor of Philosophy
Trinity College Dublin
2002
DECLARATION

I Karen Doherty declare that the material submitted in this thesis has not been submitted as an exercise for a degree in this or any other University.

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<td>ACoP</td>
<td>Approved Code of Practice</td>
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<tr>
<td>ACTH</td>
<td>Adrenocorticotrophic Hormone</td>
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<tr>
<td>AD/HD</td>
<td>Attention Deficit / Hyperactivity Disorder</td>
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<td>ADD</td>
<td>Attention Deficit Disorder</td>
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<td>APA</td>
<td>American Psychological Association</td>
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<td>APD</td>
<td>Antisocial Personality Disorder</td>
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<td>ASD</td>
<td>Acute Stress Disorder</td>
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<td>BPD</td>
<td>Bipolar Personality Disorder</td>
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<td>CBC</td>
<td>Cognitive Behavioural Counselling</td>
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<td>CD</td>
<td>Conduct Disorder</td>
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<td>CORE</td>
<td>Clinical Outcomes and Routine Evaluation</td>
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<td>DESNOS</td>
<td>Disorders of Extreme Stress Not Otherwise Specified</td>
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<td>DSM</td>
<td>Diagnostic Statistical Manual</td>
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<td>EAP</td>
<td>Employee Assistance Programme</td>
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<tr>
<td>EEG</td>
<td>Electro Encephelo-Graph</td>
</tr>
<tr>
<td>EMDR</td>
<td>Eye Movement Desensitisation and Reprocessing</td>
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<td>GABA</td>
<td>Gamma Amino Butyric Acid</td>
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<td>GAS</td>
<td>General Adaptation Syndrome</td>
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<td>GHQ</td>
<td>General Health Questionnaire</td>
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<td>HEA</td>
<td>Health Education Authority</td>
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<tr>
<td>HPAaxis</td>
<td>Hypothalmic-Pituitary-Adrenal axis</td>
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<td>HSE</td>
<td>Health and Safety Executive</td>
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<td>IPD</td>
<td>Institute of Personnel &amp; Development</td>
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<td>MBTI</td>
<td>Myers Briggs Type Indicator</td>
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<td>MDD</td>
<td>Major Depressive Disorder</td>
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<td>Acronym</td>
<td>Full Form</td>
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<tr>
<td>MSF</td>
<td>Manufacturing Science Finance (Union, now renamed Amicus)</td>
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<td>NHS</td>
<td>National Health Service</td>
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<tr>
<td>NIOSH</td>
<td>National Institute of Safety and Health</td>
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<tr>
<td>NIOSH</td>
<td>National Institute of Safety and Health</td>
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<tr>
<td>NPD</td>
<td>Narcissistic Personality Disorder</td>
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<td>ODD</td>
<td>Oppositional Defiant Disorder</td>
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<td>PDSD</td>
<td>Prolonged Duress Stress Disorder</td>
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<td>PTSD</td>
<td>Post Traumatic Stress Disorder</td>
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<tr>
<td>RCN</td>
<td>Royal College of Nursing</td>
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<td>REBT</td>
<td>Rational Emotive Behavioural Therapy</td>
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<td>SRRS</td>
<td>Social Readjustment Rating Scale</td>
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<td>SSRI</td>
<td>Selective Serotonin Re-uptake Inhibitor</td>
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This thesis reports the findings of a qualitative and quantitative study of the effects of counseling on the recovery from Post Traumatic Stress Disorder (PTSD) symptoms of a group of nurses traumatised by workplace bullying or other forms of workplace victimisation.

A group of 51 mostly senior grade nurses were studied who had experienced victimisation in the workplace in the form of bullying or false accusation and who had developed an extreme stress reaction resembling PTSD.

Their clinical condition was assessed and evaluated against the DSM-IV criteria for PTSD and by the PENN Inventory, an established assessment tool for PTSD. The clients met all the symptom criteria for PTSD in terms of the range, frequency, intensity and duration of symptoms. Without an explicit or implicit component of physical threat in their psychological and emotional abuse, their workplace experiences did not strictly meet the current DSM-IV description of a traumatic event exposure. However PTSD was the best-fit conceptualisation of their condition. Their recovery in terms of Reliable and Clinically Significant Change (RCSC) was assessed at the time of their counselling and at a six-month follow up. The PENN Inventory and the CORE System (Critical Outcomes in Routine Evaluation), a general outcome audit instrument for counselling and psychotherapy, were used to assess their initial clinical condition and to measure the level of recovery.

The PENN Inventory and CORE System were also compared in terms of their respective evaluations of recovery. Several recommendations are made regarding the calibration and scaling of the PENN Inventory and the CORE System for working with nursing populations and for longitudinal monitoring and evaluation of the recovery process.

All other possible sources of traumatisation or major stress in the lives of the subjects other than their experience of victimisation in the workplace were checked for and
excluded. All subjects were counselled for an average of 7 X 1 hour sessions over 14 weeks, on the assumptions that their workplace victimisation was the sole causal agent of their traumatisation. The therapeutic approach was a trauma and Cognitive Behavioural Counselling (CBC) approach and included psycho-education about trauma and PTSD.

Full recovery was defined as a return to the normal functional or the non-clinical distribution on both the PENN Inventory scale and on the CORE System scale. A strong full recovery in terms of Reliable and Clinically Significant Change was recorded for 69% of subjects by the six-month follow up. Whilst 98% of subjects recovered from PTSD during the treatment period, only 52.8% recovered from indicators of general psychiatric problems during treatment. However 62.5% of clients continued their general psychiatric improvement even after completion of treatment, typically attaining 48% of their final overall recovery between the completion of treatment and the six-month follow up. This gave a final full recovery rate of 69% from both PTSD and indicators of general psychiatric problems.

Problems with the current concept and wording of the DSM-IV criteria for PTSD were examined in respect of those traumatised by a threat to their mental or psychological integrity, as occurs in adult workplace bullying, rather than a threat to their physical integrity.

The possible role of personality in victimisation and situational bullying within nursing was explored using the Keirsey Sorter for the Myers Briggs Type Indicator (MBTI). Possible mechanisms are proposed relating common nursing and nursing management MBTI personality profiles to both the victim and the bully roles.

Prolonged psychological abuse of the purely relational form found in adult workplace bullying was shown to cause an effect symptomatically indistinguishable from PTSD. PTSD is assumed as the best-fit description of the subject’s condition, based on their symptom profile and their experience of extreme fear, helplessness or horror in
response to their psychological assault. A cognitive behavioural trauma counselling approach was shown to be very effective in assisting recovery from PTSD and for addressing the wider general psychiatric dimensions of the subject’s condition. Six months after completing treatment, 87% of subjects were still free from PTSD symptoms and 69% of subjects showed full recovery from both PTSD and other general psychiatric symptoms. Possible associations are suggested between the common nursing personality profiles and the high incidence of victimisation and bullying behaviour in nursing.
INTRODUCTION

This study was born out of an observation by its author that some clients referred for counselling with work related problems such as workplace bullying showed symptoms suggestive of Post Traumatic Stress Disorder. The author has had over 20 years of counselling experience working with the victims of many forms of trauma such as accidents, domestic violence, violent crime, sexual abuse, terrorist attacks, paramilitary punishment and intimidation. This began in the Voluntary Sector in an inner city GP centre as a General Practice Counsellor (nursing grade H).

In later years the author moved into working in Staff Support, counselling nurses with work related problems or personal problems affecting their work. This staff support counselling included trauma counselling with a number of nurses over a two year period after the Omagh Bomb incident in 1998.

The observation was that some nurse clients coming for counselling for work related issues appeared to have the symptoms of PTSD, yet they had had no recallable direct exposure to a classic traumatic event or been secondarily exposed to exceptional levels of trauma in others in the course of their work. The only unusual experience they had had was that they had been exposed to a prolonged period of what would be described as bullying in their workplace.

Bullying is difficult to define because there is no limit to human ingenuity in finding ways to manipulate, offend, abuse, humiliate or intimidate others and to do so in ways that have maximum effect but don't expose the perpetrator to sanction by the rules of the organisation. Field (1996) gives a non-exhaustive list of 110 strategies he has learnt from the people he has supported.

When the clients describe what has been done to them, the immediate impression is that their treatment has been unfair or unjust. The clients have been badly treated and their experience would match the definitions used for what is referred to as adult
bullying or workplace bullying. The following short description of bullying would describe their experiences

"persistent, offensive, abusive, intimidating, malicious or insulting behaviour, abuse of power or unfair penal sanctions, which makes the recipient feel upset, threatened, humiliated or vulnerable, which undermines their self confidence and which may cause them to suffer stress" (MSF 1995c).

The clients commonly reported events such as constant humiliation or ridicule, belittling efforts, blaming, often in front of others, excessive supervision, removing whole areas of work responsibility, reducing their job to routine tasks which are well below their skills and capabilities, setting impossible objectives or constantly changing the work remit, making threats of penalties, sanctions or getting them in trouble, deliberately withholding information, excluding from discussions and decisions.

Most events can be summed up as acts of injustice, criticism, threat or exclusion. Many such events happen in work by mistake, through bad organisation or because someone has had a bad day, but it is the repeated, systematic use against one individual over a prolonged period over 6 months on a regular weekly to daily basis which makes them different and justifies the label bullying.

The clients’ stories linked their present condition to the experience of bullying in work. The counsellor's sensing based on many years of experience working with various forms of trauma both recent and early life trauma was that they had PTSD. The only problem was that they had not experienced an extreme traumatic event involving a threat to life or physical integrity. They were fixed on the experience as the source of their problems, they would panic about returning to work and have intrusive thoughts, nightmares, flashbacks all associated with work and the incidents which occurred there.

Yet there was no other event in their lives to identify as the cause of their condition apart from the bullying. In the literature the author found others had commented on this observation of PTSD-like symptoms associated with prolonged duress type
events such as bullying (Scott and Stradling 1992 & 2001, Parker & Randall 1996). But these were usually observations on a phenomenon, not a detailed study, and they all conceded that relational non-violent bullying did not quite meet the event criterion to make a full PTSD diagnosis.

The author found themselves in the position of having to make an assessment of these clients’ conditions and to initiate a process of counselling on the basis of that assessment. PTSD was the nearest descriptor of their condition and, based on their stories, it appeared that their experience of workplace bullying was the cause.

The author had already been working with some of these clients based on such an assessment and was taking a trauma counselling approach which seemed to be having good results. For good practice, the author had to be able to substantiate the assessment of the client’s condition, establish the cause of the client’s condition, since trauma counselling focuses on the causal incident, and demonstrate that the therapeutic approach, based on this assessment, adequately and substantially addressed all the client’s key presenting symptoms. There had to be a demonstration of reliable and clinically significant change in the clients.

Dryden (1996) comments, "Many researchers are suspicious of the pronouncements of counselling and psychotherapy practitioners because they are not backed up by research". This research was undertaken, therefore, to confirm the observation of PTSD-like symptoms in these clients, to confirm the causal link, and to demonstrate the efficacy of a trauma counselling approach in their treatment. A strong emphasis was put on quantitative methods as well as qualitative because qualitative research most often used in counselling is often criticised for lacking rigor.

To say these clients had PTSD as a result of non-violent relational bullying would be to challenge the American Psychiatric Associations construction of the diagnostic criteria for PTSD in DSM-IV, since they only recognise events as traumatic if they contain a physical danger or a threat to physical integrity. However one would not be alone in challenging the present conceptualisation of the condition. Many, such as
Yehuda, are challenging it from a neurochemical and neurophysiological standpoint as well as based on the demographics of the condition (Yehuda & McFarlane 1995, Yehuda 1999c, Bowman 1999).

This study will focus on the assessment, treatment and recovery of adult victims of workplace bullying who display the symptoms of PTSD, a very serious psychological injury, causing great psychological pain and suffering. This research was undertaken to lay a solid foundation of evidence to change anecdotes into illustrations and examples.

During this present study and the treatment of these traumatised victims, it was important to understand how they came to be in this condition so that earlier intervention or early recognition of those at risk might prevent more victims. In studying the research of others, the theme of personality kept recurring, and that theme was also an important part of this study.

The antibullying campaigners use personality to blame bullying on people with personality disorders such as Antisocial Personality Disorder or Narcissistic Personality Disorder (Field 1996, Namie & Namie 1998).

Clients whom the author has counselled tell of managers who use personality to dismiss complaints of bullying. These managers imply that the complainant is too sensitive (in personality), that the behaviour of the alleged perpetrator is just their personality and they mean no harm by it, or label it as a personality conflict between the individuals and imply it is therefore nothing to do with them.

This ties through to the main topic matter of this study, since personality factors such as trait neuroticism (Breslau 1998) are risk factors for developing PTSD, and the description of the adult victim profile as reserved, traditional, rule abiding (Coyne, Seigne & Randall 2000) would describe not only many of the victims the author has seen but also a significant proportion of nurses.
The emphasis that this present study will give to the study of personality of alleged victims and bullies should help provide further information on the relationship between personality, victimisation and bullying.
AIMS AND OBJECTIVES

Aims of This Present Study
This research was designed to

1. Establish whether the trauma, or Post Traumatic Stress Disorder-like symptoms (PTSD), observed among victims of adult workplace bullying were sufficient in frequency, range and impact on the individual's functioning, to meet the diagnostic criteria for Post Traumatic Stress Disorder as laid out by the American Psychiatric Association in the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM-IV) (APA 1994),

2. To establish, through exclusion of other possible causes and association of present symptoms with specific workplace events, a link between the

3. To evaluate the effectiveness of a counselling approach with these particular victims which treated them as if they were trauma victims, with PTSD, as the result of exposure to victimisation in their workplace,

4. To explore the possible role of personality in their victimisation and development of a PTSD-like illness.

Objectives of this present study

1. The study and use of PENN inventory in quantifying the PTSD symptoms of the victims and their recovery.

2. The study and use of the CORE system to measure caseness and general psychiatric problems in the victims and their recovery.
   A. To use the CORE in a specific setting,
   B. To study the viability of the calibration,
   C. To compare CORE and PENN as assessment tools.
3. The study of the effects of counselling on the recovery from PTSD symptoms of a group of nurses traumatized by workplace bullying or other forms of workplace victimization.
   A. Identify and quantify PTSD symptoms in the clients,
   B. Establish CBC as an effective approach for clients’ full recovery,
   C. Qualitative and quantitative research to assess the recovery rate before and after counselling, and also at a 6-month follow-up.

4. The study of the role of personality in victimization and situational bullying.
   A. To use the Keirsey Sorter as an indicator for Myers Briggs Personal Preference Inventory assessment tool.
   B. To look at personality disorders and their effects within a work environment,
   C. The study of other factors contributing to the bullying dynamic amongst nurses.
Interpersonal relationships in the workplace are among the most challenging areas for the management of stress. This study focuses on workplace bullying, when these work relationships go badly wrong, and, far from simply adding to general stress, actually become a serious psychological hazard in their own right, sufficient to cause psychological injury to the victims of bullying.

The occurrence of bullying is complex. It is not simply a childhood behavioural problem. It spans many age groups, social settings, and scientific disciplines. This review attempts a synthesis which spans and draws together themes and ideas from the fields of stress, trauma, endocrinology, neurochemistry, neurophysiology, psychology, personality theory, as well as childhood and adult workplace bullying. These fields are often parallel or even divergent and do not systematically follow or build on one another. Some space is therefore necessary to lay down the essential elements of each of these fields, and then to connect them and weave them together.
1.1 ADULT WORKPLACE BULLYING

The systematic and deliberately directed use of events against an individual is a major source of stress and much worse in the workplace.

Randall (1997) reckons the effect of bullying in the workplace is greater in effect than all other sources of work-related stress together. Cary Cooper (MSF 1995) considers between a third and half of work-related stress is due to bullying.

Its effects can be so severe that people are traumatised by it. Parker and Randall (1996) said the effects of bullying on the individual were like Post Traumatic Stress Disorder. Brady-Wilson (1991) said of harassment, "it clearly falls under the domain of PTSD, similar to shell shock suffered by soldiers experiencing battle conditions".

Bullying is widespread. When Randall and Donohue (Randall 1997) set up a community antibullying project and a hotline for children, a third of callers were adults. After the overwhelming public response to two BBC Radio 4 broadcasts in 1992, 'An Abuse of Power' and 'Whose Fault is it Anyway', Andrea Adams (1992) wrote a book of the accounts of people bullied at work and set up a support group called the Andrea Adams Trust. This began to bring the issue and debate about adult workplace bullying into the public domain. Both employer representative bodies, the Institute of Personnel and Development (IPD 1996), and employee representative organisations, the Manufacturing, Science and Finance union (MSF 1995), now renamed 'Amicus', were involved in highlighting bullying as a form of human abuse, as a health, safety and welfare issue and as a human rights issue, not a management / employee bone of contention.

Tim Field (Field 1996), a leading campaigner against workplace bullying, said it was "the second greatest social evil after child abuse, with which there are many parallels." It does not toughen but weakens, disempowers and destroys. It does not aid survival but threatens existence. It does not promote long term growth and prosperity but favours short term expediency at the expense of the long term.
Out of this came the work of trying to define, describe, characterise, explain and understand workplace bullying, in the hope of preventing the behaviour and of protecting those at risk. This has been greatly hampered by an ongoing lack of an agreed definition of bullying (Workplace Bullying Issues Paper 2001). Some are very concise and detailed, Leymann (1996, 1997) details a range of 45 negative acts, any combination of which must occur at least weekly and persist over a period of 6 months. Many different combinations of acts, frequency and timeframes have been used by other researchers. Listing the specific acts puts a perhaps unnecessary limitation on the overall concept of bullying. Neil Crawford (1999) has stated, "As certain overly aggressive behaviour becomes more unacceptable in a culture, the manifestations of aggression are transformed from observable behaviour to more subtle, less detectable, forms" (87). Some such as Einarsen & Skogstad (1996) use a less structured definition which is more responsive to the recipient’s experience of the event.

Bullying is "A situation where one or several individuals persistently over a period of time perceive themselves to be on the receiving end of negative actions from one or several persons, in a situation where the target of bullying has difficulty defending him or herself against these actions. We will not refer to one-off incidents as bullying."

This lack of agreed definition has led to widely varying reports of incidence of bullying in surveys nationally and internationally. What is gradually emerging is a general acceptance of 6 months as the reference period (Cooper, Hoel, Rayner 1999) and the recognition that the experience of bullying must be persistent, systematic and ongoing (Irish Task Force 2001). Over two-thirds of those bullied at work in the UK experience the bullying for over one year, 40% experience bullying for over two years (Hoel & Cooper 2000). The generally emerging consensus on the effect of these negative events is that the victim experiences offence, humiliation or intimidation, and feels defenceless (Workplace Bullying Issues Paper 2001, Irish Taskforce 2001).
From a researcher's perspective, these criteria seem a reasonable definition of bullying, but from the point of view of a person who has been on the receiving end of such bullying treatment for 3 months, they need a definition that says this behaviour is bullying, so they can take action to stop it; they don't want to suffer for another 3 months to prove they are being bullied. A consensus definition of bullying that facilitates early intervention and prevention of stress or more serious consequences is needed.

The reference threshold for frequency is generally emerging as once a week or more (Leymann 1997, Irish Taskforce 2001, Queensland Taskforce 2001). The notional minimum level, therefore, is 24 events in six months or 12 in three months.

Obviously, any bullying is an unpleasant and disturbing experience and can have a long lasting negative effect on one's working relationship with the other person and one's attitude towards one's work (Quine 1999).

Setting these definitions and frequency requirements is not saying people outside these parameters are not being bullied or cannot be experiencing severe distress as a result. But to study and understand the phenomenon, the main core rather than exceptional cases needs to be studied first.

The Bristol Study (Smith et al. 2000) of occupational stress put forward three arguments for the cut-off definition they used for their 'high stress group'.

- Firstly, no reasonable organisation could defend the situation of their staff being exposed to this level of stressful (negative) events.
- Secondly, the threshold was close to the upper quartile which is frequently used to define high groups.
- Thirdly, where effect differences between the groups may be small, it would be unwise to use less strict criteria.

A similar argument could be put forward for the emerging study or research threshold criteria for bullying of at least weekly for 6 months.
In the RCN Working Well Survey (RCN 2002) of 4049 nurses, 15% reported one or more incidents of bullying in the last year, with 2.5% of nurses reporting they were being bullied at least once a week or daily. Based on the numbers of nurses reporting different frequencies of bullying, it can be calculated that there were approximately 16,000 incidents of bullying. Furthermore the 2.5% of nurses experiencing bullying on a weekly to daily basis would have experienced about 69% of these 16,000 incidents.

Hoel and Cooper (2000) surveyed a cross-section of industries using the descriptively more open Einarsen & Skogstad (1996) definition of bullying. Participants were asked if they had experienced such incidents over the last six months. See Table 1.1 below.

Table 1.1

<table>
<thead>
<tr>
<th>Being Bullied?</th>
<th>No</th>
<th>Yes very rarely</th>
<th>Yes now and then</th>
<th>Yes several times a month</th>
<th>Yes almost daily</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>89.40%</td>
<td>1.90%</td>
<td>6.20%</td>
<td>1.00%</td>
<td>0.60%</td>
</tr>
</tbody>
</table>

About 1.6% were regularly bullied, and one in ten had experienced incidents of bullying behaviour in the last 6 months. The rate of witnessing bullying in the last 5 years was reported as 45%. The high ratio of witnesses to victims indicates how openly this behaviour is practised, and questions whether in fact the witnesses are also in a sense being targeted for intimidation in this practice, with colleagues being singled out as an example to other staff.

The Irish Taskforce (2001) found that bullying was most prevalent in public
administration, education and health & social work. The Victorian Work Cover Authority (2001) reported bullying most common in health and community services, education and public administration. Leymann (1998) noted among his patient group diagnosed with PTSD due to victimisation at work, there was an over-representation of health care and other caring organisations, including social work, religious organisations and also public administration. Increased incidence of bullying seems to be most commonly associated with caring and sharing organisations, education, healthcare, social care and public administration.

Bullying is most frequent among two age groups: 16-24 and 35-54 years (Hoel & Cooper 2000). The Irish Taskforce (2000) found workplace bullying most prevalent in the 26-45 age group, but Ireland has a younger aged workforce, and age distribution of bullying may be more associate with position in the company structure than a simple function of chronological age. Leymann (1998), working in a clinic for those most severely traumatised by workplace bullying, and with PTSD, reported most were in 41 - 50 age band and had suffered bullying for between 2 and 8 years. Those in the 35-54 age band and fairly senior company positions would seem to be the most likely to be experiencing bullying and suffering from ill effects as a result. Bullying occurs at all levels in any organisation, but in the NHS, it was more prevalent in middle management. Bullying is most closely associated with a managerial perpetrator; Ellis (1997) found 91% of bullies were in positions of authority over their victims. Hoel & Cooper (2000) reported 75% of perpetrators were in managerial positions. In most organisations such as teaching, civil service, banking or telecom, it is twice as likely to be a managerial perpetrator as a colleague. A different picture is found in the NHS where the ratio of manager to colleague perpetrators was 6 to 5. Other reports confirm this: in nurses, 56% of bullies are managers and 44% colleagues (RCN 2002). However, no distinction is made in these reports as to whether the regular systematic form of bullying was by colleagues or managers.
1.1.2 Bullying Strategies

Hoel & Cooper (2000) used a list of 29 negative incident descriptors in their study: the 11 items most frequently selected by participants as acts of bullying were

- having opinions ignored
- information withheld which affected performance
- unmanageable workload
- unreasonable or impossible deadlines
- ordered to work below competence
- ignored or facing hostility when you approach
- humiliated or ridiculed in connection with work
- excessive monitoring of work
- spreading gossip
- having insults or offensive remarks about person, attitude or private life
- having key areas of responsibilities removed (Hoel & Cooper 2000).

Field (1996) comprehensively describes 113 bullying behaviours, many of these are common occurrences in the workplace, but it is their systematic use against an individual or a group of individuals over a period of time to undermine and control that makes them destructive.

MSF (1995c) say bullying is "persistent, offensive, abusive, intimidating, malicious or insulting behaviour, abuse of power or unfair penal sanctions, which makes the recipient feel upset, threatened, humiliated or vulnerable, which undermines their self confidence and which may cause them to suffer stress". Examples cited include

- Constant humiliation or ridicule, belittling efforts, often in front of others
- Excessive supervision
- Removing whole areas of work responsibility, reducing their job to routine tasks which are well below their skills and capabilities
- Setting impossible objectives or constantly changing the work remit
• Deliberately withholding information
• Excluding from discussions and decisions

The Royal College of Nursing, Working Well Initiative (RCN 2002) defines bullying as
"Bullying is the misuse of power or position that undermines a person’s ability or leaves them feeling hurt, frightened, angry or powerless."

On the NOVARES website (NOVARES 2002), there is a tentative definition of bullying including the following:
• desire to hurt
• hurtful action
• repetition
• unjust use of power
• evident enjoyment by aggressor
• oppression experienced by victim

It is very much the way in which these things are done, particularly behaviours that are personally offensive, which distinguishes simple bad management from conspiracy against the individual. It is the unnecessary extra acts of offence, humiliation or intimidation or unnecessary extra comments and innuendoes added on to legitimate acts which make it bullying. These do not develop the recipient or motivate them in a way that is pro-functional and beneficial for them or the organisation.

The Queensland Workplace Bullying Taskforce (2001), Workplace Bullying Issues Paper, emphasises this point that bullying "can make it difficult for effective work to be done," which is a useful evaluation to apply to an encounter with a manager and a good argument to use with employers about inappropriate behaviour.

The effect on the recipient is important. In sexual harassment legislation, the acid test
of sexual harassment is not in proving the intent of the perpetrator, but it is in the
effect their behaviour has on the recipient. If what they do makes you feel bad, then it
is unacceptable behaviour. Bullying can work in very subtle ways as does sexual
harassment, where it is the standing a little 'too' close, and the eyes lingering a little
'too' long, and that undefinable 'something' in the brushing touch, that turns an
apparently innocent event into a menace. Bullying, therefore, could similarly be
described as any act which makes, or is done in a manner which makes, the recipient
feel offended, humiliated or intimidated.

McCarthy & Barker (2000) identified the most common bullying behaviours as
impossible deadlines 42%,
repeated failure to give credit where due 39%,
repeated belittling of opinions or constant criticism 33%,
yelling, screaming, abusive language or insults 33%,
inappropriate comments about appearance or lifestyle 22%.
Again, the strategy is impossible workloads or tasks setting one up to fail, combined
with holding back or withdrawal of recognition and appreciation: a two-pronged
strategy of increase burden, withdraw support.

The Irish Task Force (2001) found a strong link between bullying and organisational
change, including new manager, change of ownership, reorganisation and new
technology.

Hoel & Cooper (2000) most closely associated the occurrence of bullying with a
change of manager, which has also been reported by others (UNISON 1997). Ellis
(1997) found the commonest triggering events for the start of bullying were a change
of manager, 45% of cases, or change of work practice, 18% of cases.
Some of the features of bullying, such as having one's opinions ignored are also
associated with particular styles of management (Hoel & Cooper 2000).

Hoel and Cooper (2000) suggest one approach to controlling bullying would therefore
be to control stress in the workplace.

The concurrence of bullying and stress would seem to support one concept of bullying described by Field (1996), the situational bully. He describes them as tolerable managers with poor interpersonal skills, a tendency exacerbated by the stress of excessive demands, tighter budgets and shorter deadlines. Their driving attitude gets them appointed to positions of power, but their bullying, badgering, running a tight ship or whatever euphemism is used to excuse such behaviour, is the antipathy of good management. Randall (1997) and Ishmael (1999) see both the perpetrator’s individual make up and cultural factors in the organisation which permit such behaviour, as contributing to this form of bullying, with the bully taking out their own dissatisfaction with the job, due to job insecurity, work intensification or competitive environment, on their staff. Einarsen (2001) suggests that bullying develops from a primary conflict with an individual, and such conflicts may be more common in a high stress environment where people are more on edge, sowing the seeds for more bullying.

Field (1996), however, would not see situational bullies as the most common form of bullying, but prefers the concept of bullies as sociopaths (socialised psychopaths) who are out to win at any cost, even if it means cheating or standing on others. He sees them as having no conscience about what they do, and not being able to see the consequences of their behaviour on others. He believes bullies have Jekyll and Hyde personalities: they are compulsive and creative liars, they have to control, and make themselves feel good by putting others down. They will blame everyone else and will relentlessly eliminate anyone who resists them, going on to repeat the process with a new victim or in a new setting if management moves them. They particularly dislike people who are popular and competent in their work. Most people are not psychologically prepared to deal with such a person, and fall victim.

In a high stress environment, many of the hazards are already there, and relatively minor manipulation of these factors by the bully may result in these hazards being unfairly distributed onto the target individual, or may result in the target being
exposed by the removal of stress protective factors such as recognition, appreciation of work, and social support (through isolation). Such a form of bullying would be difficult to identify. Simply withholding information may result in the person doing unnecessary extra work or having to do something all over again. The victim potentially may not even be aware of what is happening.

The Irish Taskforce (2001) identifies a more directly offensive and verbal type of behaviour on the part of the bully with verbal abuse/insults being the main form of bullying in 81% of situations. Their second most commonly reported form of bullying was exclusion in 35% of cases.

The equivalent in Hoel & Cooper (2000) would be being ridiculed about your work, or insulting and offensive remarks about your person, but they were not among the top six identified events. In McCarthy & Barker (2000), the equivalent would be yelling, screaming, abusive language or insults in 33% of situations, repeated belittling of opinions or constant criticism in 33% of situations, and inappropriate comments about appearance or lifestyle in 22% of situations. Direct comparison is difficult since multiple combinations of behaviour occur in bullying, and some researchers split these down and others group them, but verbal offence does not appear to be such a feature of bullying in some studies, as in the Irish Taskforce Study. The working definition used by the Irish Taskforce (2001) was

"Workplace bullying is repeated inappropriate behaviour, direct or indirect, whether verbal, physical or otherwise, conducted by one or more persons against another or others, at the place of work and/or in the course of employment, which could reasonably be regarded as undermining the individual’s right to dignity at work. An isolated incident of behaviour in this definition may be an affront to dignity at work, but as a once-off incident is not considered bullying."

The researcher, however, interviewed the clients and requested a spontaneous description of the nature of the bullying they had experienced. The interviewer then closed this down to 5 categories and verified this with the subject. The range of
descriptors was quite narrow and two of the categories of descriptors (physical abuse and sexual harassment) only got a 5% response between them. The category of verbal abuse and insults was a very general catch-all category.

Furthermore, the analysis of the forms of bullying would appear to have included respondents whether they experienced bullying once or twice in six months or on a daily basis.

By calculation it can be approximated that the 39% of subjects being bullied several times a week to daily, experienced 89% of the bullying incidents reported to the study. By including the other 61% of victims who only experienced low grade bullying occasionally or several times a month, and consequently between them experienced only approximately 11% of the incidents, they may have inadvertently distorted the profile of the bullying they were describing, particularly if low grade bullying has a different form than more systematic bullying. Further work is needed to tell if sporadic bullying uses the same profile of methods as systematic bullying. Most organisational policies on harassment explicitly target what those in N. Ireland term as 'banter' making verbal derogatory statements in a joking way, but with a vicious intent. Verbal abuse is generally recognised as a low grade institutionalised form of harassment, and the inclusion of low grade bullying in any study may increase the incidence of verbal abuse reported.

Ellis (1997), in a UK-based study, reported similar high rates of verbal offensive behaviour but a frequency definition of once a week or more over a six month period was not used in this study. See Table 1.2 below.
Table 1.2

Frequency of Reporting Different Bullying Behaviours (Ellis 1997)

<table>
<thead>
<tr>
<th>Bullying Activity</th>
<th>% Victims reporting the Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>aggressive shouting</td>
<td>94 *</td>
</tr>
<tr>
<td>public humiliation</td>
<td>70</td>
</tr>
<tr>
<td>constant insulting</td>
<td>41</td>
</tr>
<tr>
<td>unjust or inconsistent discipline</td>
<td>29</td>
</tr>
<tr>
<td>set up to fail</td>
<td>27</td>
</tr>
<tr>
<td>inconsistently changing hours or duties</td>
<td>23</td>
</tr>
<tr>
<td>discriminatory content</td>
<td>23</td>
</tr>
<tr>
<td>telephoning at home to further hassle</td>
<td>18</td>
</tr>
<tr>
<td>cancelling leave without good reason</td>
<td>18</td>
</tr>
<tr>
<td>exclusion from social gatherings</td>
<td>6</td>
</tr>
<tr>
<td>gossip or rumour spreading</td>
<td>6</td>
</tr>
</tbody>
</table>

This study is looking at subjects with a particular psychological injury of PTSD as the result of bullying, which is something being observed and commented on by those studying workplace bullying, but never mentioned in connection with excessive workload or other common work stressors.

Ellis (1997) details the main symptoms resulting from bullying, and Kinchin (1998) claims 25% of those bullied develop PTSD. The table below combines these findings.

Table 1.3

Frequency of Symptoms Among Victims of Bullying (Ellis 1997, Kinchin 1998)

<table>
<thead>
<tr>
<th>Symptom</th>
<th>% Victims reporting the Symptom</th>
</tr>
</thead>
<tbody>
<tr>
<td>loss of humour</td>
<td>47</td>
</tr>
<tr>
<td>depression</td>
<td>35</td>
</tr>
<tr>
<td>migraine</td>
<td>35</td>
</tr>
<tr>
<td>post traumatic stress disorder</td>
<td>25 *</td>
</tr>
<tr>
<td>constant fatigue</td>
<td>24</td>
</tr>
<tr>
<td>hypertension</td>
<td>24</td>
</tr>
<tr>
<td>muscular tension or pain</td>
<td>18</td>
</tr>
<tr>
<td>skin problems</td>
<td>18</td>
</tr>
<tr>
<td>chest pain</td>
<td>18</td>
</tr>
<tr>
<td>vomiting (returning to work)</td>
<td>12</td>
</tr>
<tr>
<td>diarrhoea</td>
<td>12</td>
</tr>
<tr>
<td>abdominal pain</td>
<td>6</td>
</tr>
<tr>
<td>coughs and asthma</td>
<td>6</td>
</tr>
</tbody>
</table>

* Source Kinchin (1998)
In the cases of bullying, The Irish Taskforce (2001) found the favoured response in over 70% of situations was talking to colleagues, friends and family. Half took the situation up with their supervisor, but it is not actually clear if this is the perpetrator themselves or the perpetrator's supervisor. The other half presumably put up with it. Confronting the bully was three times more common than doing nothing according to Hoel & Cooper (2000), but again a substantial number or people did nothing. Zapf & Gross (2001) studied strategies by victims to deal with bullying, and report,

“Talking with bullies was the most often used strategy. However this strategy was significantly more often used by the unsuccessful victims, supporting the qualitative results that voice behaviour did not prove successful” (514).

Among nurses (RCN 2002), a third did nothing or only shared with a colleague. Overall, about a third of people accept this treatment and try to absorb the emotional and physical impact, and make no, even informal, attempt to stop it or to get out of it.

Although this study does not look into it further, others are researching the role of organisational culture and bullying. As the study expands, uncertainty arises about the nature of the relationship between organisational culture and bullying, but it seems obvious that it affects the workplace environment. Einarsen (2001) reports in one study in Denmark that 17.7% of those asked had witnessed others being bullied. Hoel, et al (2001) in a survey of a broad spectrum of professions and status within organisations in Great Britain found that 32.1% said they had been bullied individually, 54% shared the experience with colleagues, and 14.9% reported that their whole work group had been bullied. It would seem clear that bullying, when it occurs on this kind of basis, would affect the whole atmosphere at work in a negative way.

The study of bullying as an aspect of organisational culture is picking up speed. Einarsen (2001) suggested that bullies will only victimise others if they feel the organisation backs them, either through supporting their behaviour, or at least giving
implicit permission. “The organisational tolerance of bullying is communicated by sanctions, or rather lack of sanctions, enacted towards people violating informal norms and values, and the existence and enactment of organisational policies against bullying” (23).

In examining the phenomenon of bullying in the fire brigade, a uniformed service he terms “paramilitary” for its organisational resemblance to the military, David Archer (1999) found that bullying within a hierarchical structure is almost a fact taken for granted. “Patterns can also be found when examining the abuse of formal power within the code of discipline. There is an acceptance at all levels that this does occur and that it is a cultural or traditional aspect of the service” (103).

Believing that this culture goes beyond the uniformed services to other organisations, Liefooghe and Mackenzie Davey (2001) reported that when employees are given a voice, they raise issues which expand the term bullying beyond interpersonal issues. This “shifts the focus from the individual to the organization and exposes concern with organisational power systems rather than individual status differences, ...organizational interests as conflicting with the interests of individual employees” (387, 389). Many of the issues raised were perceptions of what legitimate organisational power entails and where it crosses the line into organisational bullying: sickness policy and sick leave, setting work targets and punishments for not meeting them, surveillance methods, threats of job loss, and methods to control employees’ behaviour. Liefooghe and Mackenzie Davey are aware that these concerns move the definition of bullying outside its normal sphere and take the arguments down other roads than are normally travelled in the research, but find that this view amongst employees is widespread, and the employees themselves do not question their use of the word “bullying” to describe an organisational culture.
Whether the organisational culture has an impact on the person or the bullying is purely with individuals in the workplace, these events have an effect on the victim, the onlookers, the employers, and those being serviced by the organisation.

These events can disturb a person’s equilibrium and affect their physiological, chemical and emotional mediators, resulting in physical and mental tension. This can cause stress which will be explored in the next section to see what impact it has on an individual.

1.2 STRESS

Stress is something we associate with modern living and increasingly associate with working life. As the debate continues as to whether it is good or bad, a normal and necessary part of living, a hazard or an illness, it is clear that the same word is being used by many to describe different things.

Webster's New English Dictionary defines stress as

'a physical, chemical or emotional factor that causes bodily or mental tension, resulting from factors that tend to alter an existing equilibrium'.

In other words, events disturb our equilibrium. There are physiological, chemical and emotional mediators, resulting in physical and mental tension.

When faced by a threat, an opportunity or any change, our sensory perception is unconsciously translated into an emotional, a sympathetic nervous, and an endocrine response (adrenaline release). This puts the body on alert, and prepares and energises it to respond. We are most conscious of the physiological changes that take place in our body which may be uncomfortable, unpleasant, or even distressing. Alert is not a comfortable or resting state, and, if we do not return quickly to equilibrium, we will find that these changes obstruct us from carrying out normal tasks. If alert is prolonged, we will begin to experience dysfunction in the body systems which are up- or down-regulated in this alert response. Eventually the strain on these physiological and psychological systems may result in permanent damage.
There is much debate over whether stress is good or not, but what has sometimes been referred to as positive stress would be more appropriately called challenge. Challenge energises us psychologically and physically: it motivates us to learn new skills and master new jobs. When a challenge is met, we feel relaxed and satisfied. Challenge is an important ingredient for healthy and productive work (NIOSH 1999).

Stress would be more appropriately defined as

"the emotional and physiological distress experienced by a person exposed (1) to a series of interpersonal or environmental stressors perceived as demands that exceed the persons capabilities of coping with them, or (2) to an ongoing situation perceived as sufficiently threatening to overwhelm the person’s resources for handling it" (Ellis, Gordon, Neenan & Palmer 1997).

Stress is therefore not the arousal, but the distress caused by a negative perception and assessment of the event in relation to the person’s resources. This concept of stress as distress would agree with the assertion that stress is not good and that there is no such a thing as good stress (HSE 2001b).

Holmes & Rahe (1967) drew attention to the role of events in people’s lives in relation to subsequent health problems. They rank ordered, and then scaled major life events in the Social Readjustment Rating Scale SRRS and introduced the idea that change in itself was a stressor, whether it was a change for the good, like marriage, or a change for the worse, like divorce. Their work established the concept that experiencing several of these key life stressors in close succession could have an accumulative effect which increased the likelihood of subsequently developing a serious physical illness. This emphasis on key, but infrequent, life events has been criticised for neglecting the significance of the less individually stressful but more common hassles of life, whose cumulative effect may be equal or greater than that of the big events (DeLongis, Coyne, Dakof, Folkman, & Lazarus 1982). The frequent use of the Social Readjustment Rating Scale SRRS (Holmes et al. 1967) on stress
management courses has left the impression that major life events, mostly unconnected to work, are the main sources of stress in individuals’ lives.

1.2.1

General Adaptation Syndrome (GAS)

Hans Seyle (1956, 1976) saw stress more as a non-specific response of the body to any kind of demand made upon it, and hence he focused on the reactions rather than the nature of the events or individual differences. He saw the same predictable chain or pattern of physiological events occurring regardless of the cause, situation, or psychological interpretation of the stressor. This pattern he called the General Adaptation Syndrome, GAS, or stress response. GAS results in the release of certain adaptive hormones and subsequent changes in the structure and chemical composition of the body. There are three stages in GAS

1. Alarm Reaction,
2. Resistance
3. Exhaustion

Stage 1—(which has two aspects or phases)

The body prepares for fight or flight through the limbic system, the sympathetic nervous system and the endocrine release of adrenaline and noradrenaline.

Counter-shock phase

This counter-shock phase involves the parasympathetic nervous system and this occurs at the same time as and following the shock phase. Cortisol acts like an anti-stress hormone, switching off adrenaline production Adrenaline and cortisol allow the body to regulate its response appropriately to the developing situation. Other hormones such as serotonin and dopamine also affect how this core reaction impacts on other physical and mental systems, and they play a role in whether we find the experience pleasurable and exciting, or unpleasant and shocking.
Stage 2—Resistance

This occurs if the stressor continues over a long time. Coping and adaptive mechanisms come into play to extinguish or accommodate the stressor. High cortisol levels play a central role in dulling down and switching off the stage 1 adrenaline stress response which, if prolonged, can in itself cause damage, adding to the body's stressors. Prolonged high levels of cortisol are an indicator of prolonged stress.

Stage 3—Exhaustion

This occurs when coping and adaptive mechanisms are exhausted. The body may rest its defences or reach a point of total exhaustion and die. This is usually precipitated by a sudden drop in cortisol levels.

The General Adaptation Syndrome is the core physiological response to any type of stressor acting on the body. An individual assesses whether an event is a demand or not, and the extent of the demand. This is an automatic reaction, rather than a mental process.

1.2.2 Work-Related Stress

The focus of concern today has shifted onto the negative impact which intense, prolonged or repeated stress reactions have upon the physical and psychological well being of individuals. Employers have realised the cost implications of a stressed workforce, and have moved from seeing it as 'not their problem' to seeing it as a 'problem for them'. In 1996 the Institute of Management (MSF 1997) estimated that 270,000 workers were off work each day as a result of stress, costing 7 billion pounds per year. This does not take account of lost productivity due to 'presenteeism': staff who are in work for fear of losing their job, but are not performing on par.
The Bristol Survey (Smith, Wadsworth, Johal, Davey-Smith & Peters 2000) said stress was a major problem and estimated that 1 in 5 workers in UK, 5 million people, were very or extremely stressed. A range of health outcomes such as poor mental health or back pain, and health-related behaviour such as drinking and smoking were associated with reports of being very or extremely stressed. To keep this in proportion, it should be noted that the main author of the Bristol Study, Andy Smith, pointed out that to be unemployed still tends to be an even more stressful experience (Smith 1999).

Along with a general concern about growing reports of stress in the workplace, there is particular concern about stress in certain professions. The caring professions, particularly the health service, seem to be a focus of stress-related problems. The Health Education Authority (1995) and Rees and Cooper (1990) reported higher incidence of stress-related problems such as high turnover, chronic tiredness, absenteeism and alcohol abuse among NHS staff than in the general working population. Nurses and teachers have been found to be the professions with the most reported stress. (Jones, Hodgson, Clegg & Elliott 1998)

A comprehensive survey of mental health in Sheffield NHS Trusts found that 26% of the NHS workforce was significantly psychiatrically distressed and had minor psychiatric disorders compared to 17.8% in the general working population (Borrill, Wall, West, Hardy, Shapiro, Carter, Goyla, Haynes 1996). The differences between health workers and the general working population could not be explained on demographic criteria. Some NHS professional groups had higher scores: managers at 33.4% and nurses at 28.5%. Mental health was significantly poorer among female than male managers, and senior nurses reported poorer mental health than their junior colleagues. Mental health among all staff was poorest in the 26-45 age group. Therefore a nurse manager in the 26 - 45 age band is twice as likely to be suffering significant psychological distress or a minor psychiatric disorder as her equivalent in the general workforce.
Smith, Brice, Collins, Matthews & McNamara (2000) found the most stressed individuals were divorced/separated/widowed, aged 41-50, working full-time, educated to degree level, socio-economic group II, salary £20,000+, working as a teacher, nurse, manager or professional (Smith, Brice, Collins, Matthews & McNamara 2000). Each of the above factors had an additive and independent effect: individuals with 4 or more factors had above average stress, though individual variation still played a significant part with a number of such people also reporting quite low stress. But individuals with 6 factors had stress levels twice the average.

There have been calls for more radical or multidimensional approaches for a number of years. Several Health Education Authority reports, "Action on Stress" (Jee and Reason 1989) and "Organisational Stress in the National Health Service" (HEA 1995) called for a more organisational-level response to stress. They said stress should be seen as everyone's problem and not blamed on individual responses. There should be less attention on the symptoms and helping people cope, and more emphasis on organisational changes, because the sources of stress and the remedies are often beyond the control of individuals.

"It is not enough to say that individuals must learn to cope better by practising relaxation or counselling. Changes may be needed in the workplace itself to reduce or eliminate the sources of stress" (Jee and Reason 1989).

Richards (1996) proposed a more "Public health" approach to dealing with traumatic stress at work:

"That does not distinguish between prevention and cure, but addresses health at all stages of disease progression, as well as taking action to prevent the problem in the first place".

Prevention and early intervention are recognised as more effective than cure for other major health problems: perhaps the same approach is needed for the stress problem in the NHS. These publications moved the concept of stress away from being an individual problem or susceptibility to being an organisational, management and
workforce problem.

"The emphasis in recent years with regard to workplace stress has moved from the sick individual to the sick organisation"(MSF 1997).

This is an important development in the concept of workplace or occupational stress which recognises that, whilst not all stress is from the workplace, work today certainly contributes a significant proportion. Employers cannot protect individuals from all of life's stressors, but the emerging attitude is that work should not be adding to them. Where a work-related stressor can be identified, the employer's responsibility is to assess the risk and protect the employees. These developments have placed greater attention again on studying the causes and nature of the precipitating events in order to prevent or eradicate them.

The UK Health and Safety Executive, HSE, has taken a growing interest in workplace stress, beginning with their Guidance on Stress at Work (HSE 1995). They see work-related stress as largely both predictable and preventable. The involvement of the HSE has established an authoritative definition of stress and has clarified the responsibilities of the employer in respect of workplace or occupational stress. Stress is defined as "The reaction people have to excessive pressure or other types of demands placed upon them". Cox (1993) in another HSE publication expanded the definition,

"Work-related stress is a negative and unpleasant condition which may be experienced when a person perceives that they are unable to meet the demands and pressures that are placed upon them, and which may be associated with a range of ill health effects, both physiological and psychological."

These were the first indications that the HSE was linking workplace stress to health and psychological outcomes, and signalled that it could be considered a workplace hazard and come under the provisions of the Health and Safety at Work (N.I.) Order 1978 and the Management of Health and Safety Regulations 1992, which explicitly require employers to carry out risk assessments of all hazards and provide safe
systems of work for employees.

Following an extensive consultation exercise by the Heath & Safety Commission with employers, employees and representative bodies through a discussion document 'Managing Stress at Work' (HSE1999), the HSE reported the following outcomes in feedback to the respondents:

- Work related stress is a serious problem.
- Work related stress is a health and safety issue.
- It can be tackled in part through application of health and safety legislation.

The HSE declined to respond to the majority of respondents who wanted an Approved Code of Practice (ACoP) for the management of stress in the workplace, their position being that there were not any clear, agreed-upon standards of good management practice against which an employer's performance in managing a range of stressors, such as the way work is structured, could be measured.

Following a guide for managers on tackling stress which included carrying out risk assessments (HSE 2001a), the HSE immediately issued another report which questioned the validity and reliability of current questionnaires used to measure stressors (Rick, Briner, Daniels, Perryman & Guppy 2001). The report concluded that it was impossible to recommend any of the methods currently devised for measuring the various stress causing agents. With no agreed standard of good management for stressors, with no recommended means of monitoring the level of stressors, to determine if there is a problem there in the first case, and with no reliable means to monitor the effectiveness of any interventions made, it is difficult to see a health and safety approach having much impact.

1.2.3

Work-Related Stressors

A number of recent studies have identified and broadly agreed on a range of key components of the workplace that are associated with high levels of reported stress,
including workload, work complexity, work design and relationships. They have also identified several components which have a protective effect against stress.

The National Institute for Occupational Safety & Health NIOSH define stress as

"The harmful physical and emotional responses that occur when the requests of the job do not match the capabilities or needs of the worker: job stress can lead to poor health and even injury" (NIOSH 1999).

Whilst work conditions are seen as the primary cause of job stress, certain individual and situational factors also intervene to strengthen or weaken the impact of these work conditions.

The following job conditions contribute most to stress:

**Design of Tasks:**
- excessive workload, long hours, shifts, hectic routines,
- work with no purpose, little control

**Management Style:**
- no part in decision making

**Interpersonal Relationships:**
- poor social environment or support

**Work Roles:**
- conflicting or uncertain expectations,
- too much responsibility

**Career Concerns:**
- job insecurity

**Environmental Conditions:**
- noise, overcrowding.

Workload, work complexity and work design are emerging as significant contributors to workplace stress.

Work autonomy/control over work, is reported both as a stressor when low and as a protector when high. Some items may be on such a scale, harmful at one end and
positively beneficial at the other. Other components such as workload have a U-shaped relationship, too much or too little work is stressful. More work is needed to understand how the levels of these components relate to stress outcomes.

Holmes and Rahe (1978) saw different types of events having different stress potential. Statistical analyses of recent large scale studies take this further, suggesting that different types of events may actually provoke different types of stress reactions. The Whitehall II Study (Stansfield, Head & Marmot.2000) has identified associations between specific aspects of work design and specific mental health outcomes. Not having much say was associated with poor mental health in men and higher alcohol dependence in women.

The other significant aspect which is emerging is the impact of person-on-person interactions and transactions, the relationships within the organisation. These play an important part in protecting from the effects of stress, but they can also contribute greatly to the stress. It is in this aspect of workplace stress that individual differences and vulnerabilities have the greatest impact. Ellis, Gordon, Neenan & Palmer (1997) say interpersonal relationships are one of the main causes of stress in both large and small organisations. Employees who act in a hostile or bullying manner usually cause interpersonal difficulties in the workplace. Bullying and harassment are included under relational stressors in Work-Related Stress: A Short Guide (HSE 2001b).
1.3 TRAUMA

Trauma is a Greek word meaning 'wound', and in counselling, a psychological trauma implies a permanent, or at least enduring, injury to one’s sense of self and identity. The idea that exposure to severe external stressors can cause extreme individual distress is an ancient one (Scott & Stradling 2001). Trimble (1985) traces the accounts of its history back to Homer. It has been known under many names often associated with the aftermath of acts of violence such as war, where it has been called combat exhaustion or shell shock.

Trauma differs from stress in that the emphasis is not on a build up of stressor events over time, or an accumulative pressure and strain, but more on a sudden exposure to an extreme stressor. In trauma, a person is exposed to an overwhelming experience of helplessness in the face of something considered so awful that "anyone exposed will experience a level of stress that exceeds their capacity to withstand and will at least partially crack" Ellis, Gordon, Neenan, Palmer (1997).

In terms of the ABC model (Ellis 1997), some events (A) are so extreme that anyone would be affected (C), regardless of individual differences or any evaluation or belief (B) they may have about the event. In trauma, A causes C, regardless of B.

In some cases there is a psychological injury, the person develops a disorder focused on the event. Kinchin (1998) groups these reactions under 5 main headings:

**Intrusive**
- Recurring and distressing recollections
- Flashbacks, thoughts, nightmares, dreams
- Phobias about specific daily routine, events or objects
- Feelings of guilt for having survived

**Avoidant**
- Detachment from others, emotional numbness
- Avoidance of thoughts or feelings associated with the event
- Markedly diminished interest or pleasure in most activities
Physical
- Sleep problems
- Hyper vigilance
- Exaggerated startle response
- Joint/muscle pains
- Feelings of nervousness

Social
- Violent outbursts
- Increased irritability
- Impaired memory
- Inability to concentrate
- Irrational or compulsive behaviour
- Low self esteem

Coexistent
- Depression/anxiety

Many people will experience some of these symptoms after an extreme experience, such as a car accident or a robbery, which is quite normal. Usually they will experience only a few symptoms, which will diminish in frequency and intensity over about a month.

This disorder which is described in the Diagnostic and Statistical Manual DSM-IV (APA 1994) is called Post Traumatic Stress Disorder, PTSD.

About 1% of the general population are reported to have PTSD at any time (Helzer Robins & McEvoy1987). Others estimate the prevalence of PTSD in the community to be as high as 7% (Kessler, Sonnega, Bromet, Hughes & Nelson 1995). The rate varies depending on the means and rigor used to assess the condition, and whether it is the acute condition that is being measured, or whether chronic lifelong or subsyndromal PTSD is included.

Much art and literature has been preoccupied with how people cope with the inevitable tragedies of life, but the large scale scientific study of the effects of trauma on the body and the mind has had to wait to latter part of the 20th century (van der Kolk & McFarlane 1996). Each generation adds something to its description and
understanding. Horowitz's work (1975, 1976, 1979) on distressing thoughts, intrusive imagery, avoidance and information processing contributed significantly to the characterisation of Post Traumatic Stress Disorder when it was first officially recognised as a syndrome in the Diagnostic and Statistical Manual DSM-III (APA 1980), and subsequently as a disorder in the appendix DSM III-A (1984).

PTSD is a psychological disorder following exposure to an extreme event, called Criterion A, and which is characterised by a set of symptoms:

- Criterion B. Intrusive Imagery,
- Criterion C. Avoidance Behaviour,
- Criterion D. Disordered Arousal,

and which persists for more than one month and causes clinically significant distress or impairment in social, occupational or other areas of functioning (Criterion E & F).

Psychodynamic approaches, like Horowitz, see PTSD as a normal reaction to an abnormal event which has not been completed (Horowitz 1986). Personally significant events are usually given meaning, translated into narrative, and integrated into accumulated experience. Traumatic memories, however, seem to be handled differently, missing out on being collated and transcribed into narrative, but are imprinted and initially stored in memory as sensations and feelings. Traumatic memories are held in the form of sensory and emotional representations which are not attached to other experiences. Reminders of the events therefore trigger a real time emotional and sensory reliving as intense as the original experience (Levin, Lazrove & van der Kolk 1999).

The major symptom groups of PTSD are explained as by Levin, Lazrove & van der Kolk (1999) as follows:

(Criterion B) A cycle of fear and traumatisation is established as the trauma repeatedly comes to mind in an (unsuccessful) attempt to make meaning of a disturbing life event.
(Criterion C) The victim both attempts to master or make meaning of the trauma, whilst also avoiding reminders of the event for fear of being overwhelmed by negative emotions. They simultaneously experience symptoms of intrusion and arousal.

(Criterion D) Chronic fearfulness and a high level of emotional arousal translate into the sympathetic hyper arousal symptoms of PTSD, constantly on high alert. This incomplete processing theory is backed by Neuroimaging evidence following a form of therapy called Eye Movement Desensitisation and Reprocessing (EMDR). Levin, Lazrove & van der Kolk (1999) found that therapy-assisted improvement in symptoms was associated with a marked change in activity levels in the anterior cingulate and the left prefrontal cortex areas of the brain. These areas are associated with modulating fight/flight reactions and the assignment of meaning.

The behaviourists have a different concept of PTSD and trauma reactions, which they see as a learned response that has not been extinguished (Keane, Fairbank, Caddell, Zimering & Bender 1985).

The assumption of stuck recovery or learnt response is that these processes can be completed or reprogrammed. Recovery is possible, especially if empowered by some form of therapy. The actual prognosis is often not so optimistic. Reliable recovery rates are hard to find due to difficulties in the way the data is often collected using retrospective recall or questionnaires rather than structured interview.

Among a sample of Vietnam Veterans, 15% had chronic PTSD, but a further 30% had suffered at some stage and had recovered (Kulka, Hough, Jordan, Marmar & Weiss 1988). In a group of rape victims, 64% had PTSD at 4 weeks and 42% had it at 6 months (Rothbaum, Foa, Riggs, Murdock & Walsh 1992).

In a sample of accident victims, 30% developed PTSD, half of these remitted by 11 months, and by 29 months only a third of the original sufferers were still diagnostic (McFarlane 1988).

Studies overall suggest about two thirds of those with a PTSD diagnosis 1 month after the event will recover, but the other third will have a chronic persistent disorder.
1.3.1

Risk Factors

Certain risk factors have been found to be associated with developing PTSD. These are female, neurotiscism, major depression, other anxiety disorders, and childhood family adversity or physical abuse (Breslau 1998, Blanchard & Hickling 1997). Pre-existing personality disorder or major depression, and past or present alcohol abuse increase the likelihood of developing chronic PTSD (Blanchard & Hickling 1997). Personality disorders are especially associated with developing chronic PTSD (Southwick, Krystal, Bremner et al 1997).

Event-related factors, which partially predict the development of prolonged disorder, include the initial severity of PTSD symptoms, physical injury in the event, irritability after the event, sense of fore-shortened future following the event, re-traumatisation when other injured survivors die, and family relationships after the incident (Blanchard & Hickling 1997).

Peritraumatic responses are responses which occur during the impact phase of the stressor, and may predict the development of PTSD. Dissociation is one such response and comprises numbing, detachment, absence of emotional response, reduction in awareness of surroundings, derealization (unreality), depersonalisation (feeling outside looking on), and dissociative amnesia (unable to recall important aspects of the event).

Dissociation during the event and marked dissociation during the first month increases the likelihood of developing PTSD (Marmar, Weis & Metzler 1997, Shalev, Peri, Caneti & Schreiber 1996).

DSM-IV recognises a disorder called Acute Distress Disorder, occurring during the first month after an event, which is similar to PTSD, but differs in being explicitly formulated as a dissociative response to trauma. Symptoms must have lasted for at least two days. Those with Acute Stress Disorder are at greater risk of subsequently
developing PTSD. Among crime victims 83% of those with a diagnosis of Acute Stress Disorder subsequently developed PTSD (Brewin, Andrews, Rose & Kirk 1999). Dissociation however was less associated with prolonged PTSD at one year than early depressive symptoms (Yehuda & Shalev 1998). This suggests that depression and dissociation may play different roles in the onset and the continuation of PTSD.

This outer experience of dissociation is an expression of an inner dissociation of the event in the mind. In Jungian psychotherapy, dissociation or scattering of the component parts of a traumatic experience, the cognitive awareness, the affect, the sensation and the imagery, is a normal part of the psyche’s defence (Kalsched 1996). This occurs when a person is confronted with an event from which they cannot withdraw or escape. It allows life to go on, but at a cost of flashbacks and memory gaps. Association and dissociation usually work together and finally result in the integration of the event: for example, when we delay the experiencing of emotional response in order to manage a crisis. However, if integration is not completed, the end result may be a splitting off of part of the psyche, giving more permanence to this separation or scattering.

In addition to risk factors for developing PTSD, there are other types of risk factors which independently increase the chances of exposure to traumatic events, these include being male, non-white, having a low education and income, neuroticism, extroversion, major depression and conduct problems (Breslau 1998). Their lifestyle puts them at risk. Another risk factor for exposure to traumatic events is one’s profession. Emergency services staff are directly exposed to trauma, but medics and nurses through working with victims are also exposed to the trauma of others and may be subject to secondary traumatisation or what is termed 'vicarious traumatisation' (McCann & Pearlman 1990) or 'compassion fatigue' (Figley 1995).

Individual coping style during and after the event has been suggested as a predictor of
developing PTSD, but the results conflict. Shalev (1996) suggests that efficacy of a coping strategy is not inherent but depends on the nature of the situation and the resources of the person. Passive surrender, stoic acceptance, and cognitive reframing are appropriate where the stressor is uncontrollable, whereas acting directly on the stressor, seeking help, and other active strategies may be adaptive in other circumstances. Individuals do however have habitual styles, and selection is based on the individual's experience and sense of competency and self efficacy (Schwarzer 2000). The person's usual style may not be appropriate, especially if the event is one they have not encountered before, and they may not have the experience to know to modify their strategy and will instead respond habitually.

In a longitudinal study of World War II veterans, those who had no PTSD 45 years later had altered, diluted, retold their original stories of war. Those with continued PTSD had not. The ability to reframe, re-evaluate, cognitively restructure or transform memory, especially extreme memories appears to be normal and pro-functional (Lee, Vaillant, Torrey & Elder 1995). In recovery from a traumatic event, the adaptive cognitive reframing and meaning given to the event are just as important in determining and shaping recovery, as completing the processing and integration of the event memory.

Scott & Stradling (2001 p 3) describe a man paralysed in a motorcycle accident who was not disturbed by recollections of the accident, but was suffering depression because he could not engage in his previous roles. Applying Alford & Beck's (1997) Cognitive Theory of Emotional Disorder, they said the content and pattern of the man's thinking, "What I can't do now", indicated his emotional disorder to be depression. His recovery or lack of recovery would in turn be shaped by these thoughts and the view he took of the events and his condition.

General negative, maladaptive or dysfunctional thinking a person has before an event may shape their response to an event or shape their recovery after the event. However, traumatic events in themselves confront an individual with experiences completely
different from what he or she has been able to imagine, and this confrontation can radically shake and change their beliefs and attitudes (Janoff-Bullman 1992). This may explain the change in personality noted in some traumatised individuals. Maladaptive but pro-functional beliefs formerly used by the individual to enable them to engage with the world, like "It will never happen" or "I can take care of myself", are shattered. Dysfunctional beliefs may have replaced them: "The world is a dangerous place", "You can't trust anyone", "It's all my fault". Such dysfunctional beliefs, which may keep a person trapped in their state of disorder, are some of the things addressed in CognitiveBehavioural Counselling.

The indications are that the outcomes after traumatic exposure are not automatic nor are they immediately set in stone. There is a period before symptoms occur, or during early symptoms, in which a dynamic process is occurring, and intervention may prevent the development of PTSD. The stubbornness of PTSD once it has set in, and especially if complicated with other comorbid problems, suggests prevention or early intervention is needed.

Critical Incident Debriefing has become standard among emergency service workers and those professionally exposed to violent crime such as bank counter staff. The evidence for its effectiveness is mixed, ranging from no effect (Kenardy, Webster, Levin, Carr, Hazell & Carter 1996) to findings of more PTSD among those debriefed than controls (Bisson, Jenkins, Alexander & Bannister 1997). In a review of several studies, Rose & Bison (1998) concluded that one session does not reduce psychological distress or prevent PTSD. No similar studies have looked at the effects of early intervention on the subsequent development of depression or anxiety. Critical incident debriefing deals with all those exposed. Another approach provides early counselling for high risk groups such as those with Acute Stress Disorder, ASD. Three groups of ASD subjects were given three different interventions, (1) Prolonged Exposure, (2) Prolonged Exposure plus Anxiety Management and (3) Supportive Counselling (Rogerian or Person Centred Counselling). Six months after the trauma,
the PTSD rate in patients treated by prolonged exposure with and without anxiety management was approximately equal, but the PTSD rate in those receiving only Supportive (Person Centred) Counselling was three times higher. All interventions included education about trauma, so the findings indicate that it was the cognitive behavioural type intervention of prolonged exposure which was preventative for the development of PTSD (Bryant, Sackville, Dang, Moulds, Guthrie 1999).

Taking all these facts together, it would appear that the classic PTSD concept of the extreme event that would affect most people does not generally hold true. Only a minority develop PTSD from the start, most have no psychological problems at all, and a sizeable proportion have a prolonged struggle with transient psychological problems which may develop into anxiety, depression or in some cases PTSD.

1.3.2

Other Outcomes of Trauma

Not everyone exposed to an extreme event develops PTSD; on average only 14% develop PTSD (Breslau, Kessler, Chilcoat 1996). However, many more will experience a few transient PTSD-type symptoms, such as nightmares or fears of being in certain situations, in the first month or so following a particularly horrific experience. PTSD is not even the most likely consequence of extreme events: Shalev & Yehuda (1998) took a sample of 211 trauma exposed casualties in Emergency Rooms (ER) and followed them up 4 months post-trauma. Two-thirds showed no lasting psychiatric disorder; the remainder were as likely to have symptoms of major depression or other mood disorders such as anxiety as they were to have PTSD. A quarter of those with symptoms of psychiatric disorder were comorbid for a second disorder. See Table 1.4.
There are many possible psychological outcomes from exposure to an extreme event, including, most commonly, no major outcome. This would indicate there are many individual factors involved in determining that outcome.

The DSM-IV requirement for a certain range, frequency and intensity of symptoms to have persisted for a month indicates that during this time such symptoms must regularly come and go in a large proportion of people, and may continue for longer, and yet be considered normal.

Now to explore the role of the activating event and the criteria laid down by DSM-IV (APA 94).

1.3.3

The Activating Event in PTSD

Diagnostic criteria are artificial constructs, valued by researchers and lawyers. From the perspective of the counsellor seeking to assist recovery, the client, the person just one symptom short of a diagnosis, is still very likely to be seeking help for their
distress through treatment. This leads to a proliferation of unofficial terms and
descriptions, such as sub-syndromal PTSD (Blanchard & Hickling 1997) to
authenticate the experience of the client and merit some sort of intervention or support
from the counsellor.
The most problematic diagnostic criterion in PTSD is Criterion A, the Event. This is a
unique feature among psychological disorders, since it is not a symptom. In order for
a diagnosis of PTSD to be made, the DSM-IV (APA 1994) specifically requires a
particular type of extreme event to have preceded the onset of symptoms. The same is
not required to make a diagnosis of the anxiety or the depression which accompany
PTSD and are as common, if not more common, sequels to an extreme event.
Reactive depression (also called exogenous or neurotic depression) is considered the
reaction to some imagined or actual loss or trauma usually involving threat or
helplessness (Folkman & Lazarus 1986, Seligman 1975). However the term
'Reactive' is only a descriptor and is not required in order for a diagnosis of
depression to be made. Roland May (May 1996) stated that anxiety is always cued off
by a threat to something that an individual considers important. So threat, actual or
imagined, can cause depression or anxiety; but in PTSD, a very specific type of threat
is described which must occur in order for a diagnosis of PTSD to be made.
The ICD-10 (World Health Organisation 1992) diagnostic description of PTSD
requires an event but describes it less prescriptively as a "traumatic event of
exceptional severity". The diagnostic criteria of DSM-IV and ICD-10 are similar but
are applied differently. DSM-IV is more mechanistic using guidelines and rules; ICD-
10 looks for best fit to diagnostic patterns. DSM-IV promotes more multiple
diagnoses and comorbidity, while ICD-10 promotes a single best fit diagnosis (Yule,
Williams & Joseph 1998).
Peters, Slade & Andrews (1999) compared the DSM-IV and ICD-10 assessment of
1364 participants for PTSD. DSM-IV made about half the number of diagnoses
mainly due to its additional requirement that the symptoms 'cause clinically
significant distress'. The more detailed event descriptors in DSM-IV also made it
slightly stricter.

The DSM-IV, Criterion A, event is described below and a full description of the PTSD diagnostic criteria can be found in Appendix A.

The person has been exposed to a traumatic event in which both the following were present:

1. The person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to physical integrity of self or others.

2. The person's response involved fear, helplessness, or horror. Note, in children this may be expressed instead by disorganised or agitated behaviour (APA 1994).

DSM-IV (APA 1994 p 424) further expands and clarifies the description of the event as follows:

"Traumatic events that are experienced directly include, but are not limited to, military combat, violent personal assault (sexual assault, physical attack, robbery, mugging) being kidnapped, being held hostage, terrorist attack, incarceration as prisoner of war or in a concentration camp, crime, natural or man-made disasters, severe automobile accident or being diagnosed with a life threatening illness. For children, sexually traumatic events may include developmentally inappropriate sexual experience, without threatened or actual violence or injury.

Witnessed events include, but are not limited to, observing the serious injury or unnatural death of another person due to violent assaults, accident, war, or disaster or unexpectedly witnessing a dead body or body parts.

Events experienced by others that are learnt about include, but are not limited to, violent personal assault, serious accident or serious injury experienced by a family member or close friend; learning about the sudden unexpected death of a
family member or close friend or learning that one's child has a life threatening disease" (APA 1994).

Everyday tragedies such as bereavement, divorce or minor accidents are excluded by the definition. Most forms of human abuse and neglect are covered only because physical abuse of some form usually accompanies emotional or psychological abuse. Even though emotional and psychological dimensions of such events may be a principle contributor to the fear, helplessness or horror experienced by an individual, they do not exist as causes in their own right in the criterion. The DSM-IV field trials have been criticised for concentrating too much on events of violence (McFarlane & Girolamo 1996).

Because physical and emotional abuse so often accompany each other, it is difficult to separate their effects for study. Keashley (1998) carried out a study in a health service workplace where fellow staff members were constrained by the normal rules of employment from physical abuse of each other, but clients were not so constrained. In the study of health care workers, she explored the stress impact of 412 workplace incidents. Whilst physical and sexual abuse by clients were the most common incidents, their stress impact was comparatively low in comparison to incidents of emotional abuse mainly by other staff. She concluded that emotional abuse by fellow staff had as big a stress impact as physical and sexual abuse by clients. The findings also show the greater stress impact of non-physical threat and emotional abuse compared to threatened or actual physical attack. To only understand trauma in terms of actual physical or threatened physical events is too limiting.

If sexual abuse on children without threat, violence or injury can traumatisise, then the fundamental wound is an impact wound on the psyche and the integrity of the psyche. It is not the literal integrity of the body that is at stake, but the integrity of identity and existence. In that context, non-violent events which damage the psyche need explored for their traumagenic effect. Humiliation is an example; Lindner (2001) says
humiliation is an overlooked cause of trauma, including PTSD. The context of the event is very important to understand humiliation: in some societies being discriminated against, being enslaved, being degraded, breaking the will of a child or adult may be considered a normal part of life and of maintaining and regulating the structure of society. Whilst these behaviours have a negative effect, their acceptance as normal reduces the impact of their severity on the recipient. In a human rights-based society such as ours, when humiliation is used as an instrument to keep people in their place and even to exclude or banish them, not only is the perception of the event different, the negative experience is intensified. The treatment is not expected or accepted; we are not prepared to cope; we are outraged by the injustice; our reaction is more severe and distressing. What in one context is necessary humbling, in another can be humiliating trauma.

There has been a lot of general criticism of the exclusivity of the event and symptom criteria used in DSM-IV. One important symptom, compulsive re-exposure, has been omitted. Some traumatised individuals have a compulsive attraction to situations reminiscent of their trauma: e.g. women attracted to men that beat them, sexually molested children who grow up to become prostitutes. In such re-enactments of interpersonal abuse, they may play the role of either victimiser or victim (van der Kolk & McFarlane 1996).

Another symptom omitted is aggression. Yehuda (1999b) says research supports a prevalence of aggression in PTSD, but for reasons of not blaming victims, this was left out of the criteria. Anger is acknowledged but only in the form of a feeling the victim may have, rather than something openly expressed by them.

McFarlane & Girolamo (1996) point out that property damage has been left out which is a strong and better predictor of long term psychopathology than the intensity of exposure. The response to such criticisms is that these omitted symptoms, when they occur, always occur along with the core diagnostic symptoms, and the DSM-IV criteria are sufficient for diagnosis even if they do not include all possible dimensions of the disorder.
There are many reports which indicate that less extreme events, typically ones that are prolonged or repeated, can lead to PTSD symptoms (Ravin and Boal 1989, Scott and Stradling 1992, 1994). Scott & Stradling (2000) suggested a PTSD-like disorder can be caused by an unremitting series of less extreme events, and they specifically named workplace bullying as an example. Another older term used to describe prolonged, sustained or repeated traumatic events is Type II trauma (Terr 1981): examples include abuse, chronic illness or nuclear accidents.

The term Prolonged Duress Stress Disorder has been aptly used to describe PTSD symptoms in the absence of a classic, criterion A triggering event, but it has not been widely used (Scott & Stradling 1994). Scott & Stradling (2001) have now adopted instead the term Disorders of Extreme Stress Not Otherwise Specified (DESNOS). They attribute the origin of the term DESNOS and its description to van der Kolk (van der Kolk & McFarlane 1996 van der Kolk, Roth, Pelcovitz & Mandel 1996 a,b). This term is used by other workers in the field to include also the particularly wide range of symptoms, in addition to the PTSD diagnostic set, which those exposed to prolonged abusive events often develop. In prolonged exposure cases, some of these more fringe symptoms may be the most prominent features in the individual.

Herman (1993) questioned whether DSM-III (APA 1980) adequately described the difficulties of those exposed to prolonged and repeated trauma, but these criticisms were only partly taken on board in DSM-IV. The latest version DSM-IV (APA 1994) did not adopt the concept of DESNOS, but instead subsumed many of the DESNOS symptoms as associated symptoms which can coexist with PTSD:

"impaired affect modulation, self destructive and impulsive behaviour, dissociative symptoms, somatic complaints, feelings of ineffectiveness, shame, despair, or hopelessness, feeling permanently damaged, a loss of previously sustained beliefs, hostility, social withdrawal, feeling constantly threatened, impaired relationships with others, or a change from an individuals previous personality."

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What they did not do was alter the event criterion in such a way to include the type of prolonged or repeated events that most significantly produce these sorts of effects.

1.3.4

Treatment Methods for PTSD

There is no one treatment method that stands out from any other for PTSD.

The Journal of Clinical Psychiatry (1999) surveyed a panel of psychotherapy experts and medication experts to rate the appropriateness of various treatments for PTSD. They were asked to rate treatments for different stages of the condition, different severity, different presenting symptoms and different age groups. Only a limited number of treatments were rated extremely appropriate by over half the panel, and these consensus recommendations are listed below. Although it did not achieve as strong consensus, psychotherapy was the preferred first choice over medication in all but the most severe symptoms, where opinion was split. Rather disappointingly, they were not asked in the survey to estimate the recovery rates in response to the various treatments. These recommendations may therefore either reflect experience of use or biases from professional and training backgrounds.

**Exposure Therapy** was recommended
Especially suitable for adults, and older adolescents and for intrusive thoughts, flashbacks and trauma related fears, panics and avoidance.

**Cognitive Therapy** was recommended
Especially suitable for adults, older adolescents and geriatrics and for guilt and shame or comorbid depression.

**Anxiety Management** was recommended
Especially suitable for adults, older adolescents and geriatrics.
Psychoeducation was recommended
Especially suitable for adults, older adolescents and geriatrics, and to prevent acute PTSD becoming chronic.

Medication: SSRIs Nefazodone and Venlafaxine were recommended
Especially suitable for comorbid obsessive compulsive disorder and panic disorder,
SSRIs especially suitable for comorbid unipolar depressive disorder, social phobia, women of child-bearing age,
Antidepressant and mood stabiliser joint therapy especially suitable for patients not responding to initial therapy.

There is also a relatively recent and novel form of treatment devised and described by Shapiro (1995) Eye Movement Desensitisation and Reprocessing (EMDR). Some argue that without the eye movement component, it is just good psychotherapy (Hyer & Brandsma 1997). What has been interesting has been the novel combination of therapy with neuroimaging.

Ochberg (1995) identified four main treatment methods:
1. Education, particularly about trauma and its effects, to give meaning to the symptoms and increase the person’s sense of control,
2. Holistic Health (health promotion) teach, coach, support and encourage the person in self care and healthy living,
3. Enhance Social Support and Interaction to reduce isolation, feelings of shame and to learn more adaptive coping,
4. Clinical Therapy (and Medication) to work through grief, extinguish fear reactions, and cognitive restructuring.

All these elements were in the treatment which subjects in this present study received.
The emphasis in most trauma treatment is on directive, educative, cognitive and
behavioural approaches, such an approach is outlined by Scott & Palmer (2000) and Scott and Stradling (2001).

The most studied and documented group of people for any aspect of PTSD are Vietnam War Veterans. Hammarberg and Silver (1994) presented an outcome of treatment report on a group of veterans, and commented on the relative lack of outcome of treatment studies. Major thought disorders, personality disorders and substance abuse disorders were excluded from their treatment and study. These individuals were chronic PTSD cases and underwent an intensive 90 day program of residential therapy, including individual and group work, involving imaginal flooding techniques, systematic desensitisation, psychodynamic therapy, behavioural modification, cognitive therapy, hypnosis, emotive and existential therapies. Of those completing treatment, 48% showed some or substantial gain, 39% showed no gain and 13% reported some worsening. At one year follow up, they had all returned to pre-treatment levels on PTSD measures. Once in its chronic form, PTSD is a very resilient disorder to most forms of treatment. Poor evaluations of treatments on chronic PTSD cases should not therefore be relied on as an indication of its effectiveness for earlier interventions.

Rogers (1998) adds another cautionary note in critiquing a number of veteran programmes showing similar poor results for intensive therapy programmes. She argues that many programs are not delivering what they describe themselves as delivering, particularly in relation to exposure therapy which is usually a well-rated therapy. Treatment failure may be due to poor application of treatment with an often difficult clientele.

1.3.5

Neurochemistry of PTSD

Major advances have been made in recent years on the neurophysiology and neuroendocrinology underlying PTSD. They point to a distinctly different response from the normal stress response. The results have been confusing at times, but one
explanation for this is the frequent complication of comorbid disorders and their independent effects on the brain’s biochemistry. For example, norepinephrine (catecholamine) levels are reduced in pure PTSD but appear normal if individuals have comorbid Major Depressive Disorder (MDD). This is because norepinephrine is usually raised in depression. The norepinephrine levels were shown to be significantly associated with the severity of the depression (Yehuda, Siever, Teicher, Levengood, Gerber, Schmeidler & Yang 1998).

Glucocorticoids are chronically lower in PTSD than in other psychiatric disorders or in trauma-exposed individuals without PTSD. (Yehuda 1995). This reduction in cortisol is the opposite of what would be expected in a normal stress type response (Yehuda et al 1995). Therefore the underlying chemistry of PTSD is distinctly different from what might be expected if it was simply an extreme stress reaction. The level of cortisol usually indicates the presence of stress and the amount of stress in an individual. During stress, neuroreceptors in the brain stimulate the release of corticotrophin releasing factor (CRF) from the hypothalamus, which then initiates release of adrenocorticotropic hormone (ACTH) from the pituitary, which in turn releases cortisol from the adrenals.

Cortisol levels can be measured non-invasively in saliva which has enabled some useful studies. Salivary cortisol levels have been negatively correlated to the intrusive symptoms of PTSD (Kellner, Baker & Yehuda 1997). So the lower the cortisol levels the more intrusive imagery symptoms the individual experiences in their PTSD.

Yehuda (1997) reports on unpublished work by Mc Farlane showing that cortisol response immediately following a car accident predicted clinical outcomes: the cortisol response was lower in those who developed PTSD and higher in those who developed depression, than those with no clinical outcomes.

Yehuda (1999a) suggests that PTSD is a biological sensitisation following stress due to pre-existing risk factors, a post-traumatic sensitisation, not a stress disorder. In a series of articles, Yehuda (1997, 1998, 1999) reviews and attempts to explain and reconcile the conflicting studies on the role of cortisol and the Hypothalmic-Pituitary-
Adrenal Axis HPA.

A low or lowered cortisol response has been found in other situations and is often associated with chronicity of highly or traumatically stressful events, including persons exposed to highly stressful, chronic, occupational tasks, or nurses subjected to particularly stressful, work-related responsibilities (Hellhammer & Wade 1993). The Bristol Study (Smith et al. 2000) made similar findings of normal cortisol levels in workers with high work-related stress.

Their cortisol levels, although falling in the normal range, would be better described as lowered from what would be expected in a high stress group. It is a normal level, but not a normal response under the circumstances or compared to other stress indicators.

In the context of this study, further clarification of the cortisol conundrum holds great promise. If the underlying chemistry can be fully understood, then there may be a simple chemical test to determine whether those with PTSD type symptoms following prolonged duress are a disorder of extreme stress or actually PTSD. The question is also raised whether those experiencing an already lowered cortisol response to workplace stress are at a greater risk of being traumatised and developing PTSD. An alternate explanation may be that those who are more susceptible to workplace stress have an under-active cortisol response for regulating and turning off their fight or flight response, and therefore they suffer more from prolonged raised levels of adrenaline.

1.3.6 Neurophysiology of PTSD

A number of neurophysiological differences have also been observed in those with PTSD, many associated with the components of the limbic system. The normal role of the hippocampus is more fully reviewed by Stein, Hanna, Torchia & McClarty (1997). It has a role in fear-related learning and memory. Reduced
hippocampal volume of up to 22% has been found in people with PTSD, even after controlling for alcohol abuse which also reduces the hippocampus (McEwen 1999). This effect is not found in trauma-exposed people with no PTSD. Stress and glucocorticoids (cortisol) can damage the hippocampus, but since cortisol levels are unexpectedly low in PTSD, cortisol would not seem to be directly responsible for this atrophy. Yehuda (1997) suggests that the increased glucocorticoid receptors in PTSD cases (sensitivity) may mediate this atrophy, in spite of the low levels of cortisol.

The hippocampus is a very plastic organ, undergoing quite rapid selective atrophy in a number of disorders. The hippocampus can be plastic undergoing reversible atrophy, and it can also be vulnerable to permanent cell loss. Animal studies show adrenal steroids produce reversible atrophy, resulting in cognitive impairment in learning spatial and short term memory tasks (McEwen 1999). It is thought some of the cognitive impairments associated with high cortisol (high stress) may be due to hippocampal atrophy. Adrenal steroids can cause short term reversible deficits in episodic and spatial memory in humans; repeated continued elevation in humans also leads to cognitive dysfunction and affects selective attention and memory consolidation. Van der Kolk (1996) suggests hippocampal atrophy may be associated with behavioural disinhibition leading to more sensitive arousal and to difficulties taking in or processing arousing material or learning from such experiences. This suggests some of the symptoms of PTSD may also have a neurophysiological dimension and may not simply be a cognitive or event processing problem.

The amygdala is another component of the limbic system. It is the interface between sensory experience, the brain’s cognitive information, and the biochemical and behavioural systems which ultimately must respond to the information. It determines if there should be a stress response, and if so, it begins the process of activation (Yehuda 1999c). The left side of the amygdala is also reduced in PTSD. Intense stimulation of the amygdala can produce lasting changes in neuronal excitability and enduring behavioural changes in the direction of fight or flight. In animals,
stimulation through trauma may exaggerate the animal’s existing personality.

The effects of comorbid conditions, and multiple causes for atrophy of different brain structures have resulted in very conflicting and confusing findings. Gradually these problems are being identified, controlled for, and eliminated. Coupled with major advances in brain imaging, a clearer picture is emerging.

Teicher (2000, 2002) attempts to draw together these and other neurophysiological observations into a coherent explanation which associates these changes with early life stress, commonly resulting from abuse or neglect. Observations of reduced right hippocampus volume, reduced amygdala volume, and over-excitement of the amygdala are found in a number of conditions: PTSD, Borderline Personality Disorder and Temporal Lobe Epilepsy. These share many common symptoms such as hallucinations of all the five senses, distortions of reality, feelings of deja vu and mind-body dissociation. The language and terminology used in each of these disorders is different, but essentially they are describing similar experiences. The occurrences of these types of conditions are associated with childhood abuse before the age of 18, physical, emotional or sexual, but particularly with multiple forms of abuse. This refers to any form of abuse or neglect which results in raising the stress hormones. Early life stress alters the structure of gamma aminobutyric acid (GABA) receptors resulting in increased amygdala sensitivity, and the resulting overactivity of the limbic system leads to the symptoms described above and aggression, exasperation and anxiety. Abuse affects a number of other brain structures and functions, Electro Encephalograph (EEG) coherence testing has found that the left cortex in normal control subjects is more developed than the right, consistent with left hemisphere dominance or right handedness. Those who have been maltreated have normal right cortex development but their left (dominant) cortex is less developed than the right.

Joseph (1996) believes the hyperarousal of trauma functionally inactivates the left
hemisphere, and the emotional memory is encoded primarily on the right and is not available to the left once the trauma is over until an environmental stimulus reacts it. Teicher's (2000 & 2002) proposal links early childhood neglect, abuse or trauma to later life difficulties in processing traumatic events, exaggerated response to traumatic events, dissociation during traumatic events, inability to extinguish these effects, and the development of PTSD.

Events from early childhood until present day have an impact on a person’s personality and these need to be taken into account when looking at the affects of bulling on an individual, which will be explored in the following section.
1.4 THE RECURRING THEME OF PERSONALITY

1.4.1

Sensed Patterns

In this review of the role of personality in bullying, the author aims to capture the sensings of those immersed in the field of bullying, workplace bullying and personality, then test and triangulate these sensings against the objective findings of those attempting to describe or measure these phenomena and those attempting to formulate patterns or theories to account for them.

Whilst each school of psychology has different theories on the development and operation of personality, they generally agree that personality is the dynamic and organised set of characteristics possessed by a person that uniquely influences his or her cognitions, motivations and behaviours in various situations (Ryckman 2000). It can also be thought of as a psychological construct, a complex abstraction that encompasses the person’s unique genetic background and learning history, and the way in which factors influence his or her responses to various environments or situations.

The Encyclopaedia Britannica (Britannica 2002) defines personality as the characteristic way in which an individual thinks, feels, and behaves; it accounts for the ingrained behaviour patterns of the individual and allows the prediction of how he will act in particular circumstances. Personality embraces a person’s moods, attitudes and opinions, and is most clearly expressed in his interactions with other people.

A common pattern noted among those who study bullying, who interview parties involved in bullying, or who get drawn in to resolve problems between individuals, is that they often attribute some causal role in what is happening to Personality. The propositional idea that personality is involved is usually not backed up by scientifically rigorous or objective testing. Andrea Adams (1992) quotes Christine, a
victim she interviewed, who said of her bullying workplace colleague, "He fitted a psychopathic personality to perfection". This colleague’s described behaviour would be consistent with such a claim, but he was never tested for Antisocial Personality Disorder (psychopathy).

Without such a test, no specific theory of personality can be drawn upon to explain the actual dynamics of what might be happening or to point towards a possible resolution.

However from his own experience Carl Rogers (1990a) believed that his 'sensings' of situations were ultimately more reliable than his intellectual calculations. "When I have trusted some inner non-intellectual sensing, I have discovered wisdom in the move."

Rogers (1990b) also said

"It appears if I want to become a scientist, the first step is to immerse myself in the phenomena of the particular field in which I have developed an interest....Out of this immersion in phenomena, certain things 'come to mind.' I may find some sense of pattern, or rhythm, or relationship emerging.... this subjective sense of pattern is something to be nourished, no matter how absurd it may seem when scrutinised by conscious thought....It appears the discoverer of knowledge feels a trust in all his avenues of knowing: unconscious, intuitive and conscious. It is the intuitive sensing of pattern which is all important in science".

"We sense patterns long before we can consciously formulate one," says Carl Rogers, "a pre-logical, intuitive...dimly sensed gestalt of a hidden reality" (Rogers 1990b).

Robson (1993) expresses similar ideas to Carl Rogers, that 'Real World' research requires the researcher to become immersed in the culture in order that 'persistent observation' and 'prolonged involvement' be achieved. Robson further pointed out the need to then 'triangulate' these findings with data from other sources.
1.4.2

**Something Different**

Bullies and victims do seem to have distinct personalities. Randall (1997) has extensively interviewed bullies and victims, and refers to a bully personality and a victim personality, giving a chapter to the development of each in 'Adult Bullying'. He says,

"On the basis of considerable personal experience, I have discovered that bullying children are different in many fundamental ways from non-bullying children and certainly from their victims. Like many other researchers, I have noted a particular cognitive make up, a distinctively hostile intention to others, no matter how slight the provocation might be. In fact, there is often no provocation, just an invented one, in order to excuse or justify the bully’s aggressive behaviour".

Randall recognises a pattern of cognitions, behaviours and attitudes, and sees the bully as unable to process information in an accurate way or to make a realistic judgement as to the intentions of other people, which results in the bully viewing others as hostile, and therefore seeks revenge.

TMR Network Project (1999) explored the dynamics of peer bullying using retrospective semi-structured interviewing of a group of children, adolescents and young adults. The sample size was small, but the interviewees attributed the three main causes of bullying as

- previous interaction between victim and aggressor,
- social reinforcement of the aggressor’s behaviour,
- followed by personality traits of victim and/or aggressor.

A bully’s behaviour may be justified as being their particular personality or managerial style. Andrea Adams (1992) gives a chapter to exploring the difference between 'Bossy or Bully'. She states that personality may be the cause of the bully’s behaviour, like Christine's (Adams 1992) description of her colleague with a
'psychopathic personality'..

Personality may be seen as a component in the victim’s experience of the situation, with the explanation that their sensitivity or lack of assertiveness is a weakness of personality.

Randall (1997) presents the argument for social withdrawal contributing to victimisation. Social withdrawal encompasses reduced exploration in novel social situations, social deference, timidity, submissiveness, social wariness or anxiety about interactions. Attitudes of low self-esteem and acceptance of low status are also forms of social withdrawal (Hymel, Woody & Bowker 1993, Randall 1996).

Those who choose withdrawal from general social settings, because they make them uncomfortable, put themselves in a more isolated position and may be more vulnerable to targeting by a bully. They may also find themselves less skilled in handling such an intrusive social encounter and less connected for drawing on the social support of others.

Personality may be seen as a component in the interaction between the two individuals with the explanation that it is a clash of personalities or a personality conflict. Randall (1997) lists a clash of personality as one among a number of possible individual differences which may be the cause of harassment.

The large scale work-based questionnaire surveys undertaken by trade unions (MSF 1995, UNISON 1997) and employer organisations (IPD 1996) focus very much on the observable behaviour of individuals considered to be bullies, which is only one dimension of their personality and is only one side of the bullying dynamic. This observed behaviour is only the end product of the interactions between all the personalities involved within a particular environment.

Coyne, Seigne & Randall (2000) studied 120 adult bullies and victims using the ICES Personality Inventory (Bartram 1994, 1998). ICES measures individuals on the factors of Independence, Conscientiousness, Extroversion and Stability. These are related groupings of thinking, feeling and behaviour. They found modest but significant differences. Victims scored lower than non-victims on Stability, indicating...
they were more anxious, sensitive, and emotional. Victims also scored lower than non-victims on Extroversion, indicating they were more introverted, quiet and reserved.

On Independence, particularly the assertiveness sub-scale, victims tended to be more submissive and non-controversial. However on Conscientiousness, victims scored higher than non-victims particularly on the organised sub-scale. Conscientious people are traditional, detail-conscious and rule-abiding.

This suggests that those who are more likely to be victimised in bullying are more anxious, sensitive, emotional, introverted, quieter, reserved, traditional, fussy and rule-abiding than non-bullied individuals. Their study supports the idea that there are stable personality characteristics which are associated with victimisation. Leymann (1996) urges caution interpreting similar findings, suggesting such characteristics may develop as the result of bullying rather than pre-existing it. Olweus (1993) and Schwartz, Dodge & Coie (1993) however, in school-based studies, showed similar characteristics pre-existing in those later bullied.

This may be the basis for the impression that those who are victims are overly sensitive; but is that a weak area in which they should be supported and afforded extra protection because others take advantage of them, or an excuse to dismiss their claims as imagined and not of substance?

1.4.3 Personality Disorders

As a group, those who campaign on behalf of victims of workplace bullying, such as Field (1996), are particularly immersed in the subject. Many have themselves been the victims of adult bullying, and they align themselves very closely with the victim and focus their attention solely on the behaviour of the bully.

Heinz Leymann (1996), a leading pioneer in the study of workplace bullying or mobbing as he termed it, was opposed to the idea that personality could in any way predispose an individual to become a victim of workplace bullying. However, Field
(1996) sees personality as an important component in the behaviour of the bully. He sees adult bullies as having a "psychotic personality" and to be suffering from a "psychopathic disorder". He also refers to them as "socialised psychopaths" or "sociopaths".

On his website 'Bully Online,' Field (2001) makes further claims of associations between habitual bullying and Antisocial Personality Disorder, Narcissistic Personality Disorder, and Paranoid Personality Disorders. The evidence is anecdotal, and he describes the bullies with the carefully constructed phrase 'exhibits behaviours congruent with the diagnostic criteria for....' He also reports the opinions of some visitors to the website who have suggested that the bullies they have personally encountered may exhibit characteristics of Borderline Personality Disorder, BPD.

Personality disorders appear to be deeply ingrained patterns of maladaptive feelings, thinking and behaviour, present throughout life. They are characterised by behaviour patterns rather than by symptoms which typify the clinical syndromes. There is usually a spectrum of behaviour from full blown disorder, fairly rare, to specific personality traits which are relatively common (Meir, Minirth, Wichern & Ratcliff 1991). Having one or two traits is normal, but when there are enough traits to impair occupational or social functioning, a disorder is present. In addition, for a specific diagnosis to be made, disturbance must have been evident before the age of 15. Observation of particular traits does not mean the person has a personality disorder. Sherman (1999), commenting on the differentiation of 'Conduct Disorder' from simply bad conduct, quotes Dr Haroun, supervising psychiatrist for Superior Court of California, San Diego, who says in adults

"antisocial personality disorder is clearly differentiated from antisocial behaviour which is given a V code in the DSM-IV (APA 1994) indicative of a condition not a disorder."

Expressing some antisocial conduct, therefore, does not mean the person has an antisocial personality disorder. Tim Field and some other anti bullying campaigners such as the Canadian based Campaign Against Workplace Bullying (CAWB 2002),
who draw a lot of material from Field's publications, are not rigorous in making this distinction between having a number of traits and having a disorder. They label individuals with a few traits as having a personality disorder, and hence imply that they are psychologically ill. Others challenge the construct of personality disorders and whether they should be regarded as illnesses. Scott & Stradling (2001) say the diagnostic criteria in the Diagnostic and Statistical Manual (APA 1994) are driven primarily by the needs of researchers to create dichotomy to define a client as either having or not having a condition. Dichotomy defines people as ill or not ill, but personality disorders are not so black and white.

The personality disorders described in diagnostic criteria are ideal or extreme types of personality and, as such, are rare compared to a wide spectrum of people who express certain antisocial behaviours.

Most bullying is likely to be due to those with a few antisocial tendencies rather than those with full Antisocial Personality Disorder. The psychopathic, antisocial bully is as extreme a caricature as that of the wimpish victim.

The Canadian-based, Campaign Against Workplace Bullying (CAWB 2002) website, compares the behaviour of bullies to Antisocial Personality Disorder APD and also to Narcissistic Personality Disorder NPD. They give the following descriptions quoted from Namie & Namie (1998).

Antisocial Personality Disorder is a pervasive pattern of disregard for, and violation of the rights of others as indicated by 3 or more of the following:

- deceitfulness, as indicated by repeated lying, or conning others for personal pleasure,
- irritability and aggressiveness, as indicated by repeated assaults or conflicts,
- reckless disregard for the safety of others,
- lack of remorse, being indifferent to, or rationalising having hurt or mistreated another person,
- repeatedly performing acts that are grounds for arrest.
Additionally, the person must be over 18, have had a record of similar behaviours before the age of 15, and not be schizophrenic (which would account for some of the above behaviours).

Narcissistic Personality Disorder is a pervasive pattern of grandiosity (in fantasy or behaviour), need for admiration, and lack of empathy, as indicated by 5 or more of the following:

- believes that she or he is "special" and unique and can only be understood by, or should associate with, other special or high-status people (or institutions),
- has a sense of entitlement, unreasonable expectations of especially favourable treatment, or automatic compliance with his or her expectations (e.g., subservience by others),
- is interpersonally exploitative, takes advantage of others to achieve her or his own ends,
- lacks empathy, is unwilling to recognise or identify with the feelings and needs of others,
- shows arrogant attitudes or behaviours,
- has a grandiose sense of self-importance, exaggerates achievements and talents, expects to be recognised as superior without earning it,
- is preoccupied with fantasies of unlimited success, power or brilliance,
- is often envious of others or believes that others are envious of her or him,
- requires excessive admiration.

[These checklists are modifications of the original criteria from the DSM-IV (APA 1994) (Diagnostic and Statistical Manual of Mental Disorders, American Psychiatric Association).]

The requirement in the diagnostic criteria for personality disorders for the condition to have been evident before age 15, points towards links between childhood antisocial behaviour and adult antisocial behaviour. Randall (1997) gives anecdotal case
histories of adult bullies and victims who were school day bullies and victims respectively. He traces the development of aggression through from pre-school, and suggests that the adult bully is a continuation of a pattern of behaviour evident from early childhood. This would indicate that insight from the more thoroughly studied area of childhood bullying may be useful to the understanding of adult bullying.

Not only is the tie between adult bullying and personality disorders tentative, the validity of the construct of the personality disorders is also controversial. Gunderson & Ronningstam (2001) reviewed the clinical and empirical overlapping of Antisocial Personality Disorder (APD) and Narcissistic Personality Disorder (NPD) and questioned if they merited being separate disorders as in the DSM-IV (APA 1994). They saw the narcissist’s grandiosity, the tendency to exaggerate their own talents and regard themselves as more superior or unique, as the main distinguishing features between NPD and APD, and not of sufficient importance to justify separate disorders. The European equivalent to DSM-IV (APA 1994), the ICD-10 (World Health Organisation 1992) does not recognise Narcissistic Personality Disorder as a specific entity in its own right, but groups it among 'other personality disorders'. Even the validity of APD has been questioned because of the lack of longitudinal studies (Moran 1999).

The difficulty with identifying psychological disorders simply by observation, as some antibullying campaigners tend to do, is that many disorders share overlapping sets of common symptoms. There is also a high rate of comorbidity in psychological disorders. In other words if someone has one psychological disorder, it is not uncommon for them to have at least a second or third disorder. Simply observing the indicators of one disorder in a bully does not mean that this specific disorder is the primary cause of their bullying. There needs to be a construct to explain how the disorder interacts with all the other dimensions of the whole person to produce the particular patterns of behaviour we call bullying.

One characteristic of bullying is the phenomenon of targeting victims. There is no
evidence in the normal expression of NPD or APD of a particular targeting except on the basis of proximity; in other words, those physically closest to the person with the disorder, whether in their family, school or workplace are the most likely to be victim of their behaviour. It is implicit in the definition and description that this is a generalised pattern of behaviour rather than a restricted or targeted one. Cavaiola & Lavender (1999) surveyed 1018 workers and found 88% reported encountering an individual at work who they considered difficult to work with and who caused them distress.

Working with colleagues with more extreme personalities or minor mental health problems can be stressful and perhaps more so when they are one’s line manager. Some may be more difficult to work with than others, and some people may find them more difficult to work with perhaps because of things they struggle with themselves. Concepts need to be developed to distinguish between bullying and working with colleagues with mental health problems. Those with mental health problems should not be confused with bullies or seen as potential bullies.

1.4.4. Psychological Disorders

Certain Antisocial and similar Personality Disorders such as APD or NPD might explain some unacceptable behaviour by colleagues and managers in the workplace. Personality Disorders are not the only psychological disorders. In the literature on workplace bullying, little attention has been given to the effects of working with colleagues with various other psychological disorders even though some of these disorders such as Conduct Disorder, CD, in DSM-IV (APA 1994) specifically includes bullying as a major feature of the disorder, as well as deceitfulness and violation of rules.

Among children, there is a growth in the awareness and diagnosis of various disorders
such as Oppositional Defiant Disorder (ODD), Conduct Disorder (CD), Attention Deficit Disorder (ADD), Attention Deficit Hyperactivity Disorder (ADHD), Autism, Asperger's Syndrome (AS) and Dyspraxia. In the USA, ADHD has become the most widely used mental health diagnosis with children (National Institute of Health 1998). These disorders share many common symptoms with each other and with characteristics noted in bullies or in people with Antisocial Personality Disorder, including difficulty maintaining attention, risk taking and hyperactivity. Childhood hyperactivity, risk taking, failure to persist at tasks, aversion to routine activities and a restlessness in an unchanging environment have been associated with Antisocial Personality Disorder (Zuckerman, Buchsbaum, & Murphy 1980). Regular bullies exhibit a lot of externalising behaviour and are aggressive, annoying to others, disruptive, overactive, or restless and inattentive (Randall 1997). Some have observed hyperactivity in bullies (Craig, Peters & Konarski 1998) and poor attention control in provocative bullies (Olweus 1993).

There are indications that these disorders do not simply coexist but can combine to effect new behaviour patterns. Individuals with AD/HD and Depression may be at greater risk of impulsive acting out (Watkins 2001) or what others refer to as externalising, a feature noted among bullies.

Weiner (2001) in an address to the Congressional Children's Caucus Briefing on Bullying said bullying is often the result of psychiatric disorders, and he identified three causes, Conduct Disorder, Oppositional Defiant Disorder and Depression, as the main contributors. Cushman & Johnson (2000) have questioned whether ADHD is a distinct psychological disorder or actually a form of childhood depression.

The DSM-IV (APA 1994) recognises that depression in children can be expressed differently and in disguised forms from the picture seen in adults. Pollack (1998) suggests depression is often missed in boys because the keys used to diagnose
depression are inappropriate for them. Pollack argues that boys' tendency to externalise or act out their pain results in a different expression not traditionally associated with depression, including angry outbursts, conduct problems and increased aggressiveness.

Bullies also share this trend to externalise their problems in various forms of antisocial behaviour, whilst victims tend to internalise with more emotional symptoms (Craig, Peters & Konarski 1998). So depression is also worth consideration as a contributory component of bullying. Increased levels of depression have been found in bullies and victims (Kaltiala-Heino, Rimpela, Rantanen & Rimpela 2000). Depression is understandable in victims, but its presence is more difficult to explain in bullies unless, as suggested, it also has a contributory role in the behaviour.

The following illustration by Biederman and Faraone (1996) illustrates the degree of comorbidity between ADHD and other psychological disorders:

![Diagram showing comorbidity between ADHD and other psychological disorders.](image)

If bullying has an explanation in personality or psychological disorders, it is more
likely to be in terms of a combination and interaction of several disorders rather than a single source.

Support groups for specific disorders often describe behaviour in more everyday language than diagnostic criteria. Teen New Horizons (Teen New Horizons 2002) describe teenagers with ODD provoking fights between others, manipulating outsiders to believe they are the victims in order to blame others, exploiting existing weaknesses in families or groups and aggravating the situation. There are similarities between these and more indirect forms of bullying. ODD is also viewed as a milder form of Conduct Disorder, CD, which specifically names bullying as a feature of the condition, and in its more severe forms as a risk factor for the development of full CD (Teen New Horizons 2002).

Olweus (1999) makes the cautionary warning that not all bullying is aggressive and not all aggression is bullying. He claims that there are many general causes of frustration, anger and tension that may cause people to be aggressive in manner and attitude to each other, certainly on a sporadic and intermittent basis, which may account for up to 50% of reported bullying cases.

Stress may play a significant role in sporadic aggression between individuals, and in a high female profession such as nursing, the role of pre-menstrual tension, the menopause and undiagnosed post natal depression would be areas deserving investigation for their role in sporadic interpersonal conflict.

It might be more valid to separate into two constructs the issue of working with colleagues with identifiable psychological/personality disorders, and the issue of working with colleagues who are bullies, to determine if these are separate issues. Again, this is very relevant to nursing with its high rate of minor mental disorders (Borrill et al 1996).
1.4.5

**Antisocial Personality Disorder**

Whilst the claim that most people who bully are psychopathic is probably excessive, the role of Antisocial Personality Disorder (APD) and antisocial traits in bullying merits closer examination.

Mealey (1995) says antisocial strategies are not restricted to sociopaths. She points out that the majority of people arrested are not sociopathic, and that many people exhibit antisocial behaviour.

When bullying occurs at a high level in a professional organisation, those who bully must have good enough social functioning to have attained such a position of power and responsibility in the organisation; if they did have some psychological or personality disorder, it might be expected that the condition would be sub-clinical and not fully expressed. Those with full blown APD often end up in crime (Mealey 1995). They find normal advancement through traditional formal education difficult and do not have the capacity for senior levels of power or position. It is therefore difficult to be certain that reports of increased levels of the personality traits neuroticism and psychoticism among children involved in bullying (Mynard and Joseph 1997, Connolly & O'Moore in press) are reflected in relational adult workplace bullying within a professional setting.

Sociopaths are a not insignificant group within the population, and to equate them with bullies and tyrants does them an injustice. Typically sociopaths exhibit what is generally considered irresponsible and unreliable behaviour under a veneer of sociability and charm which conceals a deficit of the social emotions (Mealey 1995). There are a number of expressions of sociopathy, some of which show skilled social behaviour such as Machiavellianism, described by Christie & Geis (1970), and which is a sub-clinical condition.
The genotype of Primary sociopaths determines them to a certain inborn temperament or personality. Hans Eysenck (1977, 1987) (Eysenck & Gudjohnsson 1989, Zuckerman 1989) extensively researched the link between temperament, personality and sociopathy. He showed that sociopathy and antisocial behaviour were both correlated with high scores in the personality types Extroversion, Neuroticism and Psychoticism. In males, delinquency and antisocial activity have also been linked to other heritable temperament attributes of anger, impulsivity, and deceitfulness (Rowe 1986).

The implication for this is that primary sociopathic bullying would be more likely in environments where there is little change or challenge, but less likely in high change, high challenge, and hence high stress, environments.

1.4.6
Machiavellianism & Hypercompetitiveness

Machiavellianism shares with sociopathy high psychoticism and neurotiscism scores on the Eysenck scale and low serotonin levels. It also shares similar sex and age distributions (Mealey 1995).

Hypercompetitiveness, or Machiavellianism, is a sub-clinical form of antisocial and/or narcissistic behaviour which has many similarities to bullying.

Hypercompetitives have a low provictim attitude, blaming victims in general, not just those they personally victimise, as losers (Kaczor, Ryckman, Thornton, Kuehnel 1991).

Sutton, Smith and Swettenham (1999a) saw bullies as skilled manipulators who use psychological skills to manipulate the minds of others and cause them distress. They viewed bullies as aware of the feelings of others, but unable or unwilling to share in these feelings with others. They used the word Machiavellianism to describe them. Sutton & Keogh (2000) found children categorised as bullies scored significantly
higher than controls on Machiavellianism and significantly lower on pro-victim attitudes. They don't empathise well with those in a competitive disadvantage to themselves or to others.

Cattell (1979) emphasised the importance of the interplay between personality traits and situations in the selection of strategic behaviour. Competition is central to Machiavellianism. It is one of the most important situational variables influencing the choice of immediate strategy (Mealey 1995). Competition increases the use of antisocial and general Machiavellian strategies (Christie & Geis 1970).

Menesini, Melan & Pignatti (2000) studied the interaction of bullies and victims in competitive and co-operative settings. In bully / victim interactions, the bullies showed a dominant role often modifying or opposing the victim's initiatives, which the victims complied with in a submissive style. But in interactions with controls, the bullies opposed less often, while victims in interactions with controls affirmed themselves more often, asking for help and co-operation. Bullies and victims alike being more co-operative with controls follows the expected pattern of people being more co-operative with those more like themselves (Rushton, Russell & Wells 1984, Russell 1989). Where there is a perceived major difference with the other, bullies compete while victims submit.

Hypercompetitives (aggressive neurotics) earn position and prestige through achievement: they would get results. They would be very hard working, successful and well thought of because of that. They might not be so well-connected socially or recreationally, not forming very close relationships with others, but they would be good at networking. Such a person would do well and go far in a corporate organisation. This sort of person rather than the clinical sociopath or psychopath is more likely to be sort of bully found in middle to higher management in an all graduate entry profession.

Competitiveness, when taken to extremes, can be an indicator of underlying problems in the individual or can be harmful to those being competed against. Karen Horney
(1937) described Hypercompetitiveness as an indiscriminate need to compete and win, and to avoid losing at any cost, in order to maintain or enhance self worth. So bullying might be seen as an expression of extreme competitiveness to maintain or enhance self worth. Studies of self esteem among those who bully, however, are often conflicting with some reporting low self esteem in bullies (O'Moore 1995, O'Moore & Hillery 1991), and others reporting high self esteem among aggressive children and bullies (Olweus 1997). O'Moore and Kirkham (2001) reported lower overall self esteem among those who bullied, but commented that pure bullies, in some areas such as attractiveness, attributes and popularity, rated themselves as highly as those not involved in bullying. Variations in studies of self esteem levels might be due to the items which are measured to assess that self esteem. Straub (1999) suggests bullies may organise their self esteem around items of strength, power and physical superiority over others. So perhaps bullying or hypercompetitiveness enhances some aspects of the bully’s self concept, and they also reorganise their concept of self esteem to value the things they feel good about and undervalue the things they do not see themselves as good at, such as academic achievement. The contribution something makes to a person’s self esteem is how highly they rate themselves at it, multiplied by the value they put on it. If bullies have a different set of values and a different construction of self esteem than others, then different methods used to measure self esteem, which usually concur when studying normal individuals, might give differing results when applied to those who bully. However the researchers construction of self esteem also needs examined, O'Moore (1995) using a children’s version of Cattell’s 16 PF (Porter & Cattell 1975), to test the personality of bullies, victims and bully/victims found these groups lower on factor B, intelligence, compared to those not involved as bullies or victims. O'Moore (1995) variously described them as having lower scholastic academic ability, less bright, and lower intellectual and school status. If this lower intelligence is an objective fact measured by Cattell's 16 PF test then any self-esteem instrument which contains scales which enquire about the person’s assessment of their intellectual performance
or school status will already have a built-in factor lowering the assessment of their self-esteem. The Piers-Harris Self Concept Scale (Piers 1984) used by O'Moore (1995) and O'Moore and Kirkham (2001) is such an instrument. A realistic assessment by the respondent of their actual intellectual status will be assumed by the instrument to be an indicator of lowered self-esteem. In an academic context, such as school, the objective fact of lower intelligence may have a potential for lowering one's self-esteem, since academic ability is so highly valued in that context, but it is by no means automatic. In a non-academic context where other abilities the person has are more valued, their academic ability, or lack of it, may not affect their self-esteem. Differences in the construction of test instruments and the weighting given to component parts may account for different findings in respect of the role of self-esteem. However, they do not explain how the same workers using the same instrument can in one study (O'Moore 1995) find no statistically significant difference between pure victims or pure bullies and controls on self-esteem, and in another study (O'Moore and Kirkham 2001) find a significant difference between both pure victims and pure bullies and controls. The differences in self-esteem between pure victims or pure bullies and controls would seem to be quite small and close to the threshold of significance, making the final findings susceptible to other minor inter-study variations.

Horney was a psychoanalyst who emphasised cultural and social conditions in the development of neurosis. She believed our society's heavy emphasis on competition and individual success, even in 1937, could lead to unrealistic fears of failure or of being inferior. Horney (1937) saw hypercompetitiveness as an indiscriminate need to compete and win and to avoid losing at any cost as a means of maintaining or enhancing one's feelings of self-worth. Hypercompetitiveness involves feelings and thoughts of manipulation, aggressiveness, exploitation and derogation of others. They have unconscious feelings of powerlessness and insignificance produced by a verbally and physically abusive upbringing. In order to overcome their self-perceptions of inadequacy and
inferiority, they fantasise about attaining unlimited success and power. They striving for personal superiority, showing a grandiose sense of self importance, and exhibitionism designed to win attention.

They are ruthlessly single minded, perceive others as malevolent, and believe, for survival, they must distrust others. They become hostile, dogmatic, arrogant, aggressive and derisive of others (many similarities to Antisocial Personality Disorder).

This exaggerated or hypercompetitiveness as described by Horney embraces many features of antisocial, narcissistic or Machiavellian behaviour as well as bullying. Horney (1945) describes the attitudes and behaviour of the parent who has adopted society's hypercompetitive values.

"direct or indirect domination, indifference, erratic behaviour, lack of respect for the child's individual needs, lack of real guidance, disparaging attitudes, lack of reliable warmth, having to take sides in disagreements, isolation from other children, injustice, discrimination, hostile atmosphere and so on ".

Connolly and O'Moore (in press) found similar negativism to that above in the families of bullies supporting Olweus (1978b) who described negativism, on part of mother, including lack of warmth and involvement, permissiveness of aggression, and power-assertive child rearing, in the families of children who bully.

Hypercompetitives endorse a very self contained individualism, with little concern for others, whereas individuals who are high in what is called 'personal development competitiveness' are more caring and respectful to others (Ryckman, Libby, van de Borne, Gold & Lindner 1997). There is a difference between this dysfunctional hypercompetitiveness and a healthy competitiveness.

Those with Machiavellian tendencies may like flying close to the wind, but they would be successful and well connected in their profession, and it would only be in an encounter with a low mach, such as the victim type described by Coyne, Seigne & Randall (2000), that their behaviour might become more extreme and step over the
Machiavellians and Hypercompetitives are very similar, and Christie and Homey may be describing the same thing in two different ways. Both these types of people might be potential bullies given the right setting and/or victim. In a setting where such a person was frustrated from advancement, not recognised for achievement or not given the opportunity to perform to their full potential, they could easily turn their frustration on any colleague or subordinate who stood out for whatever reason. Machiavellians and Hypercompetitives would also be people with a darker side which may only be seen by those who compete with them or in some other way challenge them or pose a threat to them.

It would appear that frustration, provocation or some unique psychological component to the interpersonal relationship between them and a particular person, could cause them to victimise another person, in order to protect, maintain or enhance their sense of self worth, a self worth based on power, position and achievement.

In a smaller study of pure bullies, 6 - 16 years old, Connolly & O'Moore (in press) used the Junior Eysenck Personality Questionnaire (Eysenck & Eysenck 1975) and found those who bullied were higher in Extroversion, Neurotiscism and Psychoticism than those who did not bully. This profile would appear to match Eysenck's (1977) profile for antisocial tendencies, and longitudinal studies suggest these traits are stable from childhood to adulthood (Eysenck & Eysenck 1985). However, the study found some intra-group differences, namely that levels of Neuroticism were significantly higher in girls who bully than boys who bully, and that levels of Neuroticism and Psychoticism were significantly higher in primary school bullies than post-primary bullies. This would suggest that whilst profiles may persist over time, the strength of the component traits may reduce. Differences may therefore be less marked in adults or when looking at an all male profession. They found no significant difference between bullies and controls on the Lie scale.
O'Moore and Connolly (in press) also used the Family Relational Test (Bene & Anthony 1959), which indicated that the pure bullies had significantly more negative and ambivalent relationships with their parents and siblings than the controls.

In adults, Machiavellianism or Hypercompetitiveness, rather than either clinical Antisocial Personality Disorder or clinical Narcissistic Personality Disorder, are two patterns of attitude and behaviour which would approximate to the more serious forms of frequent, non-violent bullying occurring in the mid to higher levels of management in professional organisations with tertiary level education entry and performance-related career development.

1.4.6

Profiling of Bullies and Victims

Much of this work undertaken to characterise or personality profile bullies and victims has concentrated on childhood bullying. The relationship that is emerging between aspects of personality and bullying is a complex one, with differing character attributes being associated with the roles of bully, victim, bully/victim, supporter or onlooker, and with the degree of these personality characteristics varying with the individual’s frequency of involvement in these roles (O'Moore & Kirkham 2001). As described previously above, there are indications that childhood antisocial attitudes and behaviour patterns continue into adulthood, but it is not firmly established that childhood antisocial behaviour is the antecedent of non-aggressive relational adult bullying.

For example, O'Moore’s (1995) reported lower intelligence in childhood bullies using Cattell’s 16 PF does not easily equate with the Irish Taskforce (2001) finding that those in professional jobs with tertiary level education entry are the most likely group to experience bullying in the workplace. Typically the bullies in these situations were in supervisory or managerial positions in the profession and therefore it could be assumed to be above average in intelligence. Low intelligence childhood bullies and
graduate professional bullies do not appear to be the same group of people.

As part of a nationwide study of bullying and victimisation in Ireland, O'Moore and Kirkham (2001) showed that not only did bullies and victims have a lowered global self esteem relative to children not involved, but there was also a relationship between the frequency of their bullying and victimisation and their self esteem. The more often they were victimised or the more often they bullied others, the lower their self esteem. In addition, it was also noted that pure bullies who bullied others frequently differed from victims and bully/victims by their lower level of anxiety.

Ramirez (2001) used the junior Eysenck questionnaire (EPQ-J) to compare bullies and victims in the 10-15 year old range. She found that bullies were distinctly higher in psychoticism than victims. Bullies were also moderately higher in extroversion; however, she found no difference between bullies and victims on neuroticism. She concluded that psychoticism was the characteristic distinction between bullies and victims. This comparison was made between bullies and victims without a control group as the baseline.

O'Moore & Hillery (1991) were the first to point out that bully victims were different from both pure both bullies and pure victims. Mynard and Joseph (1997) in their study made a distinction between bullies, bully/victims, victims and those not involved in bullying, and found bully/victims were higher in both neuroticism and psychoticism than those not involved. Those who make the distinction of separating out bully/victims as a group, are finding differences, yet recent studies like Ramirez (2001) continue not to distinguish bully/victims when making comparative studies of bully and victim personality. Connolly & O'Moore (in press) suggest that differences between themselves and Mynard and Joseph (1997) in their method of selection of the pure bully group and the non-involved group may account for themselves finding statistically significant increases in Extroversion, Neuroticism and Psychoticism in
pure bullies, while Mynard and Joseph (1997) found only non-significant increases in pure bullies. They point out that Mynard and Joseph's (1997) groups were not homogenous: the bully-only group included high bully - low victim and their not-involved group included low bully - low victim.

When groups are carefully separated and even streamed on the basis of their frequency of involvement as victims or bullies, new patterns emerge. For example O'Moore and Kirkham (2001) found significant reductions in self esteem associated with both frequency of victimisation and frequency of bullying others, and they also found lower anxiety in pure bullies, particularly those who bully frequently. O'Moore (1995), using Cattell's 16 Personality Factor (16 PF) Test and school children, reported pure victims were more reserved, less bright, more rules-bound, more sensitive, more internally restrained, more forthright and more apprehensive than those who have not been bullied or those who bully others. It was noted, however, that those who were most frequently victimised were less sensitive (tender-minded) and less forthcoming than other victims, and not significantly different from controls. Cattell's findings suggest that persistent victimisation leads to becoming less tender-minded and more tough-minded. Secondly the victims are becoming less forthcoming and shrewder. Cattell (1979) sees this change as occurring between children under high competitiveness, where they are left to have to learn to fend for themselves. Frequent bullying has the effect of strict discipline and high competition, and, whilst in some ways moving the victims from immaturity and naivety towards self sufficiency, it does so in a manner that robs victims not only of the valuable aspects of tender-mindedness and forthrightness, but also gentleness, creativity and spontaneity.

O'Moore (1995) and O'Moore & Kirkham (2001) illustrate that research concentrates on pure groups of high intensity bullying or victimisation, in order to avoid the difficult definitions of bullies who are sometimes victimised and victims who sometimes bully, and to avoid debates over how many incidents make it bullying. The
frequent victims in O'Moore (1995) may have already lost some of the immature or naive characteristics that caused them to be singled out for victimisation in the first case.

Echoing Randall's (1997) comment about bullies that they are in some way different from other people, evidence is growing that bully/victims are a distinct group again among those involved in bullying. They are regularly involved in both bullying others and being victimised themselves. They fundamentally challenge the idea that bullies and their victims are different from each other since the same person with the same general personality characteristics can function in the two distinct ways.

It can be difficult to differentiate the different types of bullies. As Paulk, Swearer, Song & Carey (1999) comment, even the individuals involved in the situation find it difficult to identify who are the bullies and who are the victims, because the vortex of violence is so prevalent and so many participate in it.

Olweus (1994) sees most victims as passive or submissive, but noted a less common profile of the provocative victim with a combination of anxious and aggressive traits, sometimes provoking others to victimise them by their overactive and irritable behaviour. This picture of a bully/victim would appear to be basically a victim somewhat ineffective in purposefully bullying others.

NOVARES website explores the problems of defining bullying and O'Moore (2002) discusses the problem of distinguishing between bullying and aggression. Despite the lack of a clear definition and given that different studies may use widely different criteria, when bully/victim groups are studied even using varying definitions, it emerges that bully/victims are the most depressed group of any other groups involved in bullying (Kaltiala-Heino, Rimpela, Marttunen, Rimpela & Rantanen 1999).

Of children involved in bullying in early elementary school, bully/victims had more psychiatric symptoms at age 15 than the other groups (Kumpulainen & Rasanen 2000).

Bully/victims score highest in externalising behaviour and hyperactivity; they also
report feelings of ineffectiveness and interpersonal problems. They are the most likely
to be referred for psychiatric consultation. Bullies/victims have more psychosomatic
symptoms and report more anhedonia, the inability to experience pleasure, than pure
bullies or victims (Kumpulainen, Rasanen, Henttonen, Almqvist, Kresanov, Linna,
Moilanen, Piha, Puura & Tamminen 1998).

Anxiety, depression, and psychosomatic symptoms are raised in bullies and victims
but are most common among bully/victims. Eating disorders in boys are associated
with being bully/victims, whilst among girls eating disorders associated with
involvement in any role (Kaltiala-Heino Rimpela Rantanen & Rimpela 2000).
Bully/victims and victims of direct (physical) bullying have more physical and
psychosomatic health problems than pure bullies (Wolke, Woods, Bloomfield &
Karstadt 2001). Bully/victims are the most rejected by their peers and have the fewest
friends (Marano 1995).

O'Moore (1995), using Cattells 16PF personality test, profiled a number of groups of
children, pure bullies, pure victims, bullies who are also victims, victims who also
bully and those not involved as either bullies or victims. O'Moore found that pure
victims differed from controls in being more reserved, less bright, more rules bound,
more sensitive, more internally restrained, more forthright and more apprehensive
than those who have not been bullied or those who bully others. Bully/victims, in
comparison to pure victims, were less emotionally stable, more excitable, more
disregarding of rules, more internally restrained, more astute and tenser.

Pure bullies differed from controls on only six of the main personality dimensions:
intellectually less bright, more excitable, more aggressive, shyer, more uncontrolled
and tenser. Bully/victims, compared to pure bullies, were more emotionally unstable,
more serious and shyer.

Victims who also bully were more disregarding of rules than pure victims, with a
lower superego. Bullies who were sometimes victims were shyer than pure bullies,
who were in turn were shyer than the controls.

These differences can have a marked effect on the analysis of difference depending on
whether all victims are pooled or whether pure victims and victims who sometimes bully are separated. Taking two dimensions as an illustration, when all victims are pooled, all victims differ from controls in having a greater degree of emotional instability but do not differ from controls in their degree of being bound by rules. However, when the types of victims are separated, it is found that pure victims were more rule bound but not emotionally unstable, whereas victims who sometimes bully were not rule bound compared to controls but were emotionally unstable. This highlights the importance of studying bully/victims as a separate group.

Bully/victims would appear to be the most psychologically, emotionally, psychosomatically and behaviourally disturbed. If they are not differentiated as a separate group in studies, then they may end up contributing to both the bully group and the victim group characteristics. This could dilute out the statistical significance of differences between bullies and victims, making bullies and victims look more like each other, or it could exaggerate the differences between bullies or victims in comparisons with controls.

The most abundant information available on the bully/victim group is its size, although estimates vary from 3% to 66% (Mellor 1990, O'Moore & Hillery 1989). Stephenson and Smith (1987) reported 10% bullies, 7% victims and 6% bully/victims. Pepler, Craig, Ziegler, Charach (1994) found 5% bully/victims in a Canadian study. Mynard & Joseph (1997) studied 179 8-11 year olds and found 49% involved in the dynamic of bullying, 11% as bullies, 20% as victims and 18% as bully/victims. In an Irish study of 20,442 schoolchildren, 8 - 18, O'Moore, Kirkham, Smith (1997) reported 17.1% pure victims, 12.3% pure bullies and 14.1% bully/victims in primary school, and in post primary 10.8% victims, 11.5% victims and 4.1% bully/victims. Craig, Peters, Konarski (1998) reported 14% bullies, 5% victims, and said 'there is little overlap in these children, so that bullies are not victims at other times, and victims tend not to bully others'. Wolke, Woods, Bloomfield, Karstadt (2001) studied 1639 children (6-9years) and
found 4.3% direct bullies, 39.8% victims and 10.2% bully/victims.
The Irish study by O'Moore, Kirkham, Smith (1997), is worth commenting on because of its size and wide range of school types sampled. Of particular note is the 72% reduction in bully/victims from primary to post primary compared to a 12% reduction in bullies and a 33% reduction in victims.

A general observation of these studies is that there is a lot of variation in the estimated size of all the groups involved: bullies, victims and bully/victims e.g. age, frequency of incidence, time period in school year are factors reported by researchers. The various variations in the study included Randall (1997) who saw children up to age 7 bullying most anyone with limited success based on the others' ability to retaliate. Mellor (1990), Rigby & Slee (1991), Ziegler & Rosenstein-Manner (1991), Boulton & Underwood (1992), Hoover, Oliver, & Hazler (1992), Whitney, & Smith (1993), and O'Moore, Kirkham & Smith (1997) all reported reducing rates of reported victimisation later in the school year. Bullies engage in a selection process to test out the best victims earlier in the school year as children do not know each other. Ladd (1990) found 22% reported events of victimisation at start of year but only 8% were regularly victimised by end of year. This could also be important in transition years, moving from one school to the next, or when class groups are resorted after exam subject selection.

Hoover, Oliver and Hazler (1992) reported as many as 77% of children bullied at some point during their school days but made no distinction between a single victimisation event and repeated bullying.

When Mellor (1990) used questionnaires with 994 pupils 11-15, 60% said they had been bullied at school but only 50% said they had been bullied at least once or twice in the previous 6-10 weeks.

Bidwell (1997) reported in her summary that there was no drop in the total victim rate over the school years five to eight. However, examination of the figures presented in
the tables showed a reduction of over 60% in the category 'bullied lots of times'. The other categories were 'a few times', 'only once' and 'never at all' over a one year reference period were also recorded. The findings showed a drop in frequent, targeted bullying, set against a large and steady background of general infrequent victimisation. Yet it was reported as no drop in bullying rate because of the use of a timeframe / frequency definition of bullying that was too wide. The general observed pattern as illustrated by O’Moore, Kirkham & Smith (1997) is that from school years 3 to 12, overall bullying rates drop, but frequent bullying, once a week or more often, reduces the most rapidly.

O’Moore, Kirkham & Smith (1997) stated the aim of their study was to estimate the extent of bullying, and they therefore included those who reported bullying once or twice. They argued that since the participants, who were as young as 8, had been provided with a definition of bullying that emphasised that bullying was repeated and not a once-off fight or quarrel, that a response of once or twice may indicate episodes of bullying rather than single events. This once or twice group is large, comprising 60% of all the pupils reporting being bullied, so not only does the inclusion of this group influence the estimated overall incidence of bullying, it has the potential to significantly influence any characterisation or personality profiling of victims. Therefore if those bullied once or twice are included in the victim group, the overall mean difference in self esteem between victims and controls could be considerably reduced. Where differences between victims and controls in a particular dimension of personality are strongly significant, this may not matter, but, where differences are smaller, this could result in a non-significant difference. A useful alternate approach used by O’Moore & Kirkham (2001) when measuring self esteem in victims, was to separate the victims into groups based on frequency of victimisation and then calculate self esteem separately for each group. This allows characteristics or attributes which only apply to more frequent victimisation or more frequent bullying of others to be easily identified.
Consequently definitions supplied to participants, in comparison with the definitions actually used by participants and the researcher’s interpretation of what participants mean can all affect the rates of bullying and victimisation observed.

Some contradictions in the findings of O'Moore, Kirkham, Smith (1997), whilst confirming their suspicions that victims reporting only once or twice may be under reporting, also illustrate major problems with current research tools.

In the primary school children, 2.1% reported being bullied once a week or more often during the school term, but in response to a question about being bullied in the last 5 days before the survey, 17.9% reported at least one experience of bullying in the last 5 days. Even among those who reported only being bullied once or twice in the current term, 36.8% reported at least one experience of bullying in the past 5 days. It is beyond the limit of reasonable probability that in all these cases the survey just happened to occur in the same week of term as their victimisation. A third of those defining themselves as bullied once or twice in the current term in one question are reporting one or more incidents of bullying in the current week to another question.

Different questions are eliciting different responses, suggesting a low level of internal reliability in the test instrument. Liefooghe and Olefsson (2001) suggest that these differences occur when the definition provided varies with the definition in the participant’s mind, causing an inconsistent response.

Factual reporting of the current incidence of events would appear to indicate a higher incidence of bullying than when the children are invited to take a more retrospective, longitudinal review and self evaluation of their total experience over the term. Some participants appear to be saying that currently they are experiencing moderate to severe problems, but generally they don't see themselves as bullied.

The instrument throws up conflicting responses and a researcher subjectively interprets the findings. This can lead to different final results thus questioning the reliability and accuracy.
The O’Moore (et al) study is not the only one which causes questions. Mellor (1990) noted that a number of children defined themselves as not having been bullied in a general question. However in their subsequent responses to more specific questions according to researcher definition, the children did report being bullied. Therefore it would appear that self assessment questionnaires are a convenient research tool, but their validity is questionable. Researchers attempting to characterise or profile personality attributes of those involved in bullying need to use more rigorous, robust and standardised methods than self assessment to determine each individual’s roles and frequency of involvement in the dynamic of bullying.

Culture also plays an important role in self assessment of bullying by victims. Boulton, Bucci & Hawker (1999) found a significantly larger proportion of English than Swedish children indicated name calling to be a form of bullying, whereas the reverse was true for leaving someone out. In a number of Irish-based studies of children (O’Moore, Kirkham & Smith 1997) and adults (Irish Taskforce 2001), verbal abuse and insults are rated as the main form of bullying with a lesser role for exclusion. What makes something inappropriate, offensive or humiliating in one culture may not translate across cultures. Consequently statistics on bullying and characterisation of bullies and victims may not transfer across cultures.

Differences also exist between males and females. Munthe & Roland 1989 reported that girls are more unwilling to answer truthfully about involvement in violent interactions.

Adults and children may even have different concepts of bullying. O’Moore (2002) looks at some of the problems of finding suitable definitions to distinguish between bullying and violence, which she sees as two forms of aggression. She points out many of the concepts of bullying, violence and aggression currently in use, which emphasise power imbalance, intent or repetition in bullying, are very adult based ideas which are often not shared by children. Children often make less distinction between bullying, violence and aggression, and it is not clear at what age children
begin to adopt more adult definitions. Bjorkvist (1997) says children judge acts of aggression more by the severity of the injury than the repetition of the incident. If policies, educational programmes and interventions designed to combat bullying are based on adult definitions, children may not report violent incidents or other forms of aggression which they are finding distressing simply because these are 'not bullying'.

O'Moore (2002) proposes a definition of violence for use in schools to give a name to forms of aggressive behaviour, other than bullying, which are not acceptable.

"Violence is aggressive behaviour that may be physically, sexually or emotionally abusive. The aggressive behaviour is conducted by an individual or group against another or others. Physically abusive behaviour can involve pushing, shoving, shaking, punching, kicking, squeezing, burning or any other form of physical assault on a person(s) or on property. Emotionally abusive behaviour is where there are verbal attacks, threats, taunts, slagging, mocking, yelling, exclusion, and malicious rumours. Sexually abusive behaviour is where there is sexual assault or rape."

Surveys and studies would therefore need to differentiate if children are involved in either acts of bullying or acts of violence either as a perpetrator or victim. By studying both violence and bullying, stricter criteria could be used to define bullying whilst still regarding activities such as excluding behaviour as unacceptable acts of violence.

Despite the high amount of background noise due to uncontrolled variables, previously discussed patterns nevertheless emerge, suggesting that among children, some of those are involved in bullying and others have the profile of raised Extroversion, Neuroticism and Psychoticism.

Interest in and awareness of adult workplace bullying has only emerged in the last 10 years. The amount of research in characterising adult bullies and their victims is more limited than for childhood bullying. Adult studies appear to suffer from many of the same weaknesses highlighted above for childhood studies. Adult studies tend to focus
on the victims with an understandable reluctance of bullies taking part in any research studies.

Coyne, Seigne and Randall (2000) using the ICES Personality Inventory tested 60 victims and 60 non-victims representing different professional groups and occupations, from two large organisations, both public and private sector, male and female from the Irish workforce. They found victims were more introverted, quiet and reserved, but also more anxious, sensitive, emotional and suspicious than controls. They were also characterised as more suspicious and non-controversial than non-victims, and as more conscientious, defined as traditional, detail-conscious and rule-abiding.

Adult workplace bullying surveys often suffer from the very same weaknesses as school surveys and use very non-robust timeframe and frequency arguments. In spite of this, results may be questioned. Denise Salin (2001) raises concerns with statistics by suggesting that "some employees may be hesitant to label themselves bullied, since the word 'bullied' may have connotations of failure and self-blame"(437).

Quine (1999) surveyed 1100 NHS workers: 38% reported experiencing bullying one or more times in the previous year, but only 22% reported bullying in the last three months. However, their analysis of the impact of that bullying was based on the 38% who had been bullied one or more times in the last year. Up to half those counted as victims might have been excluded in other studies. Despite this, significant differences were found between victims and controls in job satisfaction, job-induced stress, propensity to leave, anxiety and depression.

Adult workplace bullying surveys only seem to recognise and report on three groups of participants: bullies, victims and bystanders. The bully/victim group is missing, despite the fact in children, it is often a larger group than the bully group, and the members of the group display the most disturbed behaviour. There is no reason to believe this style of behaviour would not continue into adulthood. The evidence in
fact shows that the roles of bully and victim are patterns that endure into adulthood. In an 8 year longitudinal study of 8-16 year olds, bullying and victimisation were often found to be persistent, and were associated with increasingly severe emotional and behavioural problems (Sourander, Helstela, Helenius & Piha 2000).

Pepler & Craig (1995) said victims of bullying tend to be victimised repeatedly over time having established themselves in the role of victim. Olweus (1978a) found some adolescent boys victimised at 13 were also victimised at 16, suggesting the role of victim to be a stable and enduring pattern. However, for many, bullying is situational, simply being in the wrong place at the wrong time, and they do manage to extricate themselves from the situation. Not all victims remain victims, and there is a general reduction of 80% in frequent victimisation from years 7 to 12 (O'Moore, Kirkham & Smith 1997). Some bullies show a similar enduring pattern: children who are bullies tend to be bullies as adults and have children who are also bullies (Farrington 1993).

Childhood bullies are also more likely to be involved in antisocial behaviour as adults and not attain socially desired goals. Patterns also repeat for the victims: children who are victimised tend to have children who are also victimised (Farrington 1993).

Eron (1987) has studied the long term outcomes for bullies in terms of criminal activity, career and family. He found that those who are bullies at age 8, are six times more likely to be convicted of a crime by age 24, and five times more likely than non bullies to have a serious criminal record by 30. Olweus (1980) similarly sees some sort of positive reinforcement or payoff from childhood behaviour continuing into adulthood. Aggressive behaviour in school years persists into adult crime, marital violence, child abuse and sexual harassment (Haemaelaeinen & Pulkkinen 1995).

There are few longitudinal studies on bully/victims to determine whether they continue, stop or become more fixed in role as bullies or victims. Only O'Moore, Kirkham & Smith (1997) report a substantial enough reduction in bully/victims from primary to post primary that, if continued, might account for the virtual disappearance of bully/victims in adults.

There should be a very distinct group of bully/victims among adults in the workplace,
but no one is describing them. Randall (1997) makes reference to these bully/victims among adults, sometimes aggressors sometimes victims, who are variously called reactive bullies, ineffective aggressors or, after Olweus, provocative victims. Tim Field's website, 'Bully on Line' does not make any reference to adult bully/victims. In 'myths about childhood bullying', he even minimises the role of bully/victims in schools. Claiming that with 75% of children bullied at school, three quarters of the population cannot be described or blamed for their own victimisation by the labels, passive, provocative, colluding, or false victims. He expresses a very strong pro-victim attitude and says bullies are physically violent, mentally violent and emotionally violent, and always pick on children who are physically smaller or less strong than themselves, have integrity, are respectful and non-violent. He also uses the word 'target' for the victim, minimising their contribution to what is happening, a very black-and-white thinking with no room for bully/victims.

Field (1996) does acknowledge that alleged bullies sometimes make a counter or 'pre-emptive' claim against the alleged victim as having mistreated them also in some way, but he sees this as an extension of the bully's tactics and not genuine.

The absence of bully/victims in most descriptions of adult bullying does raise the question of whether the distinctly non-violent adult bullying pattern most common among the 35-50 year old age group, in professions with tertiary education level entry, is a continuation of childhood bullying or something distinctly different in origin.

Neil Crawford in 'Bullying at Work' (Adams 1994) stands out in seeing the potential to bully in everyone. He says most people, who by and large make good relationships with others, admit to having had one difficult relationship with a colleague which on reflection they would consider to have been bullying or have contained elements of bullying. He says they are not bullies, but "They realise that something which occurred within the relationship disturbs them." He sees the real victim as the
individual stuck in the role of bully or victim: "both victims of inner conflicts which determine their psychological fate and imprison them".

Besides the bullies, victims and bully/victims, others are also involved. Bosworth, Espelage & Simon (1999) agree that bullying is a continuum of behaviours engaged in by many students, "Adolescents don't fall neatly into categories of either bullies or non bullies". There are some people fixed in roles and some more fluid in their roles, and this fluidity is more apparent when the bystanders, those supposedly not involved, are included in studies. Salmivali (1998) identified a number of roles played by bystanders in the Bullying dynamic, Assistant of Bully, Reinforcer of Bully and Defender of Victim.

Bystanders often intervene. Half of primary and 38% of secondary school children indicated that others intervened in bullying incidents (Whitney & Smith 1993). Individual bystanders may respond in a number of ways: 12% almost always intervene, 41% intervene sometimes, 16% almost never intervene and 22% don't consider it their business (Boulton & Underwood 1992). This intervention is not necessarily a positive thing. 89% of interventions were in an antisocial or aggressive manner (Pepler & Craig 1995). Even if they are trying to solve the problem, some may even participate in the bullying. Only 53% of primary and 46% of non primary children said they would not join in bullying if the victim was someone they didn't like, and 16% of primary and 22% of post-primary children indicating they would join in (O'Moore, Kirkham & Smith 1997).

35% of the gallery consider there is something bad about the victim and deserving punishment and 40% see it as entertaining, yet only 10% of bullies say they do it for fun (Kobayashi 1998).

Salmivalli, Kaukiainen & Lagerspetz (1999) found that children who defend others from bullying had a healthy self esteem and suggested a healthy self esteem was needed for an adolescent to dare to defend a victim.
The bystanders are not simply neutral; that they observe the bullying indicates some form of involvement. Those who support the bully, and get involved to some extent perhaps in group activities such as exclusion, may be very similar in personality to bullies. Understanding what prevents some people with a potential for bullying from doing so may be as important in prevention as understanding what makes some people bully.

Most personality profiling of victims or bullies to date is not thorough enough to either rule personality in or out as a contributory or causal factor in bullying. Therefore, for example, it cannot be said that all victims have lower self esteem than non victims; some individual victims have normal self esteem and some non-victims have low self esteem.

The research purpose of separating different roles is not to blame but to clarify, study and understand the elements that combine and interact to produce bullying, in order to intervene more effectively and ultimately prevent bullying. The current workplace culture of demonising of bullies, black-and-white thinking, blame and litigation is not conducive to such an approach. It might prove very difficult to get sufficient volunteers to openly accept and admit their role in bullying others and participate in such a study.

1.4.7

Finding a Suitable Theory

In terms of the proposal that personality plays a role in bullying behaviour or that social or environmental factors play a role, the bully/victim group provides a challenge. How can an individual shift between and express two such different sets of behaviour, when their personality and social background remains constant? There are two personality theories, one based on the work of Karen Horney and one based on the work of Carl Jung, which may explain this.

Other personality theorists including Cattell allow for variation in behaviour in response to both external environmental factors and internal environmental factors
such as mood, but the variations would not be so large.

In Horney's model (Horney 1937) of Social and Cultural Psychoanalysis, she sees hypercompetitiveness giving rise to Neuroses. Hypercompetitive attitudes in the parents are expressed in a variety of antisocial, aggressive and bullying ways including domination, indifference, erratic behaviour, lack of warmth, and verbal and physical abuse. To cope with feelings of insecurity, isolation and hostility the child develops defensive attitudes, protective devises which at least temporally alleviate some of the pain and make them feel safe. Horney called these defences neurotic needs or strivings, and they are designed to re-establish the safety of their environment. These neurotic needs are distinguished from normal needs by their compulsiveness, rigidity and indiscriminate usage and by the fact they are unconscious. Which results in the person explaining, or blaming, their behaviour in terms of something the other person did.

Horney described 10 neurotic strategies or traits which are grouped and expressed as three types of neurotics (Horney 1942, 1945).

Compliant types manifest the traits associated with moving towards people. They have a neurotic need (compulsive, rigid, unconscious) for affection and approval, for someone to control their lives and for restricted borders. They need to be liked, wanted, loved, appreciated, protected, and guided. They are self effacing and submissive, dismissing their own talents and abilities. They try to live up to the expectations of others to receive approval. Criticism is terrifying, and they will go to great lengths to win back the positive regard of the person threatening them. This would describe a potential victim. Randall (1997) describes victims showing inappropriate withdrawal through acquiescence, an ineffectiveness to form conflict strategies and inappropriately reaching out to and rewarding the bully by giving possessions to them.

Aggressive types manifest the traits associated with moving against people. They have the same style of compulsive, rigid, unconscious, neurotic needs, but instead
their needs are for power, social recognition, admiration and personal achievement. They assume others are hostile and untrustworthy, believe in the survival of the fittest, and that the strong can annihilate the weak. Their aim is to be, or appear to be, tough. They see emotions as sentimentality. They are very competitive and hard working and are driven to prove continually they are the strongest, smartest, shrewdest. Their commitment to work is misleading: it is only a means to an end of enhancing their prestige and wealth. These types could be bullies particularly to the compliant types.

Detached types manifest the traits associated with moving away from people. They are the most disturbed, very isolated, secretive, radically independent and aim never to be influenced by or obligated to anyone else.

The types are not mutually exclusive and people may have elements of each. One trend will predominate and the other two will be repressed. Although repressed, they still exist but are not being gratified which results in internal turmoil. This turmoil exacts a high cost on the person's energies. Fulfilling one need by moving against people will actually deny the opportunity to meet other needs met by moving towards people. You cannot exploit people and expect love and respect in return. There are contradictory tendencies within the person. A non neurotic person will also have the same trends but will be more flexible and will appropriately respond to situations by giving in, fighting others or keeping to themselves. Neurotics are more rigid and do not respond appropriately or proportionately to situations (Horney 1945, Ryckmann 2000).

Horney's theory gives a dynamic that potentially unites bully, bully/victim and victim behaviour. Furthermore, each type is a product of the same type of family background which Horney describes as 'Hypercompetitiveness', with the aggressive type being a reproduction of the parents and the other two types a reaction. In Horney's approach there is an underlying dysfunction leading to different behaviour.
The personality typology theory of Carl Jung (1923) and Briggs & Myers (1976) was developed to explain normal differences that occur between healthy people. In Jung's model each person has one of two basic foundational attitudes, introversion or extroversion, which is an expression of where they like to focus their attention and draw their energy from. The model is typological, based on preference: each individual is capable of functioning in either a fully introverted or a fully extroverted way but has a definite preference. Trait approaches to personality might place a person on a scale point between introverted and extroverted, say 60% extroverted and 40% introverted, but according to Jung, one cannot function in a manner that is part way between extroversion and introversion--one would act extroverted 60% of the time and act introverted 40% of the time. Jung would define such a person as extrovert because that would be their preferred style.

For a fuller description of Jung's ideas see Ryckman (2000).

Jung's system is extroversion and introversion and four functions, or ways that people relate to the world, sensing, thinking, feeling and intuiting. Myers & Briggs (1976) later developed Jung's work into the Myers Briggs Type Indicator (MBTI) which is a self report measure used extensively in career counselling, classroom teaching, management development, and psychotherapeutic counselling.

The MBTI model is based on four preferences

Where is your primary source of energy?

E--extroversion, from the outer world of activity and spoken words
I--introversion from the inner world of thought and emotions

How do you prefer to take in information?

S--sensing, in the form of facts and details
N--intuition, in the form of patterns and overviews

How do you prefer to make decisions?

T--thinking, on the basis of logic and objective considerations
F--feeling, on the basis of personal values

How do you prefer to organise your life?
J—judging, in a structured way, making decisions and knowing where you stand

P—perceiving, in a flexible way, discovering life as you go along (Myers, S 1995).

A person can be either one in each of the four sections. This is expressed as a four letter profile, each letter representing the person's preferred mode of operation for each dichotomy. For example someone who is Introverted, iNtuitive, Thinking, and Judging will be represented by the profile INTJ. There are sixteen possible permutations of the 4 letter profiles or MBTI types. These personality profiles or types are described in positive affirming ways, no one is superior to any other, and each has strengths and weaknesses. Therefore this is a very flexible typology, and does not restrict people to behave in certain ways irrespective of the circumstances. This therefore illustrates the idea that one’s ability to respond appropriately to a situation is not simply a function of one’s personality. It also may involves a lack of awareness that there is another way of responding, a lack of appreciation of the usefulness of the other way of responding, and a skills deficit in using the other response.

The 16 personality types occur because of the dynamic interaction between the components of personality. Thumb nail descriptions of each type are included in Appendix D.

From a person’s four preferences, a complex set of predictions can be made about how they solve problems, how they learn best, their preferred occupation, what type of working environment enables them to function optimally, how they relate to and work with others, how to motivate and persuade them, how they react to pressure, the situations they find most difficult to handle, and many more.

The basic concepts of type and interactions between functions are comprehensively explained in Myers (1995, 2000). Consideration of how type relates to learning styles and occupation Myers & Myers (1980), how type affects a person’s preferred team role and team functioning, Hirsh (1997), how type relates to organisations is
explained in Hirsh & Kummerow (1990), how type affects one's reaction to pressure Quenck (1996), and how type affects the relationship between nurses and their patients, Allen & Brock (1999, 2000).

Myers (1996) and Quenck (1996) believe that under mounting pressure there is a gradual underlying change in their behaviour, first becoming more fixed and extreme in their own preferred type. This is expressed through them becoming rigid, supporting hierarchy, authority, and procedures, feeling resentful for not being appreciated and focusing on the detail and missing the bigger picture. Then gradually their repressed shadow side begins to emerge as stress increases or in response to certain triggers, such as people with unrealistic plans, having to face the unknown without warning and overdoing their caring role. They can for example become intolerant, critical of others, find fault, argumentative. Some of their unmerited condemnation in others may be their own projected faults which could be compared to bullying behaviour.

MBTI is used extensively in careers guidance to help people identify types of work they would be most compatible with. People select careers which suit their character and personality. In fact, the subjects people take an interest in are a reflection of their personality preferences. In career guidance ISFJ and ESFJ are two types associated with nursing (USDOI 2000). Daub, Cresci, Keyser & Friedman (2000) found just 4 types, ISTJ, ISFJ, ESTJ and ESFJ made up 75% of geriatric nursing assistants. These SJ combination individuals were characterised as detail-orientated, realistic, step-by-step processors who gravitate towards closure. Allen (2001) found 80-90% of nurses in palliative care were Feelers. These organisational characteristics, once established, tend to replicate themselves (Bridges 1992) and organisations take on enduring personalities.
Allen & Brock (1999, 2000) explored the implications of personality type on how nurses carried out their duties and on inter-staff and staff/patient relationships. Allen (2001) found that thinker / feeler interactions caused the most heated misunderstandings. Research would need to be carried out on bullies to see if a pattern also emerges in their profiles.

The MBTI is a useful tool for team building, for helping understand the different ways in which other people like to be managed or lead, and for understanding how to communicate effectively with each other and with patients. It may also give some insight into how conflicts can begin and how people react differently under stress.

Thus it will be looked at further in the methods section as this study looks at the study design with the test subjects to see if it can give any insight into their victimisation.
Chapter 2: METHODS

2.1 STUDY DESIGN

2.1.1 Objectives of This Present Study

This research was designed to

- establish whether the trauma, or Post Traumatic Stress Disorder-like symptoms, observed among victims of adult workplace bullying were sufficient in frequency, range and impact on the individual’s functioning, to meet the diagnostic criteria for Post Traumatic Stress Disorder as laid out by the American Psychiatric Association in the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM-IV) (APA 1994),
- to establish, through exclusion of other possible causes and association of present symptoms with specific workplace events, a link between the individuals PTSD-like symptoms and their victimisation in the workplace,
- to evaluate the effectiveness of a counselling approach with these particular victims which treated them as if they were trauma victims, with PTSD, as the result of exposure to victimisation in their workplace,
- to explore the possible role of personality in their victimisation and development of a PTSD-like illness.

The design principle in the research was to do the above within the framework of treatment for their own unique presenting psychological needs.

A fundamental value within the treatment was the primacy of treatment, and no tests or questions were used within the counselling to interrupt or redirect the flow of the counselling to collect a piece of information for research, unless the item also materially and substantially contributed to the work in hand.

Clients were adequately and appropriately assessed treated and/or referred.
2.1.2

Study Structure

The four study objectives follow sequentially from each other: does the client have PTSD, if so, what is the most probable cause; does personality play a role, and what is the most appropriate treatment in the light of this? The outcome of each part is dependent on the accuracy of the previous part.

The research was carried out in two steps or phases. The first phase was to validate the general assumptions of the research approach objectively before embarking on a large scale study. A small group of 15 individuals were assessed to see if they had PTSD and whether it related to workplace bullying. If not work related they were appropriate treated but not included in the study. The counsellor had already been using this trauma concept approach in treatment with a number of individuals on a case by case basis and was seeing successful outcomes. However for the protection of the clients, it was important to validate this objectively with a small sample. The research was therefore commenced with an early review of the initial findings.

In the review of the pilot study of the 15 individuals it was established by clinical assessment of the clients against the DSM-IV diagnostic criteria for PTSD that they had a sufficient range, frequency and intensity of symptoms to meet the DSM-IV symptom criteria for PTSD. This assessment was confirmed by the PENN Inventory, an established diagnostic assessment tool for PTSD, which was included in the study to provide a second objective assessment of the clients' condition and to provide a means of scaling or measuring the severity of the clients' condition and their rates of recovery. The review established that a number of these clients had had an experience that would meet a standard definition of bullying without any other cause of their traumatisation. Finally by re-assessing the clients, after treatment, against DSM-IV criteria and with the PENN Inventory, it was established post treatment that the trauma counselling approach, based on Cognitive Behavioural Counselling, which was used on the
assumption that they had been traumatised by their workplace experience, was effective in treating their condition. It was therefore considered safe for future clients to increase the scale of the study and treat victims of bullying who had PTSD-like symptoms with a trauma counselling approach.

As a result of the polit study review it was decided to make several modifications in the latter design of the research.

Observation 1:
A small anomaly was noted in the distribution of PENN Inventory scores for the original normative control group of nurses. There appeared to be a small over represented cluster of scores at the high end of the control group distribution. The control sample was too small to establish the statistical significance of this, but the scores were clustered around the high 20s. This was consistent with reports by Hammarberg (1992), who developed the PENN Inventory, of a group of individuals with general psychiatric problems, but not PTSD, whose scores centred around 28 on the PENN scale. The PENN scale is partially responsive to general psychiatric problems because a number of symptoms of PTSD are also found in other psychiatric conditions. Given that many reports on the mental health of healthcare workers and nurses in particular find much higher rates of mental health problems among nurses than in the general population, it was important to determine if the PENN assessment threshold of 35 was also valid for a nursing population with high background mental health problems.

Response 1:
In response to this, two changes were introduced to the study. Firstly, the control group was greatly expanded to assess this potential phenomenon. Secondly, another psychometric test was introduced to the study, the Critical Outcomes in Routine Evaluation (CORE) System.
CORE is an outcome or audit tool for counselling and psychotherapy and takes a more general evaluation of the psychiatric well being, symptoms and functioning of the individual rather than looking at them in only a single dimension which a specific diagnostic tools such as the PENN Inventory does. CORE would give a wider perspective of the client’s general mental health both before and after counselling. This was considered important since nurses may have a high rate of other comorbid general psychiatric problems as well as PTSD and any evaluation of treatment regimes must consider this.

The CORE test was in the process of being introduced to the RCN counselling service as a service evaluation tool; it is performed on all clients of the service before and after treatment. Its inclusion in the study therefore did not add an extra unnecessary research burden to the client. Its audit value was considered beneficial to all clients of the service.

Observation 2:
In the review a substantial group of nurses were identified with PTSD-like symptoms but whose workplace experience would not conform to the standard research definitions of bullying. However, they had all shared a very similar experience of a sudden unexpected false accusation of serious misconduct in work: several had been suspended pending enquiry or even immediately dismissed in one case. They had apparently been traumatised by this single event or a very short series of events as the disciplinary processes came into operation. There were approximately two cases of traumatisation associated with bullying to every one case associated with a more focused series of events.

The subjects had been selected for the first stage of the study, firstly, by having PTSD-like symptoms, secondly, that they had no other major current sources of stress or trauma in their lives apart from problems in their workplace, and thirdly, they had no history of previous life events commonly recognised as causing trauma.

Exploration and determination of the nature of their workplace experience had been
left until later within the study. Had the study selected upfront only to include those reporting experiences of bullying rather than including all those reporting experiences of traumatisation related to the workplace, this group would have been missed. This posed the question whether to include or exclude this group from the study. Their experiences shared some similarities to bullying, but the most compelling reason for continuing to include this group in the study was that some had been accused of mistreating or being abusive to other staff or patients or even behaving in a bullying manner. Whilst antibullying campaigners push for the outing and expulsion of bullies, this second group of people represent the other side of the dilemma: the equally traumatising potential of rough and unfair justice.

Response 2:
It was decided to leave the selection criteria unchanged and to include this group as a useful comparative clinical group and call them single traumatic victimisations.

Observation 3:
The recognition of a second major form of workplace victimisation besides bullying highlighted the question of why individuals should be singled out for such undeserved treatment. It was recognised that the study was characterising and documenting the experiences, symptoms and treatment of the victims, but the data being collected was not going to throw any greater light on the 'Why'. In the stories of the clients, the theme of personality kept recurring, sometimes others blaming them for a weak personality and allowing themselves to be victimised or others trying to put their mistreatment down to the result of a personality clash. A lot of this was very contradictory and confusing, and those offering these analyses often obviously had little grasp of the theories of psychology. Nevertheless there was a common sensing of personality playing some role.
Response 3:

It was decided to include a personality assessment tool called the Myers Briggs Type Indicator (MBTI) in the study. It is a very useful personal development tool which the counsellor sometimes uses with clients as part of the therapeutic process. The counsellor has experience using it, and it is beneficial to clients. Because personality types are relatively stable over time, profiles could also be collected retrospectively after treatment, unlike the other psychometric tests which had to be collected at critical points in the process. Therefore, this did not add an extra burden on clients or a distraction from their treatment.

Observation 4:

In phase I of the study such a high rate of recovery from a severe and potentially chronic disorder as PTSD was almost too good. A possible criticism was anticipated in that the post-treatment assessment was performed immediately on completion of treatment. The clients were still highly supported by the counsellor and had not had to manage yet on their own. Outcome audits and evaluations, as typified by the CORE System, are used at beginning and end of therapy but they are not used as a followup to confirm how robust the individuals' recovery was.

Response 4:

It decided to include a 6 month follow up of the clients in the study in which they would be contacted and asked to complete again the PENN Inventory and CORE System questionnaires. It was expected that this would give a more accurate measure of the long term outcomes of counselling for the clients.

Having established the validity of the diagnostic concept that some victims of workplace bullying met all the clinical symptoms of PTSD, and having shown that a trauma counselling approach, which accepts the client's premise that their problems originate from and are centred around this workplace experience, is effective in
resolving their PTSD symptoms, it was considered safe for future clients to proceed with this line of research and to expand the numbers in the study. The early assessment and review provided very useful information which was used to develop and refine the design of the research to include a wider range of psychometric tools and to include a follow up study of client recovery 6 months after completion of treatment.

2.1.3

Phase II of the Study

The next stage in the research saw the introduction of the additional testing outlined above and the expansion of the control and study groups. The number of clients in the study increased from 15 to 51. The 36 new clients in phase II had additional testing using CORE on starting and completing treatment. A sample of 16 clients were tested again by PENN and CORE 6 months after completing treatment. MBTI profiles were obtained from 19 clients in the study.

This was a treatment-centred study. The clinical assessment and counselling of 51 clients with PTSD-like symptoms following workplace traumatisation is the central component of the study.
2.2 SAMPLING

There were 51 clients in the study. They were all nurses and were counselled by the RCN Counselling Service in Belfast, between July 1999 and February 2002. They were all members of the Royal College of Nursing who represent 85% of nurses.

They had all self-referred themselves for counselling, although many would have been recommended to go to the service by RCN officers or activists. For those in the study, most were receiving representative support from RCN in relation to complaints they were making against their employers or in relation to disciplinary procedures being taken against them. Those who were not, at the time of starting counselling, were recommended by the counsellor to get RCN representative and legal support for their situations.

2.2.1 Selection for the Study

The study was not primarily concerned with representativeness of the wider nursing population, nor with representation of the group of nurses who seek counselling, but in studying a particular phenomenon. The study aimed to identify a sub group of the nurses coming for counselling who had been recognised as having PTSD-like symptoms and who attributed the cause of their problem to an experience of victimisation in the workplace. Therefore the study sample was one of convenience in the form of non probability sampling.

The aim of this present study was to explore the existence of the specific problem of PTSD caused by bullying and to describe its dynamics and treatment. Quantification of the scale and distribution of the problem will be the subject of future study aided by the present study's establishment of a clear causal link between bullying and PTSD and the validation of the application of the PENN Inventory as a convenient screening and evaluation test.
All nurses coming to the counselling service have an initial assessment by the counsellor to determine the nature of their problems and decide if they need counselling or some other form of support, or if they need referral for psychiatric treatment. As part of that initial assessment, they also complete the CORE System test. At that assessment any clients who showed general symptoms of Post Traumatic Stress Disorder were also tested with the PENN Inventory.

If a general assessment of any client’s symptoms and their PENN score indicated PTSD, their counselling would begin to look at this area in more depth. Through the interviewing, the range, frequency and intensity of their symptoms were checked against the DSM-IV diagnostic criteria for PTSD. If their initial assessment was confirmed they were included in the study. The counselling proceeded in this direction and sought to identify the cause of their traumatisation through looking at all major recent life stressors, earlier lifetime exposures to traumatic events, timing of the onset of symptoms and the material content and focus of intrusive and avoidant symptoms.

Over 90% of the clients were on prolonged sick leave when they first came for counselling, in other words they were under the care of a doctor, half were on medication for their perceived anxiety or depression yet only 4% had been given a psychiatric referral by their doctor. Similar types of cases being seen by psychiatric services therefore are either as the result of referral by a more clinically aware doctor or more likely are the most severe, complicated or comorbid cases, particularly those with severe comorbid depression and with a risk of self harm. Under current levels of awareness of this condition and its causes, most of the clients in this study would not have been offered therapeutic counselling.

Some counsellors are strict about the client making the first move in contacting the counsellor or following through on a referral. That is generally the position of this counsellor. However, the RCN counsellor is part of a team working to support members in difficult situations. In a few cases where an officer has appraised the
counsellor of a severely distressed member they were very concerned about, the
counsellor has initiated contact with the person.

At any point, something new could have arisen which may have revised the
assessment of their condition and redirected the counselling or some other event in
their life might have been identified as the underlying cause of their problems.
Obviously someone who was reassessed as having a different condition, or whose
condition perhaps was associated with some previous or other traumatic experience,
were excluded from the study, whilst still receiving counselling.

2.2.2
Selection and Exclusion Steps

• 1. Only clients who met the DSM-IV criteria for PTSD and had a PENN
Inventory score above the clinical threshold of 35 were initially included in the
study. The following exclusions then were made.

• 2. Anyone whose PTSD was related to some other traumatic event such as a
mugging or rape was not included in the study.

• 3. Where a client had a potential traumatising experiences in addition to
experiences of workplace victimisation

• 4. Where a client had experienced a recent series of non traumatic but major life
stressors in addition to experiences of workplace victimisation. This group were
excluded from the study since they had multiple sources of psychological distress
whose relative contribution to their PTSD could not be clarified.

Step 1 sampled all clients who came to RCN during the study period who had PTSD
symptoms. Therefore the final cohort were only those:

who had a diagnostic range frequency and intensity of PTSD-like symptoms, no
other possible source of major stress or trauma in their lives other than an
experience of workplace victimisation, and for whom the timing of the onset of
symptoms and the specific event focus of their symptoms, confirmed that the source of their traumatisation was their workplace experience.

Altogether 51 such clients were selected (sampled) during the study period. Although the selection seems stringent, the 51 clients actually represent half of all the clients referring themselves to the counselling service who were assessed as meeting the diagnostic symptom criteria for PTSD.

The 51 clients comprise 16% of the overall caseload of the RCN counselling Service in Northern Ireland during the study period. Based on RCN Working Well Initiative estimate of the number of nurses being regularly bullied (RCN 2002), the 8 victims of bullying per year selected for the study are 2.5% of those bullied locally on a weekly to daily basis.

Excluding clients from the study who had undergone an accumulation of major recent life crises or been exposed to traumatic events could result in an under representation of particular groups For example middle aged nurses who may be having marital problems or mid life crises, who may have lost a parent or are caring for a terminally ill and dying parent. A little caution is therefore needed in reading tables of age and nursing grade distributions of the victimised clients in the study.

Estimates of the total costs related to the victimisation of the 51 clients in the study. They are an under estimate of the total costs, since those with more than one potential source of stress or trauma were not included in the study even though workplace bullying or victimisation was often their main problem. However, just as the source of their problems might have been subject to challenge, the allocation of all their costs to victimisation would be equally difficult to substantiate.

The potential non-representativeness of the target nursing sample was recognised from the outset and was seen as acceptable and indeed necessary for the purposes of
the study in establishing an inferred causal link between workplace victimisation and clinical PTSD, and validating a trauma counselling approach for treatment of the client's condition.

As the present study progressed and patterns began to emerge in the findings another type of non probability sampling was used, theoretical sampling, which is a special type of purposive sampling. Sub-groups of clients were identified and separated out for inter-group description and comparison using comparative statistics. This is appropriate for "research which is more concerned with describing the full nature of a phenomenon than developing a precise estimate or percentages" (Politt & Hungler 1995). Study clients were divided into sub-groups on the basis of the type of victimisation they had experienced, bullying or single traumatic victimisation.

2.2.3 Follow up Sample

The follow up study re-tested clients using PENN and CORE six months after completing treatment. CORE was only introduced during the second phase of the study, so only 36 clients had pre and post-treatment CORE results and were eligible for the follow up study. Because this was a rolling study and the clients were not all counselled at the same time, but as they presented to the service over the study period, 6 clients completed their treatment stage late in the study so their 6 month follow up was too late for inclusion.

That left 30 potential clients for follow up. The counsellor sought to make telephone contact with these clients to ask them if they would take part in the follow up. Due to shift work, change of phone number, or problems leaving messages with family because of confidentiality hence problems contacting clients for six month follow up. Since the counsellor did not know the home circumstances of these former clients, they sought to contact them directly. Contact was made with 20 clients and all agreed
to take part and were posted out the questionnaires. By the time the study had to be closed, 16 fully completed replies had been received with no blanks or ambiguous answers.

The 16 clients in the follow up sample represent 53.3% of the 30 clients eligible for the follow up study.

2.2.4
MBTI Sample

MBTI profiles were collected from 19 (53%) of the 36 clients in phase II of the study. A few were collected during counselling and the results shared and used with the client within their therapy. The intention was to collect MBTI profiles at the end of treatment but with exit CORE and PENN assessments a priority, it was usually not opportune to do all this and to do the important ending work which is part of counselling. Most consequently were collected as part of the follow up study, but since these traits are stable over time this would not have adversely affected the results.

2.2.5
Control Groups

There were three control groups in the study:

- A control group for the PENN Inventory comprised 105 nurses who were members of several groups attending professional nursing development courses being run by the RCN Institute at RCN Headquarters in Belfast. Only those who had no recent history of bullying in the workplace or recent traumatic life experiences, and had not been off work in the previous 6 months with a stress-related or other mental health problem, were invited to complete the PENN Inventory. This was taken as the normal or normative nursing control group for the PENN Inventory.
• For the CORE System test, the study used unpublished CORE data from a large scale UK survey of 4049 nurses by the RCN Working Well Initiative (RCN 2002).

• For the Myers Briggs Type Indicator (MBTI) all 18 members of a single nursing management team from a health care trust were profiled. This team had invited the RCN counselling service to run a course for them, as a team, on conflict resolution, and the profiling was performed as part of that course. It was considered that sampling a working team would reflect the spread of personality types that might be found in senior nursing management where most of the victimisation observed in the study appeared to be occurring.
2.3 TESTS AND ASSESSMENTS USED IN STUDY

The data collection methods, psychometric tests and assessment instruments used in this present study were

- Counselling
- Clinical assessment against DSM-IV criteria for PTSD
- PENN Inventory
- CORE System
- Myers Briggs Type Indicator
- Social Readjustment Rating Scale

2.3.1 Counselling

Therapeutic counselling was both the subject of study in this research and one of the instruments used to extract and collect information about the client’s condition and experience. This section will focus on the role of counselling as an information extraction, collection and verification tool.

Helping the clients to tell their stories and exploring the experiences they had had was foundational to assessing their condition and to directing the counselling process. Throughout the counselling process, qualitative and quantitative data emerged and was collected. Interviewing therefore was a principle source of data collection in the present study.

Therapeutic counselling and research share a common purpose of seeking to understand what is happening, counselling in order to inform the process of treatment, and research in order to record, evaluate, and describe phenomena. Counselling is a form of research with every client a separate study, a living, interactive, responsive questionnaire, seeking understanding and insight.

Counselling uncovers a lot of high quality information and data but usually concerns itself more with the meaning, significance and values which the clients attach to such details.
Counselling is a comprehensive process using many different forms of interviewing. In one sense, counselling is unstructured interviewing, the approach has no preconceptions and lets the client take the lead; it uses open questions and encourages free flowing story telling. Counselling also uses semi-structured or focused interviewing, to make an assessment of the client’s condition and underlying problem; it purposefully seeks to explore certain areas. Various probes are used to extract and clarify specific information. An example of this would be rating scales such as the DSM-IV diagnostic criteria for PTSD (APA 1994) or the Social Readjustment Rating Scale (Holmes & Rahe 1967), where specific data provided by the client in interview is inserted into a key or table to make a standardised assessment of their present condition or recent experiences. Whilst this aspect of counselling may be structured and methodical, it is also interactive and responsive to the client; while still seeking specific information. This flexible questioning format allows the complexity of situations to be more adequately addressed. The clients in the present study are having major mental health problems and are psychologically disordered; their emotional state at times may make specific recall difficult or may make it difficult to openly admit to a directly and specifically worded question. Counselling therefore is more appropriate with distressed or confused individuals for obtaining the necessary information than direct interviewing might be.

An example of this would be the Social Readjustment Rating Scale (Holmes & Rahe 1967) which assesses the accumulative stress impact of recent major life changes. The counsellor does not go through the list of 43 items asking has this or that happened recently. The counsellor uses more open story telling by the client to collect the relevant information. Other interviewing techniques used included life histories, narrative self disclosure, free association, also relevant to trauma work is critical incident interviewing in which specific incidents relevant to the behaviour being investigated are explored.

General demographic data was collected on a Client Information Sheet during the initial counselling session. Few notes were taken during the counselling sessions. The
counsellor, as part of their personal debriefing after each session, would reflect on the
session and write case notes. This is practice for the counsellor after any counselling
session. Over the span of the treatment, the counsellor in effect filled out a
questionnaire of specific items of information. This targeted information was
determined before the study: some of it was needed to confirm the clients PTSD
assessment, some was needed to exclude other sources of traumatisation, some was
identified as relevant to bullying by other studies.
The additional free form taking of case notes and recording of potentially relevant or
anecdotal information allowed wider access to the vast wealth of data generated in the
counselling and created space for unexpected results or patterns to emerge.
Information therefore was largely collected by observation of the client’s story telling
and their responses to probes or other interventions. This was retrospectively recorded
after each session by the counsellor. At a later date this targeted information was
codified for further statistical analysis. More detailed notes than normal were kept of
study clients to assist the research.
It can therefore be stated that the large amount of information recorded in the present
study was recorded in a manner which did not interfere with the counselling process.
It can further be stated that the information gained was information that would
normally emerge during counselling, although normally not recorded in such detail.

Counselling is also collaborative research, it does not simply observe and arrive at its
own conclusions, but seeks to find an agreed understanding and insight between the
client and counsellor. Its observations are reflected back to the clients and confirmed,
clarified or explored further. This collaborative research with each client can uncover
things the client may not even be aware of themselves, and would be missed if the
client was only responding in a single interview to a bank of set questions.

The counselling relationship with the client creates a safe and supportive atmosphere
where the client has more time and space to reflect and consider the questions being
put to them and has less need to gloss over, generalise, impress, catastrophise or exaggerate. Counselling should therefore yield a better quality or more realistic answer from clients than self report questionnaires or straight interviews.

The counsellor equally does not take everything the client says at face value but challenges vagueness or avoidance, asks for clarification and examples, seeks to make things concrete. In effect counselling checks the internal reliability and consistency of the information it is collecting. Counselling also provides a valuable quality control for the information collected in the psychometric tests.

Just as questionnaires can be badly constructed with biases, so counselling could create a bias if not conducted in a skilled manner to collect data within counselling process.

Counselling Interviewing was used to collect data for the following purposes:

- To assess the client's condition against DSM-IV criteria for PTSD and identify recent major life changes or crises for the Social Readjustment Rating Scale
- To identify any previous life history of traumatic experiences or PTSD type symptoms and to collect demographic details about themselves and their workplace
- To confirm and characterise their workplace experience as bullying or other forms of victimisation and to collect demographic details about onset of symptoms to establish a timeline and causal link also details on the long term outcomes for the clients.

The enquiring and investigative manner of counselling yields a high quality of internally consistent and realistically scaled qualitative and quantitative information.

Counselling can therefore be understood as a high quality form of interviewing in which client responses were verified by deeper exploration of their responses, by seeking specific examples to support statements and by cross checking the consistency of different parts of their story.
Assessment by DSM-IV

The American Psychiatric Association is the organisation which recognises and characterises psychiatric disorders in the Diagnostic and Statistical Manual of Mental Disorders (currently the in the 4th edition). As a body they decide which disorders merit recognition and lay out the criteria for diagnosis. The World Health Organisation has an equivalent manual the International Statistical Classification of Disease and Related Health Problems (WHO 1992) (ICD-10 currently in its 10th edition). Both recognise PTSD as a psychiatric disorder and characterise it similarly: ICD-10 is more open to accepting a best-fit approach, whereas DSM-IV is more prescriptive and requires all specific criteria to be met. Much PTSD research work is from USA and uses the DSM-IV approach, so this present study adopted this also. It is the gold standard for diagnosis of PTSD against which other diagnostic questionnaires and psychometric tests for PTSD are evaluated. If it doesn't meet DSM-IV, it is not PTSD.

The PTSD criteria are rigorous: there are 6 criteria to be met,

- An event criteria (A) including both a definition of a specific type of event and a specific type of response on the part of the victim.
- An impact criterion (F) which requires the victim to have experienced a very significant impairment of social and occupational functioning.
- A symptom duration criterion (E) which requires the symptoms to have persisted and been co-present for at least one month.
- There are 3 sets of symptom criteria the client must meet,
  - Intrusive symptoms (B)
  - Avoidant symptoms (C)
  - Hyperarousal symptoms (D)

For a full diagnosis the client must have had all three types of symptoms in the one month reference period, and they must also have had more than one form of such a type of symptom. For example, there are 5 signs of hyperarousal, the client must have
experienced two different signs to be considered as having hyperarousal.

The DSM-IV Criteria for PTSD are more extensively detailed in Appendix A. The counsellor must identify and determine 21 different pieces of information to make this assessment. For example Criterion C item 6, restricted range of affect (reduced experience of emotions), requires an understanding of the person both before and after the event in order to determine if there is impairment. The client typically is hyperaroused—very jumpy, fearful and panicky—therefore they themselves may not have consciously observed a numbing of their other warmer or more pleasurable emotions.

Many of these items are potentially vulnerable to subjective interpretation by the counsellor, which was one of the reasons for introducing the PENN Inventory for a second assessment of the client's condition.

Assessment by the ICD-10 (WHO 1992) criteria for PTSD was considered. This similarly requires exposure to an extreme event which is described as a 'stressful event or situation of an exceptionally threatening or catastrophic nature' and the presence of a variety of intrusive, avoidant and hyperarousal symptoms. The ICD-10 description is more narrative and not in the form of a diagnostic key making it more difficult to say confidently whether or not an individual has met a sufficient range, frequency and intensity of symptoms to be considered to have PTSD. The DSM-IV sets a very clear threshold of symptom range and frequency.

2.3.3

Social Readjustment Rating Scale (Holmes & Rahe 1967)

Data collected from the clients in the counselling interviews about major personal life crises they had encountered during the 12 months prior to onset of PTSD type symptoms were inserted in the Social Readjustment Rating Scale to assess the level of impact these events may have had on them.

For example, client’s partner had died in the previous 12 months (100 points), causing
a financial crisis (38 points), requiring them to move house (20 points), the total impact of these events would be 158 points. The clients in the present study are typically having some sort of trouble with the boss (23 points), have often moved job (36 points), or changed responsibilities at work (29 points); the total rises to well over 200 points. According to Holmes and Rahe (1967), an accumulation of 200 stress points or more in a year increases the likelihood of subsequently developing psychiatric disorders. It would be difficult in such cases to link their current mental condition to their workplace problems convincingly.

The argument for a prolonged series of lesser events causing PTSD is based on a similar principle to Holmes and Rahe (1967) of an accumulation of impact, but in some cases it would not be possible to establish a clear causal link between the client’s psychiatric conditions and their workplace experiences alone, since they are experiencing both personal and workplace problems. Therefore any client with an accumulation of major personal life crises in the previous year amounting to over 200 points was not included in the analysis of the present study to prevent the cause of any psychiatric problems being attributed to personal problems.

2.3.4

Life Trauma History

Compared to the Social Readjustment Rating Scale and the DSM-IV, this interviewing was less structured with no preset criteria against which to make an assessment.

Information is needed about the onset of symptoms, timing of critical incident, previous similar experiences and events in previous few years. It is not simply the occurrence of particular types of events that is important, but the significance and meaning of these events for the client.

Careful history-taking would be able to show whether some of the relational problems being experienced in the more recent situation have had antecedents in other settings
It is impossible to methodically and systematically scrutinise every aspect of a person's life history to reveal such information.

The client's emotional response to certain probes or topics as revealed through voice tone, eye contact and body language send unconscious messages. Choice of words in telling their story, patterns of imagery, avoidance of subjects, under- or over-reaction to particular situations, patterns of behaviour can uncover other previous trauma's. Counsellors identify these and use them to focus their exploration on the main areas of dysfunction. As a result, a lot of very similar information is initially collected from clients as a build up to initial assessment, but, following this, different areas for exploration and clarification may emerge, resulting in quite different paths of subsequent enquiry with individual clients.

Using semi-structured enquiry for known major causes of trauma and stress, and unstructured enquiry using open probes, free association, and looking for patterns, all clients with a previous history of exposure to potentially traumatic experiences or previous experiences of PTSD symptoms were identified and excluded from the study analysis. All such clients were nevertheless counselled for their particular problems.

2.3.5

Establishing if the Client was Bullied or Otherwise Victimised in the Workplace

There are no standard definitions or agreed criteria or psychometric tests to determine if someone has been bullied or not. Some workers use descriptive lists of what are considered bullying behaviour: Hoel & Cooper (2000) or Field (1996), who lists 113 bullying behaviours. Others use descriptive phrases with or without short lists of illustrative examples. Some emphasise the behaviour, while others emphasise the effect it has on the victim.

For this study the definition of the Manufacturing Science and Finance union (MSF now renamed Amicus) ((MSF 1995c) was chosen. It covers the behaviour of bullying, the effect it has emotionally, and its impact in terms of undermining self confidence
and causing stress. The examples it cites also cover the main forms of bullying strategy which, prior to the study, nurses coming for counselling were describing to the counsellor.

They said bullying was

"persistent, offensive, abusive, intimidating, malicious or insulting behaviour, abuse of power or unfair penal sanctions, which makes the recipient feel upset, threatened, humiliated or vulnerable, which undermines their self confidence and which may cause them to suffer stress".

Examples include

- Constant humiliation or ridicule, belittling efforts, often in front of others
- Excessive supervision
- Removing whole areas of work responsibility, reducing their job to routine tasks which are well below their skills and capabilities
- Setting impossible objectives or constantly changing the work remit
- Deliberately withholding information
- Excluding from discussions and decisions
- Making threats of penalties, sanctions or getting them in trouble

This MSF definition combined both behaviour and effect and cited the most common forms of inappropriate behaviour encountered in health care settings. It also recognises the significant stress impact of bullying.

It was felt the 'persistent' requirement needed further clarification in terms of frequency and duration. To be considered bullying for the current study it had to be weekly or daily for 6 months. This seems to be most commonly used frequency/duration threshold adopted for bullying research. However there seems to be little base of research evidence to justify why 2 or 3 times a month is not bullying and, by inference, is not harmful, not hurtful, doesn't cause fear or doesn't undermine confidence.

When a threat is made and a menace of vindictive reprisal hangs over a person, how
many days of bullying is that counted as? Clearly some distinction must be made between persistent bullying and one-off affronts or the general hassles and frictions of working together under pressure. But there must be some justification for picking that threshold, and it must give recognition that some incidents have a greater impact than others, similar to the concept behind the Social Readjustment Scale of Holmes and Rahe (1967).

In the present study, the emerging convention was followed but that convention needs questioned and validated. However, one important modification was made to the expression of that convention. The notional threshold of weekly or daily for 6 months can be redefined just as a mathematical formula can be restated without fundamentally changing its value. It can be restated as 24 to 120 incidents in a six month reference period based on a 5 day working week and 4 weeks annual leave, or >24 incidents in 6 months. This is a much more useful notional figure to work with, especially since bullying can sometimes start off at quite low intensity but later rapidly escalate if the victim stands up or challenges and proves to be a threat to the bully's security.

During the counselling interviewing, the client's workplace experiences were explored in detail, looking for recurring patterns of treatment and specific examples, some of which were dismantled and investigated in some depth. Single incidents were counted as single incidents, but often they contained more than one form of bullying behaviour or had more than one effect on the victim.

An assessment was made of whether the treatment the client had been exposed to and the effect this had on them met the definition of bullying and whether they had experienced at least 24 such incidents in a 6 month reference period.

On the strictest application of the definition of bullying, many clients only just meet the >24 threshold for clear-cut incidents. The feeling of upset, threat, vulnerability or humiliation, and a lack of confidence and stress were a more constant and continuous experience.

Where the content of the bullying or harassment or the apparent motive indicated a
discriminatory component related to sex, race, religion, politics or disability, their experience was labelled as discrimination and seen as a sub group of bullying, discriminatory bullying.

The in-depth interviewing of clients about their workplace experiences identified a second type of workplace experience in 15 of the 51 clients. Because of the open interviewing used, it was possible to correlate enough information to characterise this dynamic as a single or short duration of victimisation. Their emotional response to the experience was similar to that with bullying, but the type of events they experienced were much narrower and involved some sort of serious false allegation, and the inappropriate, excessive or unfair use of penal sanctions or discipline. This group of 15 clients will be more extensively defined in the results and discussion. Clients were therefore assessed on the basis of their counselling interview as either victims of Bullying, victims of Discrimination, victims of Single Traumatic Victimisation or Other. This study focused on the two major groups bullying $n = 24$ and single traumatic victimisation $n = 15$.

2.3.6 PENN Inventory

The PENN Inventory (Hammarberg1992) is a psychometric test designed to assess or confirm whether a subject has a clinical diagnosis of Post Traumatic Stress Disorder. The PENN Inventory is a self report questionnaire which was introduced to the present study for two purposes. Firstly it provided a second objective assessment of the client’s condition against which to check the counsellor’s assessment of the client’s clinical PTSD status. Secondly it provided a means of scaling the client’s condition and applying quantitative statistical analysis to their recovery. There are 26 items in the PENN Inventory, with a choice of 4 cafeteria style statements for each item. The client’s responses are specifically requested in relation
to occurrences in the previous one week reference period. The statements are scaled on a Likert scale (0 to 3) and represent an escalating severity of the item being explored. The scores for each item are totalled, which gives a numeric value between 0 and 72 representing a measure of the level of trauma symptoms experienced by the client. A comparative scaling of the PENN scale against clinical assessments of subjects (Hammarberg 1992) and other assessment tools has validated it as a quantitative tool and established a score of >= 35 as an indication of clinical PTSD. Real life psychological and social research tends to use qualitative rather than quantitative data, but quantitative analysis is important as it allows for the "manipulation of numerical data through statistical procedures for the purpose of describing phenomena or assessing the magnitude and reliability of relationships between them" (Pollit & Hungler 1995). In assessing the client's clinical condition in terms of PTSD, a bimodal approach using both qualitative and quantitative measures was used. Politt and Hungler (1995) said, "It is precisely because the strengths of one complement the weakness of the other that both are essential to the further development of nursing research".

The PENN Inventory, as well as providing an independent objective check on the counsellor's assessment of the client's condition and recovery, facilitated scaling of the severity of the condition and determination of the amount of recovery in terms of Reliable and Clinically Significant Change, which is a standard concept for evaluating the therapeutic outcome of a treatment.

A number of factors contributed to the selection of the PENN Inventory. One factor was the openness of the wording of its items compared to other similar scales. The wording in some questionnaires explicitly assumes a single disaster type event which would be difficult and confusing for clients to respond to when they had experienced a prolonged period of duress. The PENN Inventory focused more on the effects or symptoms of the client than the details of events and was less likely to get non-responses or random responses to individual items.

The single most important factor in the choice of the PENN Inventory was that it was
a well-validated, reliable questionnaire showing good correlation with other Post Traumatic Stress Disorder assessment methods, such as the Clinically Administered PTSD Scale CAPS (Drescher and Auberg 1995, Hurricane Iniki) and the Diagnostic Statistical Manual of Psychiatric Disorders (Hammarberg 1992). This is in spite of the fact that the items of the PENN Inventory do not cover all the possible expressions of symptoms found in PTSD.

Subsequent to the commencement of this present study, other reports have made further comparisons with other psychometric and clinical assessment tools, and the PENN Inventory has been shown to perform well in comparison to these. Scott and Stradling (2001), Blake, Weathers, Nagey, Kaloupek, Gusman, Charney & Keane (1995), Numaguchi's (2000).

As previously discussed in the literature review PENN Inventory would appear to be one of the most reliable of the tests currently available.

The client would then be given the PENN Inventory during the first session and given 15 minutes to complete it and add up the score. The results and their significance were then discussed with the client and this provided an opening to explore their specific symptoms and item responses in terms of how long, since when, how often or what triggered it. This produced a lot of useful information for the fuller clinical assessment.

The PENN Inventory was repeated again on completion of the counselling therapy. This was frequently used as a means of reviewing and consolidating with the client the progress made. Progress was always reviewed with each client at the end of counselling, but often the client could accurately do it themselves without reference to the PENN Inventory. A sample of 16 clients were contacted 6 months after completing their treatment and invited to complete the PENN Inventory again; no feedback was given to the clients on the follow up scores.

The statistical analysis of the PENN Inventory (and of the CORE System which is described later) was comprehensive and not only looked at group response, but also examined individual client response, and how particular components of their clinical
Correlation and Regression plots were also determined for PENN and CORE, and specific threshold values on each scale compared.

One difference between the PENN Inventory and the CORE System is that the PENN is a unitary scale whereas the CORE consists of a number of component subscales, or dimensions. Numaguchi (1999) however applying factor analysis identified 5 factors within the PENN Inventory. Two of these factors, Factor 1 and Factor 2 were similar to the symptomology of depression whereas Factor 3 contained symptomology unique to PTSD and similar to Criterion B of the DSM-IV diagnostic criteria for PTSD.

Combined scores for PENN Inventory items from Numaguchi's (1999) factors 1 and 2 (depression), and for items from factor 3 (trauma), were calculated during analysis of the present study data to determine if these values could help distinguish whether subjects with PENN scores in a borderline region close to the clinically significant cutoff values, 35 (Hammarberg 1992) 39 (Scott & Stradling 2001), were depressed or traumatised.

The calculation of Cronbach's alpha for clients and controls showed a strong internal reliability of the PENN scale when used in this novel application with individuals who do not have a singular incident of what would be generally considered a major traumatic event in mind when answering the questions.

2.3.7

The CORE System

CORE is a recently developed commercial system which the RCN counselling service has adopted as an outcome audit tool. The RCN counselling service is one of a number of centres who have adopted the CORE System for service outcome audit.

CORE is as yet a self-validated but not independently validated psychometric tool for auditing clinical outcome in counselling and psychotherapy.
The data was required to be collected on every client seen by the service anyway for audit and quality control, so the inclusion of its analysis into the present study did not add an additional burden to the client.

There have been few published studies using it, and when this research began there had been no published comparative studies of it in parallel to more established psychometric tests such as the PENN Inventory.

It was therefore decided in the present study to scrutinise in detail the general construction and working of the CORE test and its performance in respect of this particular group of traumatised nurses, as well as comparing it with the PENN Inventory.

The CORE System is a Rating Scale recently developed by the Psychological Therapies Research Centre at Leeds University. The primary purpose of the CORE scale and the task for which it was originally calibrated and validated was as an audit tool to assess outcomes in counselling or psychotherapy. CORE is distinctly different from the PENN Inventory in that it is not a diagnostic tool for assessing a specific disorder but instead measures levels of general psychological distress. CORE cannot determine whether an individual has a specific condition, although its measurement of significantly raised general psychological distress is a predictor of the presence of some specific disorder. It measures change in psychological distress as a result of treatment. CORE determines if the size of that change is sufficient to be considered Reliable and not due to experimental or measurement error. CORE also determines whether the change is Clinically Significant and that the client after treatment would be considered recovered. It is possible for a client to show a substantial and statistically significant improvement on a scale for a specific psychological condition, yet to have a score after treatment which still fell in the clinical range for that condition and not in the range of scores found in individuals without the condition. Improvement and recovery are different: recovery requires not only statistically significant improvement but the client's end state must be compared to some normative group or population. In the CORE System.
there is a statistically predetermined cut off value or threshold. This is a point which falls in the zone where the clinical and non-clinical distributions overlap, and is specifically the point where the probability of being in the clinical or non-clinical distributions on the scale is equal. In order for a statistically significant improvement in the client's condition to be considered clinically significant, their score must also cross over this threshold, so that after treatment they are more likely to belong to the non-clinical distribution than the clinical distribution.

The CORE System comes with the confidence limits for Reliable Change and the Clinically Significant cut off value predetermined from statistical analysis of clinical and non-clinical control groups in the original validation and calibration of the test. It should be noted that the significance level for Reliable Change adopted by CORE is the lowest normally acceptable (p = <0.05), and that the calculation used by CORE to establish the cut off value (1.29 females) is only one of several possible calculations for evaluating Clinical Significance. The CORE System is therefore generously calibrated to maximise the assessment of Reliable and Clinically Significant Change in response to treatment.

CORE is a self report questionnaire comprising 34 items for which clients select one of 5 preset responses from a rating scale indicative of the frequency of occurrence of the particular item during the previous one week reference period. There are five points on a scale of 0 to 4, 0 = not at all, 1 = only occasionally, 2 = sometimes, 3 = often, 4 = most or all of the time. Positive and negatively phrased questions are both used, as are what CORE refers to as low and high severity/intensity questions. The theory enables the scale to be responsive to a wide range of severities of particular problem areas.

A total mean scale score is determined for each client by adding together the value of their selected response to each of the 34 items and then dividing by 34, to calculate the mean item response; this is the value used in subsequent assessments. Within the 34 item scale there are 4 dimensions or subscales comprising subsets of items which can be totalled separately and converted to means which should measure different
aspects or dimensions of the client's condition. These dimensions cover Well Being (W) Symptoms (P) Functioning (F) and Risk (R). Some of these are divided further into minor subscales, but some of these minor subscales include as few as two items, and their reliability and validity for measuring the descriptive label given to them has not been substantiated.

Both the main scale and each of the major subscales or dimensions have been calibrated during the original validation of the scale against the clinical and non-clinical control groups, and clinically significant cut off values have been determined for each dimension.

The main scale and each of the main subscales or dimensions has a threshold value. This suggests, as does other material in the CORE Handbook that the scales can move independently of each other. The CORE handbook even suggests a specific phasing or order of recovery for the subscales, Well Being followed by Symptoms and then Functioning.

There were several reasons for including this scale in the present study. CORE gives a wider picture of general psychological distress of the clients than PENN as a single disorder diagnostic tool does.

It was known from the work of Shalev and Yehuda (1997) that exposure to traumatic events is as likely to cause anxiety or depression as it is to cause PTSD. Therefore to monitor recovery and evaluate effectiveness of therapy based on a single dimension of the clients' condition, their PTSD, seemed somewhat limited. This was anticipated as a possible criticism of the research design at the initial review of the findings, and so CORE was included in the second phase of the study. Some clients did also have anxiety and depressive symptoms which the counsellor appropriately responded to during treatment, but to monitor all clients objectively for all possible associated conditions would require a number of additional psychometric tests and put extra burdens on the client and extra distractions for the counselling process.

Whilst CORE might be limited in being able to determine the nature of any long term continuing problems not addressed by the counselling, it would serve as a useful
general indicator of the presence of such unresolved problems.

CORE also provided a validated and standardised means of comparing the outcomes of this particular treatment approach with other therapeutic approaches for the condition. Since CORE is a relatively new measure, the CORE System is still effectively being field trialled.

No comparative studies with other established psychometric tests such as the PENN Inventory or against rigorous clinical assessment such as DSM-IV criteria have been published. As with the PENN Inventory, the initial CORE test was useful to give a broad outline of the client's main problem areas and provide a stepping off point for further exploration and clarification of different aspects of their condition. The counsellor gave the client the CORE questionnaire at the end of the first session and asked them to complete it at home and bring it back for the next session. To complete two questionnaires in one session was considered to take too much time away from the central process of assisting the client to tell their story in their own way, to feel heard and understood, and to establish the counselling relationship. The counsellor therefore assessed the client's need for counselling ahead of and apart from their responses on the CORE test. The counsellor does not feel that the CORE score on its own should be relied upon in assessing the 'caseness' of a client, that is whether or not they need counselling. In the present study, the clients were so obviously severely clinical, as evidenced by their subsequent CORE scores, that counselling was initiated ahead of reviewing the client's CORE scores. However, if someone is counselled who has an initial CORE score below the clinically significant threshold, the outcome of that case cannot be evaluated by CORE.

Although the CORE System provides total mean values and subscale mean values for non-clinical controls, it does not provide item by item mean values. In order to assess how different the clients' responses were for each item compared to normal controls, a control group was going to need to be tested. Fortunately the RCN Working Well Initiative at the request of the RCN Counselling Service was planning to include the CORE test in a large scale survey they were undertaking of a targeted cross sectional
sample of nurses. The overall findings were published in 2002 and the counsellor was given access to as-yet-unpublished data in order to use the participants of this survey as a control group for the present study. The overall size and representativeness of the sample with 4049 nurses from all settings, regions, ages and grades. 5% of the survey respondents did site being bullied or having mental health problems it did not affect this study's overall results. The present study therefore adopted this survey group as a representative control sample of nurses and did not set up its own control group. The statistical strength of this control group enabled the present study to seriously challenge and question the initial calibration of the CORE System, which was based on a much smaller sample and propose a different Clinically Significant cut off value for nurses as a professional group. This is explored further in the Results and Discussion Sections.

2.3.8

The Myers Briggs Type Indicator (MBTI)

It was decided to include a personality inventory in the form of the MBTI in the study. There were a number of reasons for the inclusion of a personality inventory in the present study and for the choice of this particular one. From those who describe the phenomenon of bullying, such as Randall (1997) or Adams (1992) who refer to bully and victim personalities, to those who seek to measure personality difference such as Maynard & Joseph (1997) or Connolly & O'Moore (in press), who identified specific differences in neuroticism and psychoticism, there is agreement for some sort of role for personality. Among victims of bullying responding to the RCN Working Well Survey (unpublished data RCN 2002), 30% said the focus of the bullying they experienced was on aspects of their personality. Others such as Field (1997) take it further, blaming bullying entirely on a personality disorder in the bully. Clients in their stories recount inferences being made that they are weak in personality or overly sensitive, or it is minimised as a clash of personalities, not bullying. Coyne, Seigne and Randall (2000) identified certain
components of personality which were more common in victims. There is a general sensing among practitioners in the field and indications from some research that personality is in some way implicated, but as yet there is not enough research on this aspect. There are however many different personality theories based on different psychological understandings of the key elements of character and personal identity. To date, only a few of these have been explored in reference to bullying. Whilst there is some level of agreement between the personality theories and inventories used to measure aspects of personality, they do differ greatly. To really understand the relationship between personality and bullying, a much greater range of personality dimensions need to be investigated.

Another important reason is that the counsellor has considerable experience in using MBTI as a personal development tool in training, in therapy with clients, and also used it in team building to help understand frictions working together and in individual conflict resolution. The MBTI has been extensively researched in relation to many personal preferences in respect to interpersonal relationship and communication styles. Particular MBTI profiles have been related to leadership styles, coping mechanisms, preferred styles of conflict resolution and assertiveness, all of which may play a contributory role in either initiating or resolving problems between people. If bullying is not a psychological disorder, but one end of a continuum of interpersonal and communication difficulties, the use of MBTI might yield some insights. It might explain why only some people are apparently targeted or why some people can fend it off and others cannot.

The language and terminology of MBTI is non-pathologising and non-accusatory, it is more useful for conflict resolution work or mediation as it finds positive value in all its types.

There do not appear to be any previous studies of MBTI and bullying. The author is aware that some internet sites with an interest in promoting MBTI as a commercial product, make statements that there is no evidence of an association between MBTI types and bullying. The author, however, has been unable to obtain any evidence to
substantiate this assertion. It would appear that there is indeed no evidence because the matter has not been researched, which puts such statements in a different light. (Dalton, Aubuchon, Tom, and Penderson-Sandford 1993) Noted an association between certain MBTI types and those who have developed PTSD, which is an important dimension in this study.

Coyne, Seigne and Randall (2000), described a personality profile that was more common among workplace bullying victims, which was similar to MBTI type ISFJ. This MBTI type is commonly suggested as suitable for a career in nursing, the implication being that certain MBTI profiles common in nursing may be more susceptible to becoming victims of bullying.

The MBTI looked like a promising area to explore in respect to bully, nursing and PTSD.

The counsellor performed the test with clients during treatment if it was felt that the client needed to develop greater self awareness and self understanding. Alternatively, because personality is a fairly stable dimension, it was possible to perform it as a research tool at the end of counselling or even following counselling, by posting out the questionnaire.

MBTI is closely protected by copyright and franchise, because it is marketed as a commercial product. Franchisees are bound to strict rules on its one-to-one presentation with the individual client which would make it difficult to administer as part of a therapeutic counselling process. The counsellor therefore uses a different questionnaire format in therapeutic settings, the Kiersey Sorter (Kiersey 1998b), to allocate clients to their MBTI groups. This is freely available, even on the internet, with some sites doing the scoring automatically and providing information on one's type.

Kiersey has some important differences from Myers and Briggs in terms of their interpretation of how the different dichotomous forms of Jung's typology interact to produce expressions of personality.
Within this present study the Kiersey Sorter was only used to determine the MBTI type, but the Kiersey descriptions of type were not used; the MBTI descriptions and explanations of type were used (Myers & McAuley 1985).

The Kiersey Sorter is a forced choice selection of 70 items expressing preference between two statements. Clients are encouraged to give their first gut reaction and not to think too long, and the test can be completed and totalled in approximately 15 to 20 minutes.

Again as with the PENN and CORE tests, this is a useful starting off point to explore new areas, particularly in respect to how the client relates and communicates with others.
2.4—TREATMENT

In many senses all the tests listed above are both tests and treatments. They assist the client to make sense of their experience and retell their story in a way that does not entrap them and leave them a victim, but in a way that creates opportunity and potential to change, grow and move forward. These tests in themselves do not have a particular therapeutic value; their therapeutic value comes from the way they are used within a process of counselling.

The present study is not just a study of a static phenomenon such as bullying, but of people in a state of change brought about by a process called counselling. It is the study of an effect brought about by the application of a treatment.

2.4.1—Counselling as Treatment

The counselling process served two functions in the present study: it was both the interviewing method through which data was collected to determine the client’s condition, and it was also the treatment process applied to that condition. In the process of telling their story, giving words and meaning to their experiences, the clients were enabled to reorder their lives, regain their sense of control over their lives, recover their sense of identity and integrate the fragmented components of their experience. Information gathering is always part of the counselling process, though it plays a secondary and supportive role to the treatment. In the context of the present study, the counselling generated a large amount of data as a by-product of the therapeutic process, which was then in a sense gathered and recycled for research.

As much as one would like to be scientific in describing a systematic process for exploring, evaluating and identifying the areas to work on with the client, following such a process could lock the client into lifelong therapy. At some point, usually quite early in the counselling process, a best fit or reasonable hypothesis must be formulated to relate the client's condition with their experiences and to start helping the client manage their symptoms, to begin recognising and changing dysfunctional
thinking, and to move towards a return to normal functioning. This hypothesis is always open to review as the process goes on and as more details emerge. The more accurate and insightful that original hypothesis is, the less it will need reviewed and the fewer dead ends will be hit, or the less back tracking will be needed. Knowing when one has a good enough hypothesis to start appropriate work on the key areas is always up to the experienced judgement of the counsellor. Identifying the most productive and beneficial areas to work on first are again a judgement call by the counsellor, but are arrived at in discussion and consultation with the client. What must be borne in mind is that there is no one right answer: the issue is only whether working on a particular area will move the client towards the goal of symptom management and return to normal functioning or not. Some work will be more effective than others, some will be more costly than others, some will be more painful than others, some will give quicker outcomes than others. But all aspects of the client's condition will need addressed eventually.

Because of the open ended nature of exploration in counselling and the way in which different pieces of information are clarified and verified against each other, the overall information which emerges from counselling interviews is of a high quality and is comprehensive, giving both a wide and in depth insight of the client's history and present condition.

This does however create a paradox that the research process of impartial objective observation is inextricably linked with one of the subjects of the study, the treatment. As outlined above, great care was taken in the way data was observed and recorded to ensure that the collection did not interfere with the treatment process. Care was also taken when assessing and evaluating the outcomes of treatment, to lay the main emphasis and weight of such evaluation on the client's self report to the two psychometric tests used in the study, the CORE System and the PENN Inventory rather than rely solely on the counsellor/author's assessment of recovery.
The author often uses two counselling approaches: Client Centred and Cognitive Behavioural Counselling (CBC) are worked together by interspersing them or sandwiching them with alternating high support and then high challenge followed by consolidation with more high support and then new challenge. Person Centred counselling provides the high support and CBC provides the high challenge. A climate of both high support and high challenge is created which is considered most conducive to productive work. Nurses seem to respond well to this approach.

The counselling used in the present study did not follow a specific programme format as such, but drew on the ‘Brief Therapy’ framework of Scott & Stradling (1992 & 2001) in which they applied CBC specifically to PTSD and trauma situations. Scott and Stradling caution against the apparent but deceptive simplicity of the helping model, and refer to 'programme moulding' in emphasising the need to mould the counselling to the contingencies of the client circumstances. Their work applies CBC to trauma situations such as accidents or disasters; further moulding is needed to apply this to the specific aspects of a slowly evolving trauma such as persistent adult workplace bullying.

The steps to recovery are broadly

- Engage the client and help them tell their story
- Arrive at a clear conceptualisation of the client's condition
- Identify the source or cause of the client's condition.
- Share this understanding and perspective with the client and help them to understand their condition and the treatment needed.
- Systematically explore their story working with them to control and extinguish their PTSD symptoms.
- Deal with dysfunctional or maladaptive thinking which may hinder their recovery or may leave them vulnerable to re-traumatisation, including unhelpful coping strategies.
- Deal with the wider consequences of being psychologically injured, other areas of
life and relationships affected by or neglected during their incapacity.

- Prepare them for return to normal functioning

Crisis Management is also often involved and may be fitted in as necessary at any stage, particularly if the nature of the crisis threatens the process of recovery, or if the client's concerns about the matter prevent them fully engaging in the counselling process.

In this approach, the author has developed a trauma based, Cognitive Behavioural approach hinged broadly on Brief Therapy described above. The counsellor works collaboratively with the client, and the shared objectives of the counselling are

- Controlled Exposure (critical incident debriefing)
  - Putting words to their experience and putting their experiences in context
  - Rediscovering the client's pre-trauma sense of self, the bigger picture
  - The client learning to interact adaptively with their memories and current symptom experiences
- Client Centred (Telling their story)
- Psychoeducation—General education in PTSD
- Cognitive restructuring—Changing unhealthy thinking, attitudes, perceptions and beliefs the client's has towards themselves and their experiences
- Crisis Management—Developing interventions for immediate crises
- Re-establishing the client's previous lifestyle
- Preparing for endings of the counselling and return to independent living
- After counselling is completed, managers may undertake supervision sessions to learn about supervision of their work and develop a supervision model with other managers within their work place.

As a 'Brief Therapy', Scott and Stradling (2001) sees the process taking typically about 8 x 1 hour sessions and the mean number of sessions in the present study was 7 sessions. Scott and Stradling (2001), as well as referring to putting experiences into
words and crisis management, also refer to issues or questions the client has which need addressed:

What is or has happened?
What is going to become of me?
What if I don't get better?
Am I safe?

To these, the author would add one specific question which touches on each of the above issues and is probably the central question almost every traumatised victim has: "Am I going mad?" Reassuring them that they are not, explaining to them what is actually happening, and clearly laying out a treatment plan is the turning point for these nurses in their recovery.

The three main techniques when working with PTSD are

- Psycho-education,
- Controlled exposure,
- Cognitive reframing.

Psychoeducation follows assessment of their condition and teaches them about their PTSD condition and how it affects them, and introduces them to the type of treatment that is needed.

Controlled exposure is getting the client to revisit and face through recall, imagery or real life, in a safe and controlled environment, the events which panic or upset them. This is combined with training in symptom management and leads to desensitisation. This practically helps them to overcome blocks to normal functioning and reengage in normal life.

Cognitive restructuring of dysfunctional or maladaptive thinking, beliefs or assumptions is helping the client deal with upsetting experiences in the present by identifying, challenging, and changing unhealthy patterns of thinking that lie behind them. These dysfunctional or maladaptive thinking patterns could have pre-existed the traumatic event.
The author does not use Critical Incident Debriefing as a stand-alone technique in the treatment of these victimised clients. Most of these victimised clients are already past the notional window of opportunity for such intervention and already have developed PTSD-type symptoms.

When it comes to counselling those who have already developed PTSD, debriefing is a central component of their treatment. When debriefing is used in counselling, it comes as an integrated part of the story telling, and in this context it is more accurately described as graded exposure. In a safe, controlled, and supportive environment, the client recounts or recalls their experiences, or through imagined or practical exercises, faces aspects of their past experience. They are coached through, helped to understand their reactions, and taught how to manage their emotional and physiological reactions.

The total experience of an event includes not only the facts of what happened, but also the client's experience of it, what they saw, heard, smelt, physically felt, what they thought or said to themselves, how they behaved and how they emotionally responded. Only when they can recall the facts without becoming excessively distressed can they move on to recall their thinking, and only when they can recall facts and thinking without becoming excessively distressed, are they ready to move on to recall their feelings during the event.

The aim is to help them learn to recall the events without triggering a physiological or emotional re-experiencing of the event in the here and now.

During this they are closely monitored and give feedback to the counsellor, who keeps them focused on the single dimension and coaches them to hold with and manage their discomfort as they recall the events, or else brings them back to the here and now and de-escalates their physiological and emotional response. The counsellor is always mindful that the client must live largely unsupported for the next week, and that counselling must be seen as beneficial by the client. They must therefore not
overly drain the client's already depleted emotional and psychological energy. CBC emphasises a present focus and working back in relation to the present context. Unlike some problems to which CBC may be applied, those with PTSD have had a specific past event, recent or not so recent. Similarly those who have been bullied or victimised in the workplace and come for counselling for psychological problems after this, have an event focus in their stories. This event needs explored in some detail, but with the realisation that one is only dealing with one perspective of events and that the accuracy of recall potentially diminishes the further back in time the event occurred, or if the event was very emotionally charged, and hence the person's attention to detail was distracted. Whilst there is a danger with long past events of reading too much in around a few details, there is another danger with more recent events of getting lost in the detail and not recognising the key areas to work on, or losing sight of the overall goal of counselling, which is to get the client back to normal functioning, not to study them and their story.

Typically the initial assessment of the client's condition as PTSD was arrived at during the first counselling session and was shared with the client, identifying the most likely cause of their condition from their story but pointing out other potential causes which would need exploring and elimination. The effect of this was to bring great relief to the clients, many of whom believed they were actually going mad. Some psychoeducation on the effects and symptoms of PTSD, and relating this to their own symptoms, helped normalise their experiences. Some training was similarly done where appropriate on bullying and its potential for causing stress or PTSD-like problems. Many had not conceptualised their experience as bullying, or they had been told it was bullying by others but did not really understand the concept of adult bullying.

In some PTSD cases there may be other reminders of the event which were not actually part of the event itself but become associated with it. When exposure to traumatic events is prolonged and takes multiple forms, as in bullying, there is more
potential for the victim to develop a wider range of aversions than simply to the scene of the event. An obvious example might be avoiding certain areas or roads where the bully lives, or routes by which they travel to and from work, or places they may have once spotted them shopping. Less obvious ones might include fears about answering telephones or opening mail. The counsellor's work is to discover what the person was like before all this began, to get to know what they are like now, to recognise changes in them and to link these to details in their traumatic experience.

As the PTSD symptoms, defence mechanisms and triggering events get worked on and begin to reduce, the next area to look at is why these triggering events should have the power to affect the person so strongly. Is it simply the association with an awful event that gives them an emotional potency or might there be some cognitive process, some maladaptive thought or belief (B) as in the ABC model of Ellis (1977) which turns an event like being criticised (A) into an extremely distressing emotional experience (C).

The author is asking research questions such as, 'why should criticism upset them' or 'what made them feel humiliated', 'what if any dysfunctional thinking pre-dated their experience of bullying'. Other questions were asked in relation to any events in their past with significant others which would affect the present to significant person in their earlier life.

The client's PTSD, their psychological injury, also needs to be understood, not just as a consequence of their experience of victimisation, but as a part of their overall experience in its own right. Clients may have irrational or maladaptive beliefs about the strange things which are happening to them as part of their PTSD such as "I am going mad", which creates an additional layer of fear and panic. Such fear about fear or rather fear about the physiological symptoms of fear are the basis of the escalating chain reaction which occurs in panic attacks. This also needed to be explored.

In the case of bullying, unlike a sudden trauma, some of these changes in thinking
may have occurred during the period of bullying but prior to the traumatisation, as the victims are systematically undermined and brainwashed until they come to believe they are stupid or useless or incompetent. Bullied victims therefore could potentially have undergone more changes in their thinking due to the prolonged period of psychological abuse prior to traumatisation.

Multiple issues such as social life, work, family and friends need a problem management approach to prevent a new area of crisis arising. This is part of preparing to return to full normal functioning, which includes returning to work. Remaining obstacles to the client’s return to work may be either the presence of the bully or the issue of some sort of accusation against themselves. All advice guidance and legal advice on these matters as well as representation and advocacy work is undertaken by the officers of RCN. This is usually ongoing at the same time as the counselling, and on occasions, the counselling has had to address new crises and issues arising from this concurrent process.

The nurses in this present study were very collaborative, involved and proactive clients who quickly and easily grasped the concepts of CBC and were able research assistants in the study of their own condition. Once one gets behind the differences in the context of their stories, the symptoms and treatment of their PTSD were remarkably similar to that for victims of other triggering mechanisms.

The author, however, when appropriate, coached and prepared the client on how to handle an important meeting emotionally. This also included debriefing them afterwards if needed.

The author used their general counselling experience in reading the conscious and unconscious communications of the client, and their ability to engage the collaboration of the client. The author's experience in trauma enables them to recognise patterns and connections between items in the client's story, and focus on the most productive areas for exploration. Although application to bullying is new, there are a lot of parallels and similarities to other forms of trauma which the author
draws on when working with victims of workplace victimisation.

Several observations were made of how the counselling and wider help provided to clients in the present study might have differed from the counselling available from other sources. These differences were attributable to the fact that the counselling was being provided as a staff support service to members of a representative professional body.

Return to normal functioning very definitely included the concept of return to work, not just recovery from symptoms or being able to carry out everyday tasks.

All the clients in the present study were in receipt of 'joined up' support and care. Whilst counselling was proceeding, the RCN officers were also providing problem management for the client's workplace problems, including advice, guidance and advocacy. The overall package of both support and therapy provided to the clients is quite unique and undoubtedly plays a role in the efficiency of the treatment. Because of the workplace focus of the counselling service, it sees a substantial proportion of clients with this particular type of problem. This results in a degree of specialisation in the treatment of such cases which also contributes to the overall effectiveness of the treatment. Despite efforts to standardise one's approach for the sake of research, to enable others to replicate or to compare outcomes with other research, real life social and psychological research is subject to many intangible influences.
2.5 STATISTICS

The initial compilation and tabulation of data was done using Lotus 1-2-3 (Release 5) and was then transferred to SPSS (version 9) for statistical analysis. The statistical calculations included plotting of PENN and CORE distributions to ensure the distributions of scores approximated a normal distribution, in order to validate the use of parametric techniques which assume normal distribution. If the distribution did not closely match a normal distribution, the One Sample Kolmogorov-Smirnov Test was performed to determine if the distribution was significantly different from normal. In all cases PENN and CORE scores showed normal distribution.

Comparison of scores before and after treatment were tested with the Matched Samples Student t-Test and comparison of scores between different groups of clients were made using the Independent Samples Student t-Test. Comparisons were also made with appropriate normal control samples.

Internal reliability of the scale was tested by calculation of Cronbach's Coefficient alpha and compared with the performance of the tests in other studies. The internal reliability, ranging from 0.81 to 0.85, with nurses before and after treatment and controls was good and compared well to other studies with victims of classic trauma situations.

Recovery of individuals was tested by calculation of Reliable and Clinically Significant change after Jacobson, Follette & Revenstorf (1984) and Jacobson & Truax (1991). Clinical based concept. Reliable change was calculated from the standard error of the mean and indicated a change in score unlikely to have occurred due to testing or experimental error. This was tested both at a 95% confidence level, the standard used by the CORE System and at a 99% confidence level. Clinically significant change was calculated after (EMBH 1998) using the C method, which was one of three methods proposed which attempt to relate the position of the
individual after treatment relative to a relevant and clinically normal control group.
Change can be reliable, significant and even substantial, but if the client still remains,
the clinical range of scores that change would not be clinically significant. C is the
point where the probability of being in the clinical or non-clinical distributions is
equal. If a client moves from being more likely to be a member of the clinical group
to being more likely being a member of the non-clinical group, this is clinically
significant change.
The values for RCSC are preset in the CORE test, but were varied in the present study
to explore the effect of stricter confidence levels. The C cut off for nurses was
calculated from data from the nursing control group and found to be significantly
lower than the CORE Systems C cut off for the female population.
Since the PENN Inventory is usually used as a diagnostic test it does not use the
concept or terminology of Reliable and Clinically Significant Change In order to
monitor recovery of clients in the present study, from PTSD, the C cut off was
calculated for PENN and was found to be very close to the 35 diagnostic threshold for
the test.
Several modifications of both the PENN and CORE scales were calculated using data
from the present study and other studies to help establish clearer gradations of
recovery than simply more or less likely to belong to the clinical or non-clinical
group.
The position of a third distribution was calculated on the PENN scale corresponding
to those with general psychiatric problems. This is important since trauma can cause
general psychiatric problems with and without PTSD.
The statistics sought to follow not only group recovery but individual recovery and
also to study which aspects of the client's condition recovered most and to determine
in what ways clients were similar to, or differed from, normal controls after treatment.
Correlation was tested between the PENN and CORE scales, using Pearson's
coefficient, and the regression relationship was calculated and plotted. This was used
to compare important markers on each scale relative to the other scale. There was
strong correlation between the scales and close agreement on the threshold values for distinguishing between normal control subjects and subjects with general psychiatric problems.

Correlation was also explored between PENN and CORE scores and the number of counselling sessions required to complete treatment.

Quantitative and descriptive statistics of types of workplace experiences, duration of problems, and amount of treatment are presented which these results are explored in the next chapter.
Chapter 3: RESULTS

3.1 STUDY SAMPLE

3.1.1 Details of Study Subjects

The 51 nurses in the study sample will be referred to as study subjects, study nurses or clients. The age range and nursing grades of the 51 clients in the present study are shown in Table 3.1 below.

Table 3.1

Percentage of Clients in the Study by their Age and Nursing Grade

<table>
<thead>
<tr>
<th>NURSING GRADE</th>
<th>D n=6</th>
<th>E n=10</th>
<th>F n=6</th>
<th>G n=20</th>
<th>H n=7</th>
<th>I n=2</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGE 21-30 (n=1)</td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.0</td>
</tr>
<tr>
<td>BAND 31-40 (n=20)</td>
<td>5.9</td>
<td>9.8</td>
<td>9.8</td>
<td>7.8</td>
<td>5.9</td>
<td></td>
<td>39.2</td>
</tr>
<tr>
<td>41-50 (n=20)</td>
<td>7.8</td>
<td>25.5</td>
<td>5.9</td>
<td>39.2</td>
<td></td>
<td></td>
<td>39.2</td>
</tr>
<tr>
<td>51-60 (n=10)</td>
<td>3.9</td>
<td>2.0</td>
<td>2.0</td>
<td>5.9</td>
<td>2.0</td>
<td>3.9</td>
<td>19.7</td>
</tr>
<tr>
<td>Total</td>
<td>11.8</td>
<td>19.6</td>
<td>11.8</td>
<td>39.2</td>
<td>13.8</td>
<td>3.9</td>
<td>100.0</td>
</tr>
</tbody>
</table>

From Table 3.1, 56.9% of the study sample were nurses of grade G and above, and 78.4% were between the ages of 31 and 50. Most nurses in the study, therefore, were typically senior grade career nurses in positions of responsibility and authority who had been in the profession at least 15 years.

The breakdown of the employment sector, in which the work-related incident occurred, for which the clients sought counselling, is shown in Table 3.2 below.

Table 3.2

Percentage of Clients in the Study by Employment Sector and Nursing Grade

<table>
<thead>
<tr>
<th>NURSING GRADE</th>
<th>D n=6</th>
<th>E n=10</th>
<th>F n=6</th>
<th>G n=20</th>
<th>H n=7</th>
<th>I n=2</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMPLOYMENT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>2.0</td>
<td>5.9</td>
<td>9.8</td>
<td>5.9</td>
<td>2.0</td>
<td></td>
<td>25.6</td>
</tr>
<tr>
<td>n=13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INCIDENT</td>
<td>11.8</td>
<td>17.6</td>
<td>5.9</td>
<td>29.4</td>
<td>7.8</td>
<td>2.0</td>
<td>74.5</td>
</tr>
<tr>
<td>NHS OCCURRED</td>
<td>n=38</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11.8</td>
<td>19.6</td>
<td>11.8</td>
<td>39.2</td>
<td>13.7</td>
<td>4.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

150
Table 3.2 shows that 74.5% of the clients worked for the UK National Health Service and 25.6% worked for the private health care sector. Those in lower grades were usually employed within the NHS.

3.1.2
Details of Control Group Subjects
In addition to the client sample, a control group was selected. This group comprised 105 nurses in grades D to I with ages from 31 to 50. None of the control group was currently on sick leave at their point of participation in the test, and none reported being off work with a stress related or psychiatric illness in the previous 6 months. A breakdown of the nursing grades of the control group is shown in Table 3.3 below.

Table 3.3
Nursing Grades of the PENN Inventory Control Group (n = 105)

<table>
<thead>
<tr>
<th>NURSING GRADE</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid D</td>
<td>33</td>
<td>31.4</td>
<td>31.4</td>
<td>31.4</td>
</tr>
<tr>
<td>E</td>
<td>18</td>
<td>17.1</td>
<td>17.1</td>
<td>48.6</td>
</tr>
<tr>
<td>F</td>
<td>10</td>
<td>9.5</td>
<td>9.5</td>
<td>58.1</td>
</tr>
<tr>
<td>G</td>
<td>26</td>
<td>24.8</td>
<td>24.8</td>
<td>82.9</td>
</tr>
<tr>
<td>H</td>
<td>1</td>
<td>1.0</td>
<td>1.0</td>
<td>83.8</td>
</tr>
<tr>
<td>I</td>
<td>3</td>
<td>2.9</td>
<td>2.9</td>
<td>86.7</td>
</tr>
<tr>
<td>Not Stated</td>
<td>14</td>
<td>13.3</td>
<td>13.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>105</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

From inspection of Table 3.3, it can be seen that the nurse control group spanned a wide range of nursing grades. Comparing Table 3.3 with Table 3.1 shows there were more lower grade nurses among the control group nurses than in the study group nurses. In the control group, 58.1% of the nurses were grade F and below compared to 42.2% of the study group nurses.

A Chi Square analysis confirmed this as a significant difference, \( (df = 5, \chi^2 = 17.588, p = <0.01) \). The control group had a significantly greater proportion of lower grade nurses than the study group. Most of the variance can be accounted for by a greater
number of grade D nurses in the control group, 33 (31%) relative to the study group 6 (11.8%).

The primary function of the control group of nurses was to establish the baseline response for the PENN Inventory. The higher proportion of grade D nurses in the control group would only be important if grade D nurses gave different responses on the PENN Inventory scale from higher grade nurses. An independent student t-test was performed to compare the means of the grade D nurses (n = 33) with the mean of the nurses in grades E to I nurses (n = 58) in the control group. No significant difference was found in the PENN scores of the grade D nurses in the control group compared to nurses in grades E to I (t = 1.285, df = 89, p = .202). Therefore despite the different profile of nursing grades in the control group compared to the study group, it would appear to be a valid control group for PENN Inventory scores.
3.2 PENN INVENTORY

3.2.1

PENN Inventory Scores of the 51 Clients in the Study Before Counselling

The distribution of PENN Inventory scores for the 51 clients before counselling is shown in Table 3.4 below.

Table 3.4

Distribution of PENN Inventory Scores of Clients Before Counselling

Table 3.4 shows that the PENN Inventory scores approximate a normal distribution. Most parametric techniques are based on the assumption of normal distribution, and the table shows that it would be justifiable to use these methods for analysis. The mean PENN Inventory score of the 51 clients before counselling was 49.6 with a Standard Deviation of 9.0.
3.2.2

PENN Inventory Scores of Clients After Counselling

On completion of counselling, the clients were re-tested with the PENN Inventory. Duration of treatment is detailed later in the Results in Section 3.11 and took on average 7 sessions over 14 weeks.

Table 3.5 below shows the distribution of the PENN Inventory scores for the 51 clients after treatment.

Table 3.5
Distribution of PENN Inventory Scores of Clients After Counselling

Inspection of Table 3.5 shows a normal distribution of scores after treatment with a mean post-treatment PENN Inventory score of 22.5 and a Standard Deviation of 7.8. By comparing Table 3.5 to Table 3.4, it can be seen that the distribution of scores has shifted to the left, reduced. There is a large 55% decrease in mean PENN Inventory scores after treatment.
3.2.3

Change in PENN Inventory Scores of Clients from Pre- to Post-Counselling

The PENN Inventory showed that the trauma levels of the 51 clients were significantly reduced after receiving counselling. The mean pre-treatment score was 49.59 and the mean post-treatment score was 22.49, a reduction of 27.1 (54.6%). This was confirmed as a very significant reduction in the mean PENN Inventory score by the matched t-test (t = 25.39, df = 50, p = <.001).

3.2.4

PENN Inventory Scores of the Non-Counsellled Control Group

The control group of 105 nurses, who were not on sick leave and reported no recent sick leave due to stress related or psychological problems, also completed the PENN Inventory questionnaire. The distribution of their PENN Inventory scores is shown in Table 3.6 below.
Table 3.6
Distribution of PENN Inventory Scores of the Non Counselling Control Subjects

Inspection of Table 3.6 shows a normal distribution of PENN Inventory scores for the nurse control group with a Mean of 20.4 and a Standard Deviation of 7.85.

The primary function of the nursing control group was to establish the baseline PENN Inventory response of normal nurses who showed no gross psychopathology.
3.2.5
Comparison of the Clients PENN Inventory Scores Before Counselling with the Control Group

Table 3.7
Comparison of the PENN Inventory Means of Clients Before Counselling and the Control Group

<table>
<thead>
<tr>
<th>Group Statistics</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>PENN INVENTORY</td>
<td>51</td>
<td>49.5882</td>
<td>9.0026</td>
<td>1.2606</td>
</tr>
<tr>
<td>SUBJECT before</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>105</td>
<td>20.4476</td>
<td>7.8483</td>
<td>.7659</td>
</tr>
</tbody>
</table>

It can be seen from Table 3.7 that before counselling the 51 clients had a mean PENN score of 49.59 which was much higher than the mean PENN Inventory score of the 105 control group nurses, which was 20.45. The clients had PENN Inventory scores very significantly higher than the normative control group before counselling (t = 20.718, df = 154, p < .001). The mean size of the difference was 29.14 points on the PENN Inventory scale.

3.2.6
Comparison of the Clients PENN Inventory Scores After Counselling with the Control Group

Table 3.8
Comparison of PENN Inventory Means of Clients After Counselling and Control Group Subjects

<table>
<thead>
<tr>
<th>Group Statistics</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>PENN INVENTORY</td>
<td>51</td>
<td>22.4902</td>
<td>7.7778</td>
<td>1.0891</td>
</tr>
<tr>
<td>SUBJECT after</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>105</td>
<td>20.4476</td>
<td>7.8483</td>
<td>.7659</td>
</tr>
<tr>
<td>CONTROL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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It can be seen from Table 3.8 that, after counselling, the 51 clients had a mean PENN Inventory score of 22.49 which was close to mean score for the 105 control group nurses, which was 20.44.

The independent t-test found no significant difference between the mean score of the 51 clients after counselling and the mean score of the normative control group (t = 1.529, df = 154, p = 0.154).

In summary, the 51 clients before treatment, when they first came for counselling, had a significantly raised mean PENN Inventory score of 49.5 in comparison to the normal control group. After treatment this reduced significantly, by 55%, to 22.5.

The 51 clients after treatment had a mean score of 22.5 which was not significantly different from the mean baseline score of 20.4 for the normal nurse control group. Therefore, treatment significantly reduced the indicators of PTSD in the 51 clients to the normal range.
3.2.7

Comparison of the PENN Inventory Scores of the Present Study Subjects or Controls with Results from Other Studies

Table 3.9 below shows the first of two comparisons of the present study means with those of other studies.

Table 3.9

Comparison of Present Study Means to Other Studies of Subjects with Post Traumatic Stress Disorder (PENN Inventory)

<table>
<thead>
<tr>
<th>Groups</th>
<th>N in study</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Study nurses - before counselling</td>
<td>51</td>
<td>49.6</td>
<td>9</td>
</tr>
<tr>
<td>This Study nurses - after counselling</td>
<td>51</td>
<td>22.5</td>
<td>7.78</td>
</tr>
<tr>
<td>This Study nurses - control group</td>
<td>105</td>
<td>20.4</td>
<td>7.85</td>
</tr>
<tr>
<td>Hammarberg (1992) PTSD before therapy</td>
<td>16</td>
<td>48.8</td>
<td>7.6</td>
</tr>
<tr>
<td>Hammarberg (1992) hospitalised PTSD</td>
<td>15</td>
<td>55.2</td>
<td>9.4</td>
</tr>
<tr>
<td>Hammarberg and Silver (1994) PTSD-group a</td>
<td>40</td>
<td>40.9</td>
<td>3</td>
</tr>
<tr>
<td>Hammarberg and Silver (1994) PTSD-group b</td>
<td>39</td>
<td>40.8</td>
<td>2.1</td>
</tr>
<tr>
<td>Numaguchi (1999) PTSD female civilian</td>
<td>30</td>
<td>42.8</td>
<td>11.3</td>
</tr>
</tbody>
</table>

From Table 3.9 it can be seen that the pre treatment PENN Inventory scores of the clients in this study at 49.6 were similar to or higher than those of disaster or combat exposed subjects in other studies who were clinically diagnosed with Post Traumatic Stress Disorder.
Table 3.10 below shows a further comparison of the present study means and those of subjects in other studies who were not clinically diagnosed as Post Traumatic Stress Disorder or who had other general psychiatric problems.

**Table 3.10**

Comparison of Present Study Means with Subjects in Other Studies Who Did Not Have Post Traumatic Stress Disorder (PENN Inventory)

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Study nurses - before counselling</td>
<td>51</td>
<td>49.6</td>
<td>9</td>
</tr>
<tr>
<td>This Study nurses - after counselling</td>
<td>51</td>
<td>22.5</td>
<td>7.78</td>
</tr>
<tr>
<td>This Study nurses - control group</td>
<td>105</td>
<td>20.4</td>
<td>7.85</td>
</tr>
<tr>
<td>Numaguchi (1999) Non PTSD female civilian controls</td>
<td>40</td>
<td>17.1</td>
<td>6.8</td>
</tr>
<tr>
<td>Hammarberg (1992) Piper Alpha survivors, disaster exposed, non clinical PTSD</td>
<td>3</td>
<td>23.3</td>
<td>2.1</td>
</tr>
<tr>
<td>Hammarberg (1992) general psychiatric patients, non clinical PTSD</td>
<td>18</td>
<td>28.2</td>
<td>14.2</td>
</tr>
<tr>
<td>Numaguchi (1999) Clinical Psychiatric female civilian subjects</td>
<td>30</td>
<td>29.9</td>
<td>16</td>
</tr>
</tbody>
</table>

Table 3.10 shows that the present client group before treatment had a mean PENN Inventory score well above that of disaster exposed but non PTSD subjects in other studies. Furthermore the present client group before treatment also had a mean PENN Inventory score well above that of subjects in other studies who were assessed as having general psychiatric problems other than PTSD.
In summary, the group of 51 clients before treatment had a mean PENN score which was above the 35 diagnostic threshold for PTSD on the PENN scale. Their mean PENN score was similar to those of subjects in other studies who had been assessed as having PTSD but were well above the mean scores for groups of subjects, with and without disaster exposure, who were not assessed as having PTSD.

The client’s PENN scores would suggest that the group of 51 clients were likely to have PTSD.

Some explanation of the PENN Inventory’s reliability may be needed. The following sections will look at that more closely.
3.2.8

The Reliability of the PENN Inventory Scale

As explained in the methodology, the PENN Inventory was designed for an implicit target group, those recently exposed to a single severe traumatic event. Cronbach's alpha was calculated to confirm the reliability of the PENN Inventory when it was applied to a different target group. The clients in the present study have been exposed to a more diffuse series of lesser events, and the control subjects mostly have no specific distressing event to focus on when responding to the questions. The values of coefficient alpha for this present study and a comparison with other studies is presented in Table 3.11 below.

Table 3.11

Comparison of Coefficient alpha for the PENN Inventory in This Present Study and Reported in Other Studies (nr = not reported)

<table>
<thead>
<tr>
<th>Study</th>
<th>N Subjects</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Coefficient Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>N.I. nurses - before counselling</td>
<td>51</td>
<td>49.6</td>
<td>9</td>
<td>0.81</td>
</tr>
<tr>
<td>N.I. nurses - after counselling</td>
<td>51</td>
<td>22.5</td>
<td>7.78</td>
<td>0.85</td>
</tr>
<tr>
<td>N.I nurses control group</td>
<td>105</td>
<td>20.4</td>
<td>7.85</td>
<td>0.83</td>
</tr>
<tr>
<td>Hammerberg (1992)</td>
<td>83</td>
<td>nr</td>
<td>nr</td>
<td>0.94</td>
</tr>
<tr>
<td>Hammerberg and Silver (1994)</td>
<td>39</td>
<td>nr</td>
<td>nr</td>
<td>0.84</td>
</tr>
<tr>
<td>Numaguchi (1999) female civilian subjects</td>
<td>100</td>
<td>nr</td>
<td>nr</td>
<td>0.94</td>
</tr>
</tbody>
</table>

Table 3.11 shows that whilst Cronbach's alpha in this present study is slightly lower than other studies, ranging from 0.81 to 0.85, it still indicates a high degree of homogeneity or internal consistency in item responses. The PENN Inventory shows good reliability in this novel application with subjects who have not been exposed to extreme combat or disaster situations. The high internal reliability of the scale with
clients and controls and the low mean score of the control group confirm that the lack of a single specific disaster event to focus on when responding to the PENN Inventory items does not result in anomalous responses or high scores on individual items of the overall scale.

3.2.9

The PENN Inventory and Reliable and Clinically Significant Change (RCSC)

This present study examines the effects of counselling on nurses who have been traumatised by bullying or similar victimisation in the workplace. It is important that there is confidence in the results that indicate change from before to after treatment. It is common for researchers to compare means between groups or in the same group before and after treatment. In contrast to clinicians, therapists and counsellors are more concerned with changes in particular individuals. Jacobson, Follette & Revenstorf (1984) and Jacobson & Truax (1991) proposed a method for determining Reliable and Clinically Significant Change (RCSC) at an individual level. Their concept rests on two questions.

1. Has the patient changed sufficiently (during treatment) to be confident that the change is beyond that which could be attributed to measurement error (reliable change)?

2. How does the end state of the patient compare with scores observed in socially and clinically meaningful comparison groups (clinically significant change)?

A look at these concepts statistically will now be pursued.
3.2.10

PENN and Reliable Change

Reliable change (RC) is change which occurs which is sufficient to be confident that it cannot be attributed to measurement error. It is calculated by the formula

\[ RC = \frac{x_1 - x_2}{S_{diff}} \]

\( S_{diff} \) is the standard error of difference and is calculated as follows

\[ S_{diff} = \sqrt{2(SE)^2} \]

\( SE \) is the standard error of measurement and is calculated as follows

\[ SE = s_1 \sqrt{1-r_{xx}} \]

Where

\( x_1 = \) pre-treatment score of subject

\( x_2 = \) post-treatment score of subject

\( s_1 = \) standard deviation of test group

\( r_{xx} = \) test-retest reliability, (or Cronbach's coefficient alpha)

Inserting the appropriate values for the clients before treatment

Mean = 49.6  Standard Deviation = 9.0  Cronbach's Alpha = 0.81

then  \( SE = 3.96 \quad S_{diff} = 5.6 \)

Therefore

\[ RC = \frac{\text{pre-treatment score} - \text{post-treatment score}}{5.6} \]

If Reliable Change \( RC > 1.96 \), then the change seen in the post-treatment score is unlikely to be due to testing error. The above equation can be rearranged to state that any change greater than \( 1.96 \times 5.6 \) that is greater than 10.96 is considered reliable change.
This calculation is based on a two-tailed probability of \( p < 0.05 \). There is, therefore, a less than a 5% chance that a change in score greater than 10.96 would be found without actual change having occurred.

At this level each of the 51 clients individually showed reliable change after counselling. Two-tailed probabilities are used throughout these calculations for reliable change because, although all scores currently are moving towards reduction, as will be seen later, some clients did show a later relapse and a rise in their PENN Inventory scores. This is not a very high level of confidence: it is selected here because the other psychometric test being used in this present study, CORE, uses this 95% level of confidence in determining reliable change. The PENN Inventory does not usually use the concept of reliable change since it is a diagnostic tool rather than an audit tool, but it has been calculated here because this present study is seeking to track the recovery of clients from pre-treatment to post-treatment through to 6 months after treatment.

If stricter criteria for reliable change are set, based on a two-tailed probability of \( p < 0.01 \), then any change \( > 2.57 \times 5.6 \), that is greater than 14.4, would be considered reliable. There is less than a 1% chance of such change being found without actual change having occurred. At this stricter level of confidence, 3 of the 51 clients (clients 2, 13 & 14) did not show a reliable change in their PENN Inventory scores during the treatment period.

These three particular clients were among a group of 16 clients who were reviewed again in a follow up 6 months after completion of the counselling. Fuller details of the follow up study appear later. Clients 2 & 13 continued their improvement, and by six months after completion of counselling they had attained reliable change in their PENN scores. Client 14 did not achieve reliable change at the \( p < 0.01 \) level of confidence either on completion of counselling or six months after completion of counselling, and their PENN Inventory score, having made an initial small reduction, rose again and returned to near their pre treatment level.
In summary, 48 (94.1%) of 51 clients showed reliable change in their PENN Inventory scores from the start to the completion of treatment. A further 2 (3.9%) attained reliable change during the 6 month period following completion of treatment. Overall 98% of the 51 clients attained reliable change, in a positive direction, on their PENN Inventory scores by six months after treatment.

3.2.11 Clinically Significant Change

The second component of change is Clinically Significant Change; this can be measured in several ways.

The PENN Inventory uses a simple cut-off threshold value to distinguish between those who have clinical PTSD and those who do not have clinical PTSD. Melvyn Hammarberg (1992), who devised the inventory, set the cut-off at 35; Scott & Stradling (2001) suggest the optimum cut-off be revised to 39. Clinically significant change would be when a client's score moves from above to below this cut-off or threshold value. The choice of threshold value is always a compromise between sensitivity (test positives/true positives) and specificity (test negatives/true negatives) of the instrument. Distributions of any feature of biological creatures, particularly psychological or psychosocial measures on humans, are such that there is often no perfect cut off. The clinician therefore looking for a suitable approximation or conceptualisation of the client’s condition, in order to understand them and to inform the helping process, may set a different threshold from a researcher.

There are three calculated determinations of the cut-off point for clinically significant change (EMBH 1998).

A. A pre-treatment to post-treatment change of at least 2 standard deviations from the original group mean (pre-treatment client group mean of 49.6, SD = 9.0). In the present study, this would be a reduction in PENN Inventory score to less than 31.6.
B. A change which moves the patient to within 2 standard deviations of a normative mean (nurse control group mean of 20.4, SD = 7.85).

In this study, using the nurse control group as the normative mean, this would be a reduction in the PENN Inventory score to less than 36.1.

C. A greater likelihood of a patient being in the normative distribution than in the clinical distribution after treatment. This requires the determination of the 'cut off' point, which is where the probability of coming from each of the two distributions, the normative or test distributions, is equal. This is determined using the formula below.

\[
C = \frac{(\text{mean clin} \times \text{SD norm}) + (\text{mean norm} \times \text{SD clin})}{\text{SD norm} + \text{SD clin}}
\]

In this present study

\[C = 34.0\]

Where

mean clin = mean of the clinical group or test subjects

SD clin = standard deviation of the clinical group or test subjects

SD norm = mean of the normative group or comparative group

SD norm = standard deviation of the normative group or comparative group

Any PENN Inventory score, therefore, below 34 is more likely to belong to the normative nurse control distribution than the pre-treatment client distribution.

Calculation A is the least useful estimation, since it only measures change in relation to the original sample group and with no reference to a normative or control population.

Calculations B (36.1) and calculation C (34) in this present study are both very close
Applying the PENN Inventory's original 35 threshold, all 51 clients had PENN Inventory scores above the threshold before their treatment and 47 (92.1%) of the 51 clients had scores below the 35 threshold immediately after treatment. Only 4 (7.9%) of the 51 clients, clients 12, 14, 21 & 51, had scores still greater than or equal to 35 after treatment. Client 14 has been discussed above; they did not attain reliable change. Client 14 therefore did not attain either reliable or clinically significant change during their treatment nor by the 6 months follow up and would be assessed as a treatment failure.

The other clients, clients 12, 21 & 51, attained reliable change during treatment but not sufficient change to reduce their scores to below the 35 threshold. It was observed that their pre-treatment PENN Inventory scores were high ranging from 61 to 72, (1.25 to 2.5 standard deviations above the mean of the client group before treatment) and their post-treatment scores were just above the threshold value ranging from 35 to 37. They therefore showed a significant and substantial improvement in their PENN Inventory scores, but not sufficient to move them from the clinical to the non clinical distribution and be assessed as clinically significant change. Unfortunately, these three clients were not among the sample of 16 clients followed up 6 months after completion of treatment, so it cannot be shown that they continued their improvement and attained clinically significant change.

A total of 45 (88.2%) of 51 clients were determined as attaining Reliable and Clinically Significant Change on the PENN Inventory, in respect of their PTSD indicators, during the treatment period. This rises to 47 (92.2%) of 51 clients when clients 2 and 13 are included, who only attained reliable change after completion of treatment, not during treatment.

If the 39 threshold proposed by Scott & Stradling (2001) is applied instead, then not all 51 clients would be initially assessed as belonging to the clinical PTSD
distribution. A group of 5 clients, clients 2, 6, 13, 16 & 17, had pre-treatment PENN Inventory scores falling between the 35 and 39 thresholds. Clinically significant change could therefore not be determined for these clients since their scores are already below 39 before treatment.

Applying the 39 threshold then, 46 of the 51 clients would be assessed with clinical PTSD before treatment and 45 (97.8%) of these 46 qualifying clients showed Reliable and Clinically Significant Change during treatment. Only client 14 did not show Reliable or Clinically Significant Change.

Raising the threshold has the effect of reducing the number of qualifying cases from 51 to 46 but allows some cases not previously considered to have attained clinically significant change during treatment, to be reassessed as having attained clinically significant change. For example, the three clients discussed above who reduced their PENN scores significantly and substantially but were still just above the 35 threshold, clients 12, 21 & 51, would be assessed as having made clinically significant change if the 39 threshold was used instead.

In summary, 42 (82.4%) of the 51 clients showed Reliable and Clinically Significant Change (RCSC) immediately following treatment regardless of whether a 95% or 99% confidence level was used for reliable change, and regardless of whether a 35 or 39 threshold was used for clinically significant change.

One of the remaining 9 clients (client 14) was by most criteria a treatment failure. Using the PENN Inventory, the assessment of the pre- or post-treatment PTSD status of the other 8 clients, clients 2, 6, 12, 13, 16, 17, 21 and 51, was equivocal.

Assessment of their clinical PTSD status by the PENN Inventory varies depending on whether change is measured immediately following treatment or six months later, whether a 95% or 99% confidence limit is selected for reliable change, and whether a 35 or 39 threshold is used as the clinical cut-off value.

For example, client 2's pre-treatment score was 38; their post treatment score was 26; and their six month follow up score was 18. Applying the 39 threshold, they would
not be assessed as having clinical PTSD in the first case. Applying the 35 threshold they would be assessed as having clinical PTSD before treatment and as having made a clinically significant change after treatment, since their score moved from above to below the 35 threshold. This change in their score from 38 to 26 however would only be considered as reliable if a 95% confidence limit was used for reliable change. If a 99% confidence limit was used instead, this change would not be considered sufficient to be confident that it had not occurred by chance. However, if they were measured some time later in a follow up instead of immediately on exiting treatment, their recovery would be found to be reliable at a 99% confidence level. This illustrates the difficulty of selecting an ideal value on a psychometric scale for Reliable and Clinically Significant Change.

Further difficulties assessing clients with PENN Inventory scores in and around the borderline region 35 - 39 are explored later in Section 3.2.15

In more detailed clinical assessment by the counsellor against DSM-IV criteria the 51 clients before treatment were all assessed as having PTSD, and after treatment all clients were assessed as no longer meeting the full diagnostic criteria for PTSD.

3.2.12 General Psychiatric Group on the PENN Inventory Scale

During phase I of the present study, the nurse control group consisted of only 30 subjects. The distribution of their PENN scores was calculated as normal, but a small cluster of control subjects had PENN scores in the high twenties, slightly more than would be expected by normal distribution. This blip coincided with Hammarberg's description of a grouping of scores around 28 on the PENN Inventory scale, corresponding to subjects with general psychiatric problems but not PTSD. This raised concerns about being able to reliably distinguish clients in the present study with mild PTSD symptoms from clients with more general psychiatric problems, but not PTSD, using the PENN scale. This is particularly relevant since NHS staff, and nurses in particular, are reported to have well above average incidence of
psychological distress and minor psychiatric disorders (Borrill et al, 1996). In phase II of this study, the nurse control group for the PENN Inventory was greatly enlarged from 30 to 105 subjects. As Table 3.6 shows, any visible blip on the plot vanished with the larger sample size, but a few (5%) of the control subjects in the upper tail of distribution of the normal control group did exceed the PENN Inventory clinical PTSD threshold of 35, with scores ranging from 35 to 41.

When the PENN Inventory questionnaires were performed with the control subjects, they were asked to total their own scores at the time, and the significance of the scores was explained to the participants after this. The author therefore had the opportunity to engage in conversation with the control subjects who had scores in the 30's and above the 35 threshold. The conversation was more of an ad hoc nature and not a structured confidential interview. The general impression given was that these individuals were under a lot of stress in the workplace, though they did not provide any evidence of bullying or harassment. The normal control distribution may therefore contain a subgroup or subsume another distribution of subjects with general psychiatric problems such as anxiety or depression.

From the findings of this present study alone, it was not possible to draw any further conclusions about such a group. Caution however is needed in evaluating clients with PENN scores between 35 and 42 if there is no other independent assessment of their PTSD status. Fortunately, there are other researchers who have approached this from a different angle using the PENN Inventory with people already independently assessed as having general psychiatric problems. For example Hammarberg (1992) and Numaguchi (1999) have both described a similar grouping of scores on the PENN Inventory scale associated with subjects with general psychiatric problems but not PTSD. Their results are outlined in Table 3.12 below.
Table 3.12

Other Study Descriptions of the General Psychiatric Group on the PENN Scale

<table>
<thead>
<tr>
<th>Study</th>
<th>N in Study</th>
<th>Mean</th>
<th>S.D.</th>
<th>Subject group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hammarberg (1992)</td>
<td>18</td>
<td>28.2</td>
<td>14.2</td>
<td>General Psychiatric Subjects</td>
</tr>
<tr>
<td>Hammarberg (1992)</td>
<td>16</td>
<td>48.8</td>
<td>7.6</td>
<td>PTSD Subjects before therapy</td>
</tr>
<tr>
<td>Numaguchi (1999)</td>
<td>30</td>
<td>42.8</td>
<td>11.3</td>
<td>PTSD Subjects</td>
</tr>
<tr>
<td>Numaguchi (1999)</td>
<td>40</td>
<td>29.9</td>
<td>16</td>
<td>Clinical Psychiatric Subjects</td>
</tr>
<tr>
<td>Numaguchi (1999)</td>
<td>40</td>
<td>17.1</td>
<td>6.8</td>
<td>Normal control subjects</td>
</tr>
</tbody>
</table>

The results in Table 3.12 suggest there are three distributions on the PENN Inventory scale corresponding to a normal population, a general psychiatric population and a PTSD population. Many of the clinical features of PTSD are not unique to the disorder but may occur as part of symptom clusters in other psychiatric disorders. The PENN Inventory scale therefore may show a modest elevation of score in subjects with general psychiatric problems other than PTSD. This grouping with general psychiatric problems is centred around 29 on the PENN scale and lies between the normal population distribution centred around 17 and the clinical PTSD distribution with scores above the 35 threshold and centred around 49.

Numaguchi (1999) considered that the 35 threshold on the PENN scale could differentiate subjects with clinical PTSD from both non clinical subjects and subjects with only general psychiatric problems. Most subjects in that study had depressive problems. The sensitivity of the 35 threshold was 0.73 (true positives) and the
specificity was 0.84 (true negatives) (Numaguchi 1999).

Because there is a much higher proportion of nurses with psychological distress and minor psychiatric problems than in the general population (Borrill et al 1996), it was considered important to determine the optimum cut-off point on the PENN scale between the general psychiatric group and those with clinical PTSD.

The upper and lower 'C' cut-off values for the general psychiatric group were calculated using data from the nursing control group in the present study and data on the general psychiatric and clinical PTSD groups from Hammarberg (1992) and Numaguchi (1999).

The formula for calculating the 'C' cut-off for clinically significant change (EMBH 1998), shown in section 3.2.11, was used. The lower limit of the psychiatric group, the value where the probability of being in the normal control distribution or the general psychiatric distribution is equal, was determined as 23.5.

The upper limit of the psychiatric group, the value where the probability of being in the general psychiatric distribution or the clinical PTSD distribution is equal, was determined as 42.5.

The calculated cut-off points between the distributions based on each researcher's set of results is shown in Table 3.13 below.

Table 3.13
Calculated Upper and Lower 'C' Cut-off for the Psychiatric Group on the PENN Scale

<table>
<thead>
<tr>
<th></th>
<th>Normal population distribution</th>
<th>General psychiatric distribution</th>
<th>PTSD distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hammarberg</td>
<td>23.2</td>
<td>41.8</td>
<td></td>
</tr>
<tr>
<td>Numaguchii</td>
<td>23.52</td>
<td>42.5</td>
<td></td>
</tr>
</tbody>
</table>
Table 3.13 shows close agreement in the calculation of the upper and lower threshold values for the general psychiatric group on the PENN scale using data from the independent studies by Hammarberg (1992) and Numaguchi (1999). The 23.5 & 42.5 values determined from Numaguchi's (1999) data were adopted because the sample size was larger and the study was based on female civilian subjects, making it a more relevant control group for the present study.

The three distributions and their descriptions, corresponding to the normal population, a general psychiatric group and the PTSD group are shown in Table 3.14 below.

Table 3.14

<table>
<thead>
<tr>
<th>Penn Inventory Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>from 0 - 23 are most likely to belong to the normal population</td>
</tr>
<tr>
<td>from 24 - 42 are most likely to belong to a general psychiatric group</td>
</tr>
<tr>
<td>from 43 - 78 are most likely to belong to a PTSD group</td>
</tr>
</tbody>
</table>

From Table 3.14, it can be seen that a client with a PENN score of 45 is more likely to belong to the clinical PTSD distribution than to general psychiatric distribution or to the non clinical distribution, whereas a client with a PENN score of 30 is more likely to belong to the general psychiatric distribution than the other two distributions.

This modification of the PENN scale, with two cut-off values and three distributions, makes it more robust for using with a nursing population who have a high background incidence of general psychological and psychiatric problems.

A client exposed to a traumatic situation with a PENN score of 31 may not have PTSD, but is likely to have other psychiatric problems such as anxiety or depression as a result of their traumatic experience, whereas a similar client with a score of 22 has no signs of adverse effects from their experience.

This modified scale will be used in section 3.3.14 to reassess recovery in terms of clinically significant change.
Exploring the Upper and Lower Thresholds of the General Psychiatric Group on the PENN Inventory Scale

When the 23.5 threshold is applied to the PENN scores of the 105 control group nurses in the present study (Mean = 20.4, SD = 7.85), 34.5% of the control group showed scores above 23.5, falling into the general psychiatric group. This compares well to the Sheffield Study (Borrill et al 1996) which found 28.5% of nurses and 33.4% of NHS managers were significantly psychologically distressed or had minor psychiatric disorders.

Applying the 23.5 threshold to the 40 normal population females in Numaguchi's (1999) study (Mean = 17.1 SD = 6.8), 17.4% of the normal female population control group would have PENN scores above 23.5 and fall into the general psychiatric group. Again this compares well to Borrill et al (1996), who found 17.8% of the general working population significantly psychologically distressed or with minor psychiatric disorders.

A 23.5 threshold on the PENN scale appears suitable to distinguish between the normal non clinical distribution and those with psychological distress or minor psychiatric disorders.

There was no independent data in this present study or available to this present study to evaluate the calculated upper 42.5 threshold. When the 42.5 threshold was applied to the 40 subjects in Numaguchi's (1999) study who were described as having clinical psychiatric problems, 22% fell above the 42.5 threshold indicating that they were more likely to be part of the clinical PTSD distribution. The selection of the clinical psychiatric subjects in Numaguchi's (1999) study did not specifically preclude those with a previous history of exposure to traumatic events. Therefore the finding of a sizeable proportion of their clinical psychiatric group with scores indicative of PTSD may say more about the role of lifelong undiagnosed traumatisation in psychiatric illness than it does about the validity of the 42.5 threshold in distinguishing PTSD from uncomplicated general psychiatric problems. None of the 105 control group
nurses in the present study had a PENN score above 42.5.

The 23.5 and 42.5 thresholds calculated in the present study appear to define the upper and lower cut-offs of a third distribution on the PENN scale, those who have marked psychological distress or clinical psychiatric disorders but not PTSD. Those with scores above 35 would merit a fuller assessment for more serious psychiatric disorders such as major depression (MD) or PTSD.

3.2.14

Reassessing Recovery Using the Modified PENN Inventory

The introduction of the general psychiatric distribution as a third distribution onto the PENN Inventory scale offers new interpretations of recovery. A client moving out of the PTSD distribution, no longer clinical PTSD, could move into either the normal distribution or they may only move into the general psychiatric distribution with indications of ongoing general psychiatric problems. The latter is a very feasible possibility because of the high incidence of comorbidity of anxiety and depressive disorders with PTSD in those exposed to traumatic events. These different aspects of the client's condition may not all improve at the same time or at the same rate.

All the PENN data from the present study was based on 51 clients. As explained in the methodology the 51 clients consist of 15 clients from phase I of the study plus 36 clients from phase II of the present study. In the second phase, an additional psychometric instrument was introduced, the CORE System, which is an audit tool for assessing clinical outcomes in counselling and psychotherapy. CORE provides a comparative assessment of the client's recovery and of their level of general psychiatric problems. However this comparative data is only available for the 36 clients in phase II. In order to evaluate the modifications made to the PENN scale by the introduction of the psychiatric distribution, the following calculations and comparisons will be based on the 36 clients in phase II for whom there is a corresponding comparative CORE assessment of their general psychiatric problems.
Before treatment, 23 (63.9%) of the 36 clients had PENN Inventory scores above the 42.5 cut-off. After treatment only 1 (2.8%) of the 36 clients, client 14, remained above 42.

The post treatment scores of the 36 clients are shown in Table 3.15.

**Table 3.15**

<table>
<thead>
<tr>
<th>PENN</th>
<th>&lt;24</th>
<th>24-42</th>
<th>&gt;42</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal Distribution</td>
<td>Psychiatric Distribution</td>
<td>PTSD Distribution</td>
<td></td>
</tr>
</tbody>
</table>

* indicates the 23 of 36 clients whose PENN scores were in the clinical PTSD range, that is above 42.5, before treatment.

Examination of Table 3.15 shows that 7 (30%) of the 23 (*) clients in the clinical PTSD range before treatment made a full recovery after treatment. That is their pre-treatment scores were above 42.5 and their post-treatment scores were below 23.5. These clients who made a full recovery, clients 1, 15, 23, 28, 32, 34, & 35, showed a reduction of over 60% in their PENN Inventory scores.

A further 15 (65.2%) of the 23 (*) clients who had PENN scores in the PTSD range before treatment also improved and were no longer within the PTSD range after treatment. However, their PENN scores after treatment fell in the general psychiatric range (23.5 to 42.5). These clients showed mean reductions of under 60% in their PENN Inventory score.

The overall recovery rate from PTSD was 95.7% for the 23 clients who had pre-treatment PENN scores indicative of PTSD. However those recovering from PTSD fall into two groups: those making full recovery from PTSD and from all indicators of...
general psychiatric problems, and those showing recovery from clinical PTSD but continue to have indicators of ongoing general psychiatric problems. The modified PENN scale would indicate that 19 (52.8%) of the 36 clients, regardless of questions over their PTSD status before treatment, still had sufficient indicators of general psychiatric problems after treatment to preclude them from the normal distribution. In approximately 2/3 of cases, recovery from PTSD, whilst substantial and showing Reliable and Clinically Significant Change, is still not complete in terms of the clients’ overall psychiatric state which still falls short of the normal range.

There was also another sense in which recovery was not complete. As explained in the methodology, a sample of 16 clients from phase II was followed up 6 months after completing counselling. The follow up sample retested 7 of the 15 clients with PENN scores in the general psychiatric range immediately following treatment. Of this group of 7 clients, 4 (57%) had continued their recovery and in the follow up had PENN scores in the normal range on the PENN scale. The remaining 3 (43%) of 7 clients at follow up still had PENN scores in the general psychiatric range. Over half the clients with indications of ongoing general psychiatric problems on completion of treatment continued their recovery after treatment. Clients 3, 4, 5 & 27 were completing recovery during the 6 month follow up period, while clients 7, 8 & 20 continued to have indications of ongoing psychiatric problems. Only 16 of the 36 clients in phase II were followed up 6 months after completing counselling, so the longer term outcomes for every individual client are not known. However, extrapolating from the sample, it can be calculated that by 6 months after counselling, 67.5% of clients in the clinical PTSD range of the PENN scale before treatment (> 42.5) would have had PENN scores in the normal range (<23.5) after treatment.

In summary, 67.5% of clients by 6 months after completing treatment have no indications of either PTSD or general psychiatric problems and can be described as in full recovery.
To be described as recovery assumes that the client had the specific condition in the first case. All clients included in this present study had been initially assessed by the counsellor against DSM-IV criteria as having clinical PTSD when they commenced counselling and by the PENN Inventory using Hammarberg's (1992) threshold of 35. The modified PENN scale with the third general psychiatric distribution set a higher threshold for PTSD assessment at > 42.5. Applying this stricter criterion leaves 13 (36%) of 36 clients with PENN scores between 35 and the 42.5. Assessment of these 13 clients by PENN score alone would be problematic had it not been for the more detailed assessment of their condition by DSM-IV.

These 13 borderline clients showed comparable improvement in their PENN scores during treatment to those with initial scores above 42.5, with 10 (77%) of these 13 clients moving from the upper range of the psychiatric distribution into the normal distribution on completion of treatment.

One of these psychiatric distribution clients, client 19, is of note because of an apparent relapse in their condition. Client 19 had a pre-treatment PENN score of 41 and a post-treatment score of 23. This was a 44% reduction in PENN score, moving from the top end of the psychiatric range to the top end of the normal range. At the 6 month follow up their score had risen again to 49, putting them in the clinical PTSD range for the first time. Looking at total scores this looked like a relapse, but closer examination of their responses to individual PENN Inventory items showed a new profile of symptoms had emerged. Some items on which they had made improvement during treatment maintained that improvement and some items on which they reported no problems before or after treatment emerged as major components of their condition at follow up. This client could be seen as a late or delayed onset of PTSD, which is an observed phenomenon in PTSD.

In summary, a third of all clients showed full recovery from all indications of PTSD or other general psychiatric problems during treatment. Another third of all clients attained full recovery within 6 months of completing treatment and the remaining
third continued to have ongoing indicators of psychiatric problems, with a few not responding to treatment at all or appearing to experience a relapse of PTSD.

3.2.15
Reassessing Borderline Cases

The normal, general psychiatric and PTSD distributions on the PENN scale overlap. Any threshold is a compromise or balance of probabilities; moving any threshold has varying effects. Moving the single threshold on the PENN Inventory scale from 35 to 39 makes the initial assessment criteria stricter, ruling some clients out of the PTSD group before treatment. On the other hand, it makes the recovery criteria less strict and allows clients scoring 35 - 39 after treatment to be reassessed as recovery from PTSD. Applying the 42.5 threshold exacerbates this further, but the creation of the psychiatric range in the modified PENN scale does recognise that clients with scores of 35 - 42 are not free from psychiatric problems, although they are difficult to assess from a PTSD perspective. From other worker's proposed thresholds and from findings in this present study, there would appear to be a borderline range of PENN scores from 35 - 42 which needs closer examination. If the only data on these cases was their PENN score, those scoring in this region could have PTSD but are more likely on a balance of probability to have general psychiatric problems instead. Each client in this region would need their full clinical symptom profile examined on an individual basis, as they were in the present study against DSM-IV criteria for PTSD. Altogether 5 of 105 control group subjects, 13 of 36 clients before treatment, and 3 of 36 clients after treatment had scores in the range 35 - 42.

As mentioned previously, the 5 of 105 control group subjects scoring in this region appeared to have high stress and anxiety. None of the 3 clients with PENN score in the range 35 to 42 after treatment were assessed as still having PTSD by the DSM-IV criteria. Clients therefore, both with and without PTSD, are frequently found with PENN scores between 35 and 42 and need independent assessment of their condition. No specific independent psychometric tests were carried out for the commonly
occurring psychiatric conditions such as depression or anxiety among the clients in the present study, so it is difficult to scale the level of depression, anxiety or PTSD in clients scoring in this range.

Each of the 36 clients in phase II of the present study made scaled responses to a total of 60 items in the PENN and CORE tests. As described in the methodology the PENN and CORE scales also have tentative and actual subscales, some of which correspond to depression, anxiety or trauma.

This study identified 13 of 36 clients with pre-treatment scores in the 35 - 42 range, and extracted their PENN and CORE subscale scores for depression and trauma.

Although the PENN Inventory has no recognised subscales, Numaguchi (1999), by factor analysis, identified 5 subsets of items: Factors 1 & 2 relating to items also found in depression and Factor 3 relating to items unique to PTSD and trauma.

The subscale scores for the 13 clients with total PENN scores in the range 35 to 42 before treatment were extracted and are presented in Table 3.16 below.
### Table 3.16

**Depression and Trauma Subscales Extracted from the PENN Inventory and CORE System for Clients with PENN Scores in the Region 35-42**

<table>
<thead>
<tr>
<th>Client</th>
<th>PENN Total</th>
<th>PENN Depression Items (factor 1 &amp; 2)</th>
<th>PENN Trauma Items (factor 3)</th>
<th>CORE All Mean</th>
<th>CORE Depression Subscale</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>38</td>
<td>26</td>
<td>9</td>
<td>2.17</td>
<td>2.5</td>
</tr>
<tr>
<td>6</td>
<td>36</td>
<td>22</td>
<td>10</td>
<td>2.04</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>42</td>
<td>27</td>
<td>11</td>
<td>2.11</td>
<td>3</td>
</tr>
<tr>
<td>10</td>
<td>41</td>
<td>24</td>
<td>14</td>
<td>2.26</td>
<td>2.75</td>
</tr>
<tr>
<td>13</td>
<td>37</td>
<td>25</td>
<td>7</td>
<td>1.85</td>
<td>2.25</td>
</tr>
<tr>
<td>16</td>
<td>37</td>
<td>22</td>
<td>12</td>
<td>2.14</td>
<td>3</td>
</tr>
<tr>
<td>17</td>
<td>37</td>
<td>27</td>
<td>5</td>
<td>2.38</td>
<td>2.25</td>
</tr>
<tr>
<td>19</td>
<td>41</td>
<td>32</td>
<td>8</td>
<td>2.5</td>
<td>3</td>
</tr>
<tr>
<td>25</td>
<td>41</td>
<td>31</td>
<td>6</td>
<td>1.97</td>
<td>2.5</td>
</tr>
<tr>
<td>26</td>
<td>42</td>
<td>29</td>
<td>12</td>
<td>2.12</td>
<td>2.75</td>
</tr>
<tr>
<td>29</td>
<td>41</td>
<td>29</td>
<td>8</td>
<td>2.29</td>
<td>2.75</td>
</tr>
<tr>
<td>30</td>
<td>40</td>
<td>27</td>
<td>8</td>
<td>1.47</td>
<td>2</td>
</tr>
<tr>
<td>33</td>
<td>41</td>
<td>32</td>
<td>5</td>
<td>2.7</td>
<td>4</td>
</tr>
<tr>
<td>Control Group Mean</td>
<td>20.4</td>
<td>12.9</td>
<td>5.1</td>
<td>0.63</td>
<td>0.84</td>
</tr>
<tr>
<td>Control Group Standard Deviation</td>
<td>7.8</td>
<td>5.3</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Clients’ Mean Before Treatment</td>
<td>49.6</td>
<td>31.8</td>
<td>12.6</td>
<td>2.42</td>
<td>3</td>
</tr>
<tr>
<td>All Clients’ Mean After Treatment</td>
<td>22.5</td>
<td>13.6</td>
<td>6.7</td>
<td>1.16</td>
<td>1.44</td>
</tr>
</tbody>
</table>

Inspection of Table 3.16 shows a wide variation of symptom profiles within a relatively small range of total PENN scores. For example, clients 10 & 33 both have total PENN scores of 41, yet client 33 has a trauma items score of 5, which is the same as the control group mean of 5.1, whilst client 10 has a trauma items score of 14, which is 2.97 standard deviations above the control group mean. Relative to the control group, client 33 appears to have a markedly raised depression score but a normal trauma score, and client 10 has only a slightly raised depression score but a markedly raised trauma score. On initial examination it would appear that the raised PENN scores of some clients scoring in this borderline region are largely attributable to a depression component rather than trauma. This suggests they may belong to the general psychiatric distribution rather than the PTSD distribution, and that this is an
overlap region between a general psychiatric distribution and a clinical PTSD distribution. A significant correlation was also noted between the PENN depression subscale and the CORE depression subscale (Pearson’s coefficient = 0.407, p = .014, n = 36).

It was, however, noted among these borderline clients that when the depression items were high, the trauma items were correspondingly low and vice versa. This was tested in a correlation analysis and showed a modest but significant negative correlation between PENN trauma items and depression items (Pearson's coefficient = -0.555, p = .049, n = 13). This negative correlation only held for the 13 clients with total PENN scores in the range 35 to 42 before treatment, and not for clients with higher total scores or controls with lower scores. When the correlation was analysed for the other 38 of 51 clients in the present study who had total PENN scores above 42 before treatment, a significant positive correlation was instead found between depression items and trauma items (Pearson's coefficient = 0.445, p = <.006, n = 38).

Most of this effect was attributable to the fact that 9 of the 51 clients in the present study had a high ratio of depression item scores to trauma item scores (>= 3.3), and 7 of these particular clients had total PENN scores which fell in the borderline region 35 to 42 on the PENN scale. The scores of these 7 individuals had a large impact on the statistical analysis of the group of 13 borderline clients. Further analysis showed that these individuals appeared to be reporting less often, or giving lower intensity scores to, items which are unique to trauma than would be expected for an individual with that particular total PENN score.

By comparison their scores for depression related items were within the expected range for their respective total PENN score. In other words, it is not that their depression items score is high, but that they are reporting lower than expected scores on trauma unique items. The reason for this is not clear. It may be that when trauma items are of low intensity and comorbid depression is relatively strong, the depression may mask the client’s self-awareness of some of the range of symptoms they have, causing them to under report in self report questionnaires. The counsellor did uncover
a sufficient range and intensity of symptoms to assess these clients with PTSD.

However, it must be remembered that the PENN Inventory is designed specifically to assess for PTSD, and that the depression related items are also part of the overall spectrum of symptoms which make up PTSD. Assessment of PTSD by PENN is based on total weight of score of all items, not just the trauma unique items. Otherwise the scale would contain considerably fewer items. It is therefore overly simplistic to say that because the trauma unique items do not show a raised score, the client does not have PTSD. The DSM-IV criteria use a 4 week reference period for symptoms while the PENN Inventory uses only a one week reference period. Those scoring low on the trauma unique items in PENN may experience less frequent episodes of these symptoms or have more symptoms which come and go, and don't all occur in a one week reference period, but do occur over a four week period.

This study also observed that 6 of the 13 clients in the borderline range were either very early cases of PTSD, within six weeks of onset of symptoms, or had had symptoms for over 12 months and were somewhat recovered from the worst intensity of some of those symptoms before treatment.

If an individual has a PENN score between 35 and 42, it can only be interpreted and understood in the context of that individual's full story and symptom history.

3.2.16

PENN Inventory Item Scores and Responses to Treatment

The previous sections explored how the total PENN Inventory scores of individuals responded to treatment. To understand more fully what was happening during treatment each of the 26 PENN items was examined over the course of the treatment and through to follow up.

There are 26 items in the PENN Inventory scale, scored on a Likert scale from 0 to 3. The mean reduction for all individual items is shown in Table 3.17 below.
Table 3.17
Description of Change in the 26 PENN Inventory Items During Treatment

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>PENN change</td>
<td>26</td>
<td>.41</td>
<td>1.80</td>
<td>1.1182</td>
<td>.3966</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>26</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3.17 shows that each of the 26 PENN items reduced by a mean of 1.1 during treatment. These reductions ranged from 0.4 to 1.8, indicating that not all items responded equally to treatment. Just as some individual clients responded more than others, some individual PENN Inventory items responded more than others during treatment. The mean response of the 51 clients before treatment to each of the 26 PENN items is plotted in descending order in Table 3.18 below.

Table 3.18
Pre Treatment PENN Item Scores for Clients (n = 51)
Examination of Table 3.18, in combination with the PENN Inventory Questions and Responses described in Appendix B, shows that PENN item 20, concerning problems with achieving goals, had the strongest response. Each bar represents an item and the strength of response to that item. Clearly some items got a very strong response from nearly all clients, while other items got either a generally lesser response or only got a response from a limited number of clients.

Item 20, for example, looks at the client's ability to achieve the things they want: a response of 2 would indicate they are achieving only some things, a response of 3 indicates they are achieving few of the things they want. The mean response of 2.76 to this item shows that nearly all clients are not achieving most of the things they want.

An anomaly was noted in the construction and wording of some of the PENN items. For some items, the first of the four responses from which a selection is made would be a normative response. E.g. Item 1, first response, "I don't feel much different from most people my age" scores '0'. For other items, the first response refers to an enhancement, the second response is normative and the third and fourth responses refer to an increasing reduction in performance. For example, item 11, concentration, the choice of responses and their Likert score are shown in Table 3.19 below.

<table>
<thead>
<tr>
<th>Score</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>I can concentrate better than ever</td>
</tr>
<tr>
<td>1</td>
<td>I can concentrate as well as ever</td>
</tr>
<tr>
<td>2</td>
<td>I can't concentrate as well as I used to</td>
</tr>
<tr>
<td>3</td>
<td>I can't concentrate at all.</td>
</tr>
</tbody>
</table>

From Table 3.19, it can be seen that no change in performance "I can concentrate as well as ever" would score '1'. The effect of this would be to give a raised mean score for this item even in the absence of any reduction in functioning. Therefore referring
back to Table 3.18, the order and strength of the item responses in this table cannot be simply compared to each other.

To correct for this effect and to get a more accurate representation of the difference between the clients and the control subjects, the PENN scores were recalculated. This correction was made by subtracting the average response of the 105 nurse control group for each item from the 51 clients' pre-treatment response to each item. This gave a measure of how different the client's responses were from the normative control group.

The mean difference between the client's response before treatment and the control group response to each PENN item is plotted in Table 3.20 below.

Table 3.20
Difference in PENN Item Response Between Clients (n = 51) Before Treatment and Nurse Control Group (n = 105)

Examination of Table 3.20 shows a slight reordering of items from the previous Table 3.19. Item 11 has now moved from the 7th most prominent feature of the client's
responses to the 15th, and item 14 about confusion emerges as the feature in which the client group is most different from the nurse control group. The columns now represent the difference between the clients before treatment and the normative control group.

By calculating the differences between the clients' mean response to each CORE or PENN item and the mean response by a nursing control group to each of these items, a clearer picture emerges of how different these clients were from the normal nursing population. This correction against a nursing control was useful because it should have largely removed any anomalies in response due to nursing sector specific stressors such as shift work, break times, generally raised stress or specific stressors like concerns around needlestick injuries. These differences are a truer reflection of the specific effects the clients are experiencing as a direct result of their psychological condition.

The major differences between clients before treatment and controls were

- confusion (14)
- not understanding themselves (15)
- sleep disturbance (21)
- being easily distracted (9, 19)
- being jumpy and on edge (4)
- difficulty remembering things they need to (22)
- difficulty dealing with intrusive bad memories (24)
- difficulty setting, working towards and achieving goals (18, 20, 23).

These results would indicate that the nurses who have experienced various forms of victimisation in the workplace are very confused about what is happening to them; they are experiencing worrying symptoms and are finding it very difficult to function. Because these differences are calculated relative to the responses of a nursing control group, these differences are clearly the result of their psychiatric condition and not because of working in a high stress profession. Examining the mean PENN Item responses of the clients when they first came for counselling gives another level of
insight into the experience of a client traumatised by victimisation.

The 51 clients were divided into 4 groups based on the spread of their total PENN score from the mean. Each of these groups can be taken to represent one of four individual nurses representing, for counselling, a borderline case (1), a mild PTSD case (2), a medium PTSD case (3) and a severe PTSD case (4).

- Group 1 had PENN scores more than one standard deviation (SD = 9.0) below the pre-treatment test subject mean of 49.5. That is less than or equal to 40.
- Group 2 lay between one standard deviation below the mean and the mean. That is 41 to 49.
- Group 3 lay between the mean and one standard deviation above the mean. That is 50 to 58.
- Group 4 was more than one standard deviation above the mean. That is equal to or greater than 59.

The assignment of the 51 clients to the groups is shown in Table 3.21 below.

<table>
<thead>
<tr>
<th>PENN</th>
<th>Test Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>&lt;=40</td>
</tr>
<tr>
<td></td>
<td>2, 6, 13, 16, 17, 30</td>
</tr>
<tr>
<td>Group 2</td>
<td>41 - 49</td>
</tr>
<tr>
<td></td>
<td>1, 8, 9, 10, 15, 19, 23, 24, 25, 26, 29, 33, 37, 41, 42, 44, 45, 46, 47, 49</td>
</tr>
<tr>
<td>Group 3</td>
<td>50 - 58</td>
</tr>
<tr>
<td></td>
<td>3, 5, 14, 20, 22, 27, 28, 31, 32, 34, 36, 38, 39, 43, 48, 50</td>
</tr>
<tr>
<td>Group 4</td>
<td>&gt;= 59</td>
</tr>
<tr>
<td></td>
<td>4, 7, 11, 12, 18, 21, 40, 51</td>
</tr>
</tbody>
</table>

Table 3.21 Assignment of Clients to Groups based on Spread from Mean

Inspection of the Table 3.21 shows that Group 1 comprises clients with borderline PENN Inventory scores who are difficult to confidently differentiate from the general psychiatric distribution. Group 4 clients, however, are beyond the 95% upper...
Table 3.22
Mean PENN Item Response by Range Group
confidence limit for the general psychiatric distribution which is set at 56.2: they represent the most severely traumatised individuals.

According to Hammarberg's (1992) parameters for hospitalised PTSD cases, all those with symptoms as severe as group 4 would usually be in hospital for treatment. None of the clients in the present study were hospitalised, though a number, particularly those whose functioning was most profoundly affected, were also receiving medical care, and some were on medication.

The mean response of each of the client groups to each PENN item was calculated. The results are presented clustered together in one graph for comparison in Table 3.22 opposite. (Table 3.22 is inserted as a colour plate opposite since black and white printing and shading does not allow easy differentiation of the bars within each cluster).

Each colour of bar represents a different client group (one of the 4 example nurses) and their response to the particular PENN item. The height of each bar represents the difference in mean PENN item response between the particular client group and the nurse control group.

Inspection of table 3.22 shows that some PENN items, such as item 20, achieving goals, only varied by 0.65 across all four groups. This sense of not achieving was comparatively common to all four groups and was only slightly stronger in the most severely traumatised cases.

Conversely, item 8, experiencing flashbacks, increased by 2.15 across the groups. Group 1 reported no more problems with flashbacks than control nurses, but for group 4, the frequency and intensity of flashback experiences was one of the strongest and most characteristic features of their symptom profile.
The most prominent features in group 1 (borderline PTSD case) were
- confused about life (P14)
- not understanding self (P15)
- anger (P6)
- easily distracted (P9)
- jumpy (P4).

The most prominent features in group 2 (mild PTSD case) were
- confused about life (P14)
- not understanding self (P15)
- jumpy (P4)
- goals not clear (P23)
- unwanted thoughts (P19).

The most prominent features of group 3 (Moderate PTSD case) were
- confused about life (P14)
- sleep disturbance (P21)
- jumpy (P4)
- moving towards goals (P18)
- memory (P22).

The most prominent features of group 4 (severe PTSD case) were
- not understanding self (P15)
- feeling different (P1)
- easily distracted (P9)
- goals not clear (P23)
- not achieving goals (P20)
Confusion about life and not understanding oneself (P 14 & P15) are strong characteristics across all the groups, as are items to do with setting, moving towards, and achieving goals (P18, P20 & P23). Items associated with heightened alert, such as jumpiness, being easily distracted and difficulty sleeping (P4, P9 & P21) again are prominent features across all groups.

The above items reflect a generally heightened alert state and confusion relative to the control group, and is a profile that would characterise all the clients.

Despite the serious mistreatment the clients have received from others, anger is only prominent in group 1, though it does occur across all groups. Examining individual client responses, it would appear that anger seems to be more a matter of individual response, shown by some clients and not others, depending on the individual or their circumstances rather than being related to the severity of their condition.

Clients in group 3 and 4 show a profile of symptoms, in their PENN responses that are very characteristic of PTSD. Clients in group 1, however, report a less characteristically PTSD profile of symptoms, and it is only the combined weight of all items, general and specific, in the PENN Inventory, which places them above the 35 threshold and identifies them as likely to have PTSD.

Group 1 individuals would be the most difficult to identify or differentiate from other general psychiatric disorders without a psychometric test, such as the PENN Inventory, or an in-depth assessment of their history and symptoms.

3.2.17
PENN Inventory Item Responses to Treatment

Having identified the strength of response to each PENN item before treatment the present study went on to examine how each PENN item changed during treatment. The difference in the pre-treatment and post-treatment mean score for each PENN item was determined for the group of 51 clients. These are presented in descending order in Table 3.23 below.
From Table 3.23, it can be seen that the 8 items which have responded the most to treatment were PENN Items P15, P14, P9, P23, P4, P18, P20 and P21. These same 8 items were the highest scoring items in Table 3.20. Therefore the items in which the clients were most different from controls and which would be causing them most concern were the same items most effectively dealt with in the counselling.

The counselling would appear to be addressing the main presenting symptoms in the clients. The reduction in item scores was shown to be statistically significant for all items (at p = <.001) by the paired t-test except for item 17 (t = 2.612, df = 50, p = 0.012). Item 17 is an historical question about a past history of traumatic events, a factual item which would not be expected to substantially change through counselling.
It was observed that the principle changes during treatment centred around

- reduced confusion (P14)
- better understanding of self (P15)
- being less distracted (P9)
- having clearer goals (P23)
- less jumpy (P4)
- better able to shape towards goals (P18)
- greater sense of achieving (P20)
  - improved sleep pattern (P21)
- being able to take enjoyment (P3)
- feeling understood (P5, P25)
- dealing with unwanted thoughts and keeping focus (P19)
- better concentration (P11)
- improved memory (P22)

These represent both a reduction in PTSD symptoms and an increase in general cognitive functioning leading to improved overall functioning.

It was observed that for some PENN items (including enjoyment P3, being able to share with a friend P12, and feeling understood P25), the clients' mean scores after treatment were actually lower than (better than) the mean score of the control group for these items. Only on one item, the enhanced ability to take enjoyment with others (P3), was this enhancement statistically significant.

PENN item P17 deals with what should be a relatively objective fact: whether or not the client has experienced what they regard as traumatic events. The fact some individual clients did report a reduction in this item suggests a cognitive reframing of the meaning and hence a change in the impact of these events in their lives. Others showed an increase in response to item 17, because through counselling, they had come to the realisation that they were not going mad but had been psychologically assaulted and injured.
Some items in Table 3.23, such as a sense of loss (P26) or anger (P6 & P16) appear to make a smaller reduction than other items. The mean scores for these items were low to begin with and numerically closer to their control group means than were other items. This meant their potential range for change, in numerical value, was less than for other items.

Because anger and aggression are considered by some (Yehuda 1999b) to be unrecognised symptoms of PTSD, it was important to determine if this area had been adequately dealt with during treatment. When the reduction in score for items P6 and P16 were recalculated in terms of percentage change relative to their pre-treatment value, the two anger related items (P6 & P16) reduced by an average of 60% during treatment.

All the main issues with which the clients present for counselling, show major reductions during treatment. The main improvements are in the areas of PTSD symptom reduction and an increase in cognitive functioning. The clients are experiencing less of the bizarre symptoms such as panic, intrusive thoughts or flashbacks and are more in control of their behaviour and responses.

3.2.18

PENN Inventory Scores of Clients After Treatment Compared to Controls

Having examined the changes in individual PENN item scores in response to treatment, the next step was to compare the post-treatment score for each item to the control group score for that item. This was to determine which items were returned to normal and which were still raised relative to normal after treatment. The difference in scores, for each PENN item, between the clients after treatment (n=51) and the nurse control group (n = 105) were determined. These are presented in descending order in Table 3.24 below.
Table 3.24
Difference in PENN Item Scores Between Treated Clients (n = 51) and Controls
(n = 105)

From Table 3.24, it can be seen that on some items the clients after treatment still had slightly higher scores than the controls (above the zero line), while on other items they had slightly lower scores than the controls (below the zero line). These differences were small and most were not significant. Some differences however were shown to be statistically significant by the Independent t-test:

- Item 17, history of previous trauma, $t = 3.78$, df = 154, $p = .001$
- Item 7, disturbed by past traumas, $t = 3.62$, df = 157, $p = .001$
- Item 1, feeling different, $t = 4.2$, df = 154, $p = .001$
- Item 24, bed memories, $t = 2.9$, df = 154, $p = .005$
- Item 8, flashbacks, $t = 2.37$, df = 154, $p = .05$

PENN Inventory Item Number
On the above items, the clients after treatment still had significantly raised scores relative to the control group. The clients were still having greater difficulty in these areas. On one item the clients were performing significantly better than the controls: Item 3, getting enjoyment, \( t = -2.22, df = 154, p = <.05 \)

Their recent experiences in their workplace (P17) and the distress still caused when these are recalled (P7) continue to set them apart from the control group. These bad memories still can come back and are difficult to keep out of one’s mind (P24 & P8). This continues to maintain the feeling of being different (P1).

Although what has happened to them remains a fact, and they still struggle in some areas, the above problems are significantly reduced from before treatment.

Their ability to take enjoyment (P3), the item specifically referring to be able to share enjoyment together with others, is slightly better in the clients after treatment than in the controls. This indicates that the clients have established at least one supportive relationship and are putting active effort into this, hence the enhancement.

The overall improvements and the post-treatment means compared to controls, show the counselling approach has been very effective in dealing with the clients’ main issues, with only a few areas of difficulty remaining.

Even though an individual's total PENN score reduces to below the 35 threshold and even though they no longer meet the full quorum of DSM-IV criteria to be clinically assessed as having PTSD, many clients still struggle with a few specific PTSD symptoms.
3.3 CORE

CORE was the second psychometric self response instrument used in the present study. CORE evaluations were only included in phase II of the study, so the following analyses of CORE are based on 36 clients. CORE differs from the PENN Inventory principally in the fact that it was developed as an instrument for audit and is an audit or outcome tool rather than a diagnostic tool. It measures well being, symptoms, functioning and risk. Its principle concern is in measuring reliable and clinically significant change.
3.3.1

CORE Scores of the 36 Clients Before Counselling

The distribution of the 36 clients' CORE scores before treatment is shown in Table 3.25 below. Note that CORE scores are expressed as the mean of the item scores unlike PENN which is expressed as the total of its item scores, so CORE scores are small in value and range from 0 to 4.

Table 3.25

Distribution of CORE Scores of Clients (n = 36) Before Counselling

Initial inspection of Table 3.25 shows a distribution which may not appear to be normal. To determine if the distribution was normal and whether statistical tests which assume normal distribution could be applied, the One Sample Kolmogoroff-Smirnov Test was performed.

The distribution was found not to be significantly different from normal (Kolmogorov-Smirnov Z = .728, Asymp. Sig. (2-tailed) = .664). Therefore statistical tests which assume normal distribution can be applied.
3.3.2

CORE Scores of the 36 Clients After Counselling

The distribution of the 36 clients' CORE scores after treatment is shown in Table 3.26 below.

Table 3.26
Distribution of CORE Scores of Clients (n = 36) After Counselling

From Table 3.26, it can be seen that the mean post-treatment CORE score is 1.19 which is a 51% reduction from the pre-treatment score of 2.42. This is a large reduction in indicators of general psychiatric problems in response to treatment.

3.3.3

Comparison of Clients' CORE Scores Before and After Treatment

The matched t-test was performed on the 36 clients' pre and post-treatment scores. The 51% reduction in mean CORE scores was found to be significant ($t = 13.076$, df = 35, $p < .001$).

It was noted that the Pearson's paired sample correlation was low at $r = 0.234$ (Sig =
0.170) but for psychosocial variables, \( r \) values in the range of 0.1 - 0.4 are typical (Polit & Hungler 1995).

### 3.3.4

**Comparison of CORE with Other Studies**

Apart from the original calibration studies, there are as yet few published studies using the CORE System.

Table 3.27 below shows a comparison of the present study means, those of the CORE calibration study, and one other published study of a nursing group being counselled.

**Table 3.27**

**Comparison of CORE and Main CORE Sub Scales for Clients in this Present Study and Other Studies**

<table>
<thead>
<tr>
<th></th>
<th>All CORE Items</th>
<th>W Well Being</th>
<th>P Symptoms / Problems</th>
<th>F Functioning</th>
<th>R Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CORE Test Calibration Study</strong> (CORE 1998)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical</td>
<td>1.86</td>
<td>2.37</td>
<td>2.31</td>
<td>1.86</td>
<td>0.63</td>
</tr>
<tr>
<td>Non Clinical</td>
<td>0.76</td>
<td>0.91</td>
<td>0.9</td>
<td>0.85</td>
<td>0.2</td>
</tr>
<tr>
<td>Clin female</td>
<td>1.85</td>
<td>2.41</td>
<td>2.28</td>
<td>1.84</td>
<td>0.61</td>
</tr>
<tr>
<td>Non Clin female</td>
<td>0.81</td>
<td>1.1</td>
<td>1</td>
<td>0.86</td>
<td>0.15</td>
</tr>
<tr>
<td><strong>Mclnnes &amp; Mellor-Clark (2000)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nurses before counselling</td>
<td>1.98</td>
<td>2.72</td>
<td>2.64</td>
<td>1.95</td>
<td>0.2</td>
</tr>
<tr>
<td>Nurses after counselling</td>
<td>1.09</td>
<td>1.09</td>
<td>1.22</td>
<td>0.94</td>
<td>0.09</td>
</tr>
<tr>
<td><strong>RCN Working Well Survey (2002)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal Nurses</td>
<td>0.62</td>
<td>0.84</td>
<td>0.74</td>
<td>0.74</td>
<td>0.05</td>
</tr>
<tr>
<td><strong>Present Study</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nurses before counselling</td>
<td>2.42</td>
<td>3.1</td>
<td>3.1</td>
<td>2.4</td>
<td>0.56</td>
</tr>
<tr>
<td>Nurses after counselling</td>
<td>1.19</td>
<td>1.63</td>
<td>1.58</td>
<td>1.12</td>
<td>0.13</td>
</tr>
</tbody>
</table>

From Table 3.27, it can be seen that the mean CORE score of 2.42 for clients in this present study, before treatment, was higher than the mean of the clinical group in the calibration study (1.86), or the mean of the general sample of nurses referred to the RCN counselling service for counselling (1.98). The degree of psychological distress
or disorder among clients in the present study was high, 22% higher than the mean for a study of nurses commencing counselling and 31% higher than the clinical psychiatric control group used in calibrating the CORE System. The clients in the present study had CORE scores not just higher than normal control groups or the general population, but 22% to 31% higher than relevant nursing and female control groups with general psychiatric problems.

After treatment, the clients' mean CORE score of 1.19 was still well above the 0.81 mean for the CORE System's normal non-clinical female population. However, the 1.19 mean is below the CORE System's 1.29 cut-off for clinically significant change.

During treatment, the 36 clients show a significant reduction of 51% in their mean CORE score but their post-treatment mean of 1.19 is still well above the non-clinical female population mean of 0.81 or the nursing population mean of 0.62 (RCN 2002). Whilst recovery is substantial and significant, they still have some way to go to reach the CORE score of a relevant control group. However, in McInnes and Mellor-Clarke (2000), nurses completing counselling had a mean score of 1.09 which is similar to the 36 clients in this study with a mean of 1.19 on completing treatment. CORE scores on completing counselling are still slightly higher than normal, suggesting that clients have not yet fully recovered when counselling is completed.

As with the PENN Inventory, the mean score reduces by half, the mean falls to below a clinically significant cut-off value, but the mean is still well above that of a relevant normal control group or the general population. Recovery but not full recovery.

3.3.5

Reliable and Clinically Significant Change and CORE

This is a study of individuals recovering from the effects of workplace bullying and other forms of workplace victimisation. Thus, individual change during treatment, assessed in terms of Reliable and Clinically Significant Change (RCSC), also needs to be examined as well as changes in group mean scores.

Is change sufficient not to have occurred due to measurement error (reliable change)?
How does the end state of clients compare with scores observed in socially and clinically meaningful comparison groups (clinically significant change)?

Reliable and Clinically Significant Change of the clients has previously been determined in respect of the PENN Inventory and indicators of PTSD (Section 3.2.9, 3.2.10 & 3.2.11). As a counselling and therapy outcome audit tool, CORE takes in a wider range of indicators of psychological and mental health, whilst PENN is focused on assessing one specific disorder.

Cronbach's coefficient alpha for CORE was calculated as 0.8860 in the present study which indicates a good internal reliability of the scale. This was used to determine what would be reliable change. Based on this, it was calculated that any change in CORE score greater than 0.425 would be reliable at a $p = <0.05$ confidence level. There is only a 5% chance of such a difference occurring without actual change having taken place.

As highlighted previously, this is the standard level of confidence used by the CORE System to determine reliable change. Applying this to the 36 clients in phase II of the present study, they all showed reliable change during treatment.

Since this is not a very high level of confidence, the values were recalculated for a 99% level of confidence ($p < 0.01$ two-tailed). It was calculated that any change greater than 0.557 would be reliable at a $p < 0.01$ confidence level. There is only a 1% chance of such a change being found without actual change having occurred.

At this level, 4 (11%) of the 36 clients did not show a reliable change in their CORE scores during treatment, clients 2, 3, 13 & 24. When three of these clients (clients 2, 3 & 13) were followed up 6 months after completion of counselling, it was found that their improvement had continued and they had attained reliable change by this time. There was no follow up data on client 24.
Clients 2 & 13 have also been identified earlier as slow but ongoing improvers on the PENN scale, who did not attain reliable change during treatment at a 99% confidence level, but attained reliable change by the 6 month follow up. At the stricter 99% confidence level for reliable change, 32 (89%) of 36 clients showed reliable change in their CORE scores during treatment. Six months following treatment this rises to at least 97%.

3.3.6

Clinically Significant Change

The CORE System provides its own predetermined C cut-off point to evaluate clinically significant change and to determine whether an individual belongs to the clinical or the non clinical distribution. The CORE All item C cut-off for females is 1.29: the cut-off values for the main subscales have also been determined and are shown in Table 3.28 below.

<table>
<thead>
<tr>
<th>CORE Subscale</th>
<th>Clinical Significance Cutoff (C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total, all items</td>
<td>1.29</td>
</tr>
<tr>
<td>All non risk items</td>
<td>1.5</td>
</tr>
<tr>
<td>Risk (R)</td>
<td>0.31</td>
</tr>
<tr>
<td>Functioning (F)</td>
<td>1.3</td>
</tr>
<tr>
<td>Problems / Symptoms (P)</td>
<td>1.62</td>
</tr>
<tr>
<td>Well Being (W)</td>
<td>1.77</td>
</tr>
</tbody>
</table>

If the client’s total or subscale score moves from above to below the cut off values shown in Table 3.28, they go from being more likely to be a member of the clinical
distribution to being more likely to be a member of the non clinical distribution. This is considered clinically significant change.

In the present study, 52.8% of clients showed clinically significant change on the total scale and on each of the above subscales during treatment. The same attainment rate for clinically significant change across all subscales during treatment, suggests the counselling comparably addressed all aspects of the clients' full range of general psychiatric indicators and not just their PTSD symptoms.

On completion of treatment, 47.2% of the clients still had scores in the psychiatric distribution on the CORE scale. The modified PENN scale (3.2.14) similarly found 16 (44.4%) of the same 36 clients in either the general psychiatric distribution or the PTSD distribution after treatment. Both scales agree that, on completion of treatment, approximately half the clients still have sufficient indicators of general psychiatric problems to be considered more likely to belong to the clinical psychiatric population than the normal non clinical population.
3.4 EVALUATION OF THE CORE SYSTEM SCALE

CORE is a relatively new scale and has not been compared with other psychometric tests in other studies. One aim of this current study was to examine in closer detail the performance of the scale, particularly in reference to the group of traumatised clients in the current study. The current study has made a number of observations concerning the general construction and functioning of the CORE scale as well as its performance with the current study clients. These will be outlined below.

3.4.1 Poor Separation of Clinical and Non Clinical Groups

One general observation of the CORE scale was that the published mean scores of the clinical and non clinical groups used to calibrate the CORE test were relatively close to each other and that the Standard Deviation, or spread of each group was relatively large in comparison to the size of the group mean. These values are shown in Table 3.29 below.

Table 3.29
CORE Mean and Standard Deviation for Clinical and Non Clinical Distributions

<table>
<thead>
<tr>
<th></th>
<th>Male and Female</th>
<th>Non Clinical (n = 1084)</th>
<th>Clinical (n = 863)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Male and Female</td>
<td>0.76</td>
<td>0.59</td>
<td>1.86</td>
</tr>
<tr>
<td>Female Only</td>
<td>0.81</td>
<td>0.61</td>
<td>1.85</td>
</tr>
</tbody>
</table>

From the values in Table 3.29 it can be seen that the clinical female mean of 1.85 and the non clinical female mean of 0.81 are only separated by 1.04 points on the CORE scale. Yet their respective standard deviations are 0.77 and 0.61. This means there is a large overlap between the two distributions, and that the calculated C cut-off value of
1.29, where the probability of being in either distribution is equal, potentially assigns a large proportion of individuals to the wrong distribution.

3.4.2
Low Differential Power of 1.29 CORE Cut-off
This value of 1.29 (female cut-off) is 0.78 Standard Deviations above the mean of the female non clinical group, therefore calculating from Z distribution tables, 23.77% (1 in 4) of the non clinical female population would be expected to have scores above this value.

The value of 1.29 is also 0.72 Standard Deviations below the mean of the female clinical group; therefore 23.58% (1 in 4) of clinical females would be expected to have scores below this value.

Therefore, up to 1 in 4 clinical or non clinical females, particularly if their scores lie between the clinical and non clinical means, may be mis-allocated to the clinical or non clinical group by the 1.29 cut-off. The C calculation for clinically significant change may not be the most accurate method of determining which distribution an individual belongs to, or of assessing clinically significant change when there is a sizeable overlap of the distributions.

3.4.3
Assessment of Clinically Significant Change Using the CORE 1.29 Cut-off
Recovery after treatment was examined using the balance of probability cut off value of 1.29 on the CORE scale (the C cut-off). It should be noted that all clients before treatment had CORE scores above the 1.29 threshold; in fact, the lowest client score before treatment was 1.47. The other 35 of 36 clients had pre-treatment CORE scores greater than 1.9 and definitely fell in the clinical distribution.

The assignment of clients to the clinical or non clinical distributions, after treatment, is presented in Table 3.30 below.
Table 3.30
Assignment of Clients to Clinical and Non Clinical Distributions by CORE After Treatment (1.29 cut off) (n = 36)

<table>
<thead>
<tr>
<th>CORE Score</th>
<th>Assigned Group (Balance of Probability)</th>
<th>Test Subjects (Client Number)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1.29</td>
<td>Non Clinical</td>
<td>1, 4, 5, 6, 8, 9, 14, 15, 16, 17, 22, 26, 27, 28, 29, 30, 32, 34, 35</td>
</tr>
<tr>
<td>&gt;= 1.29</td>
<td>Clinical</td>
<td>2, 3, 7, 10, 11, 12, 13, 18, 19, 20, 21, 23, 24, 25, 31, 33, 36</td>
</tr>
</tbody>
</table>

Table 3.30 shows that 19 (52.8%) of the 36 clients move from the clinical distribution to the non clinical distribution after treatment; they show clinically significant change. The initial rate of Reliable and Clinically Significant Change following treatment is 52.8% according to CORE.

In the 6 month follow up, 8 clients from the non clinical group and 8 clients from the clinical group were sampled and re-tested.

In the non clinical group, 2 (25%) of the 8 clients sampled showed a rise in their CORE score to return to the clinical group (clients 8 & 14).

In the clinical group, 5 (62.5%) of 8 clients sampled showed a continuing fall in their CORE scores to below 1.29 (clients 2, 3, 10, 13 & 23).

Recovery appears to be a dynamic process: some remain stable after treatment, some continue improving, and some show a deterioration after treatment, though usually not a full relapse to their previous condition or symptom profile.

In the follow up sample of 16 clients, 8 (50%) were non clinical immediately after treatment, rising to 11 (69%) non clinical by the six month follow up. Whilst 62% of clients in the follow up sample showed ongoing improvement in their CORE scores, 12.5% showed deterioration in their CORE scores. Mental health is a dynamic state, not a static state and is subject to fluctuations in response to environmental conditions. Many of the clients were still working through the consequences of major career changes or still pursuing justice though one means or another.
3.4.4 Assessment of Clinically Significant Change with Greater Confidence

Because the clients in the present study were so strongly clinical before treatment there were no difficulties at that stage with the validity of the 1.29 cut-off. However, as distribution of scores in Table 3.26 illustrates, a lot of clients had post-treatment scores in and around the 1.29 cut-off and were more difficult to accurately assess by CORE at that stage of their recovery.

The single cut-off method seemed inadequate, with two such closely overlapping distributions, to establish just how severely clinical a client was, or to determine whether a client had improved enough that one could be confident they were recovered, or would not relapse after treatment was completed.

It was decided to calculate the new cut-off points which would assign clients to the clinical or non-clinical populations to 95% confidence using CORE.

The cut-offs were calculated as follows. The 95% confidence range of a normal distribution lies within 1.65 standard deviations either side of its mean. Any score outside this range has only a 5% probability of occurring.

It was calculated that the upper limit of the 95% confidence range for the non-clinical group was 1.81 so any value above this could be assumed to be part of the clinical group with 95% confidence.

The lower limit of the 95% confidence range of the clinical group was calculated as 0.58 so any value below this can be assumed to be part of the non-clinical distribution with 95% confidence.

This created a central third zone on the CORE Scale of equivocal scores that could not be confidently attributed as belonging to either the non-clinical or clinical distributions. The three score ranges are shown in Table 3.31 below.
Table 3.31
Calculated Group Assignment by CORE (p <0.05)

<table>
<thead>
<tr>
<th>CORE Score</th>
<th>Assigned group 95% confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 0.58</td>
<td>Non clinical</td>
</tr>
<tr>
<td>0.58 - 1.81</td>
<td>Equivocal</td>
</tr>
<tr>
<td>&gt;1.81</td>
<td>Clinical</td>
</tr>
</tbody>
</table>

Table 3.31 shows a large equivocal zone, within which clients cannot be confidently assigned to either the clinical or non clinical distribution. This three zone approach allows assignment to the non clinical or clinical groups with 95% confidence. The two zone or single cut-off approach only allows assignment to the non clinical or clinical distributions on the balance of probabilities.

Applying these stricter criteria to the clients in the present study, 34 (94%) of the 36 clients were in the clinical zone before treatment; only 2 (5.56%) of the 36 clients fell into the equivocal zone (clients 6 & 30) prior to treatment.

Applying the three zone approach after treatment, 3 (8.3%) of the 36 clients remained in the clinical zone, while 28 (77.8%) of the 36 clients moved down into the equivocal zone and 5 (13.9%) of the 36 clients moved further down into the non clinical zone.

The allocation of clients to each zone is shown in Table 3.32 below.

Table 3.32
Assignment of Clients to Groups by CORE After Treatment
(95% confidence)

<table>
<thead>
<tr>
<th>CORE Score</th>
<th>Assigned group 95% confidence</th>
<th>Test Subjects (Client numbers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 0.58</td>
<td>Non clinical</td>
<td>1, 30*, 32, 34, 35</td>
</tr>
<tr>
<td>0.58 - 1.81</td>
<td>Equivocal</td>
<td>2, 4, 5, 6*, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 31, 33, 36</td>
</tr>
<tr>
<td>&gt;1.81</td>
<td>Clinical</td>
<td>3, 7, 18</td>
</tr>
</tbody>
</table>

* = clients who did not qualify for the clinical group before treatment.
From Table 3.32, it is clear that only 8 (22.2%) of the 36 clients after treatment can be confidently assessed as non clinical or clinical using this three zone approach. The other 77.8% of clients are equivocal.

The three zone method, whilst offering greater confidence of client assignment in some cases, loses a lot of clarity in other cases. It nevertheless gives a more honest determination of the client’s condition. The single cut-off method, especially when there is a large overlap of the distributions, gives a misleading impression of a clear distinction between the distributions.

One of the features of the clients in this study, which was identified by the PENN Inventory, was that on completion of treatment, a sizeable proportion have not completed their full recovery but do go on to recover more. A lot of clients are borderline for indicators of general psychiatric problems after treatment which is the most probable explanation for such a large equivocal group in Table 3.32.

When the three zone assessment model was used with the sample of 16 clients in the 6 month follow up, a clearer picture emerged. All 16 of the clients who were sampled in the follow up were definitely clinical before treatment. Immediately on completing treatment, 14 (87.5%) were equivocal and 2 (12.5%) remained clinical. By 6 months after completion of treatment, 9 (56%) of the 16 clients were in the non clinical zone, 6 (38%) of the 16 clients were in the equivocal zone, and 1 (6%) of the 16 clients was in the clinical zone (having been in the equivocal zone after treatment). Six months after treatment the three zone model assigns 62% of the clients with 95% confidence to either the clinical or non clinical group. The large equivocal group found with the three zone model of CORE on completion of treatment may not so much be a weakness of the model, but reflects the fact that many of the clients after treatment were borderline and difficult to assess which distribution they belonged to: the clinical or the non clinical. On completing treatment they were still working on issues and a clear distinction between those who have successfully resolved issues and those who have not only occurs by 6 months later.
Examining the sample of 16 clients whose recovery was tracked from before treatment to 6 months after treatment, the CORE 1.29 cut-off gave an initial recovery after treatment of 50% rising to 69% after 6 months. The three zone CORE model found a similar final recovery rate of 62% (with 95% confidence). Because of a clear distinction by 6 months between those who have fully recovered and those who have ongoing problems, both the single cut-off approach and the three zone approach agree on a similar recovery rate.

Assessment of recovery by CORE confirms that recovery from clinical PTSD, and recovery to what would be considered full mental health, relative to a control group, are not the same. Recovery to full mental health takes much longer than recovery from clinical PTSD.

Observation of both the PENN and CORE scales suggest that assessing Reliable and Clinically Significant Change immediately on completion of treatment is not such a good indicator of the long term effects of the treatment. A 6 month follow up assessment seems to give a more stable outcome measure that is not so susceptible to the choice of reliability and clinical significance criteria.

Later in Section 3.4.9, a four zone model combining the strengths of the single threshold and the three zone models will be proposed and applied, but before doing that, the implications of some other observations of the CORE must be considered.

3.4.5

Validity of the CORE 1.29 Threshold

When the CORE test was introduced into phase II of the present study, most of the control group testing for the PENN Inventory had been completed. The choice was to either test another separate control group for CORE or find another source of appropriate control data on CORE from a socially and clinically meaningful comparison group.

As part of the introduction of the CORE System for client evaluation within the Royal College of Nursing (RCN) Counselling Service, the Working Well Initiative of RCN included CORE questionnaires as a component of a major survey of RCN members.
With a representative sample of 4049 nurses surveyed from a cross section of ages, grades and work settings, this was a larger and more representative control group than this study could test. Preliminary findings were published in the Working Well Survey (RCN 2002), and the author of this study was given access to the unpublished data such as the total mean scores and individual item mean scores, in order to use this as a comparative nursing control group for the study. The mean CORE score for this nurse control group (n = 4049) was 0.63 and the standard deviation 0.52.

The sample size of the Working Well Survey at 4049 was considerably larger than the 576 non clinical females used for the original calibration of the CORE System. Because of the initial concerns with the CORE test already identified above, the data from the Working Well Survey was closely examined, particularly the overlap in distributions between the control nurses and the clinical psychiatric group. The most obvious observation was that the nursing group mean of 0.63 was lower than CORE's published non clinical female mean of 0.81. The standard deviation of the nursing group was 0.53 compared to 0.61 for the CORE's non clinical female population.

Based on these figures 11% of the nurse control group would be expected to have scores above the 1.29 cut-off, compared to 23% of the non clinical females. The implications of both this and the lower mean, point to the nurse control group being more psychologically healthy than the normal female population. This is contrary, or counter intuitive, to the substantial findings of other reports and surveys on the psychological health of NHS staff in general and nurses in particular. For example, Borrill et al (1996) found significantly higher incidence of psychological disorder or minor mental health problems in nurses. This prompted the author of this current study to look more closely again at the original calibration of the CORE System, especially for non clinical females.
CORE Calibration Groups not Matched

Examining the composition of the non clinical female group used to calibrate the CORE test, it was noted to be a young student population. They comprised three groups with quoted age quartiles of 19,20,23 and 20,21,22 and 18,20,23. This means 3/4 of the non clinical female group were below the age of 23.

The clinical group by comparison had a wider range of ages and higher average. Quartiles for this group were 26, 34, 45, so 3/4 of the clinical group were above the age of 26.

The clinical and non clinical groups on which the CORE test was initially calibrated were not matched in age distribution, and the normal non clinical group did not represent the general population in terms of age spread or occupation.

A similar report was found in another study in which a student group had more indications of mental health problems on a psychometric test than nurses. A study of Psychiatric Nurses using Beck's Depression Inventory BDI (RPNAS 2001) commented on the fact that a student sample had higher scores on the BDI than the nursing sample in the study. Nurses are either more psychologically healthy than is usually reported, or else students are even more psychologically unhealthy. There are several possible explanations: students may not be good subjects for normative testing or nurses may give unexpectedly low responses in psychometric tests, or underplay in self report surveys. The fact that other large scale self report based surveys such as the Sheffield Study (Borrill et al 1996) or the Bristol Study (Smith et al 2000) find higher responses in nurses than the general population to indicators of mental health-related problems suggests that nurses do not under rate themselves in such tests.

If student groups make poor normative samples in mental health related psychometric self reports, then it could be suggested that the sample of nurses in the Working Well Survey with a better age spread and a larger sample size may be more representative of the normal female population than the sample of mostly under 23 year old students used as the CORE normal population. The sample of 4049 nurses in the Working
Well Survey are certainly representative of the general nursing population from which the clients in the present study come and were therefore used as the normal control group for CORE in this present study.

Taking his argument one step further, since most surveys suggest nurses should have poorer mental health than the normal population, then the normal population mean for CORE would be expected to fall below the 0.63 value of the 4049 nurse control group, and certainly not above it as the CORE System's non clinical female 'student' control does.

Further corroboration for this idea was sought within the other findings of the present study. As described earlier, the PENN Inventory is responsive to general psychiatric problems, a control group of 105 nurses with no signs of serious mental health problems had a mean PENN score of 20.4 and SD = 7.85. By comparison, Numaguchi (1999) described a normal female sample of 40 subjects who had a mean PENN score of 17.7 and SD = 6.8.

Based on the calculation of the standard error of the mean for Numaguchi's 40 normal female controls, the 95% confidence limit for the female population is $17.7 \pm 2 \times 1.08$, which is a range of 15.54 to 19.86. The nursing control group mean of 20.4 is just above the 95% confidence limit, suggesting that the nurses sampled for the normal control group have more indicators of mental health problems than general population females.

This finding is consistent with the direction of most studies on the mental health of nurses and adds weight to the argument that the non clinical female population on which the CORE test is calibrated is not representative of the general female non clinical population.

The author of this present study, having identified this observed anomaly, raised it through Barry McInnes, Manager of the RCN Counselling Service, with John Mellor-Clark, one of the developers of the CORE test. McInnes and Mellor-Clark (2000)...
have presented and published a study of CORE scores for nurses coming for
counselling. In response to this author's observations, John Mellor-Clark suggested in
a verbal communication that the non clinical CORE distributions may be different for
different occupational groups.

Other workers have said the same, such as Borrill et al (1996) who found differences
in mental health indicators between different health care professions. But this only
explains the existence of a difference; the response by John Mellor Clarke does not
explain the direction of that difference: why nurses have better indicators of mental
health on the CORE scale than the CORE System's non clinical female population
control group.

If the nursing group sampled in the RCN Working Well Survey is accepted as a valid
control group for nurses on the CORE scale, the first impact will mean a recalculation
of the C cut-off value for clinically significant change. No reason could be found not
to accept the nurse control group mean of 0.63 or standard deviation of 0.53 as
representative of the normal nursing population.

The C cut-off was recalculated using the 4049 Working Well Survey nurses as the
non clinical normative control group and using the CORE clinical calibration group as
the clinical group. Calculations are shown below.

\[
\begin{align*}
\text{non clinical group,} & \quad \text{mean} = 0.63, \text{sd} = 0.53 \\
\text{clinical group,} & \quad \text{mean} = 1.85 \text{ sd} = 0.77 \\
\end{align*}
\]

\[
C = \frac{\text{mean clin } \times \text{ SD norm}}{\text{SD norm } + \text{ SD clin}} + \frac{\text{( mean norm } \times \text{ SD clin)}}{\text{SD norm } + \text{ SD clin}}
\]

\[
C = 1.127
\]

This recalculation of the clinical significance cut off has the effect of reducing the
overlap between the non clinical and the clinical distributions. Only 17.36 % of the
non clinical group would fall above this cut off and 17.6% of the clinical distribution
will fall below it.
3.4.7

Reassessing Clinically Significant Change Based on the 1.127 CORE Cut-off for Nurses

The recalculation of C at 1.127 for nurses necessitated a re-assessment of Clinically Significant Change for the clients in the present study. The 36 clients were re-assessed for clinical change based on the new 1.127 cut off. The findings are presented in Table 3.33 below.

<table>
<thead>
<tr>
<th>CORE Score</th>
<th>Assigned Group (Balance of Probability)</th>
<th>Test Subjects (Client Number)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1.127</td>
<td>Non Clinical</td>
<td>1, 4, 5, 6, 8, 9, 15, 22, 26, 29, 30, 32, 34, 35.</td>
</tr>
<tr>
<td>&gt;= 1.127</td>
<td>Clinical</td>
<td>2, 3, 7, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20, 21, 23, 24, 25, 27, 28, 31, 33, 36.</td>
</tr>
</tbody>
</table>

Table 3.33 shows that 14 (38.9%) of the 36 clients reduced their CORE scores to below the 1.127 cut off after treatment.

This is a reduction in the number of clients showing Clinically Significant Change compared to the 19 (52.8%) of 36 clients determined to have attained clinically Significant Change after treatment using the 1.29 cut-off. The lower cut-off value of 1.129 greatly reduces the number of clients determined to have made Reliable and Clinically Significant Change, on completion of treatment, from 52.8% to 38.9%.

Of the 16 clients sampled in the 6 month follow up, 12 had CORE scores above 1.127 on completion of treatment and 4 had scores below 1.127 on completion of treatment. The same complex pattern was found as with the 1.29 cut-off, some scores improving, some stable and some getting worse.
In the follow up sample, 8 (75%) of the 12 with post-treatment scores above 1.127 continued to reduce their CORE scores and were below the 1.127 cut-off by 6 months, (clients 2, 3, 10, 13, 16, 17, 23 & 27). The other 4 sampled clients, who were still clinical after treatment, remained in the clinical group at the 6 month follow up (clients 7, 14, 19 & 20).

Of the remaining 4 clients in the follow up sample who were in the non clinical distribution immediately after treatment, 3 (75%) remained non clinical, (clients 4, 5, 9), while client 8's CORE score rose again and they returned to the clinical distribution.

Overall, applying the 1.127 cut-off to the sample of 16 clients in the follow up study, 4 (25%) of the 16 clients were non clinical immediately after treatment, which increased to 11 (69%) non clinical by the six month follow up. When the same sample of 16 clients was assessed by the 1.29 cut-off, the initial recovery rate was 50% rising also to 69% at 6 months.

Whilst changing the cut-off value from 1.29 to 1.127 reduced considerably the estimation of clinically significant change on completion of treatment, it did not affect the longer term follow up assessment of clinically significant change at 69%.

Assessment of recovery rate immediately on completion of treatment seems to be very susceptible to the means of assessment used and the parameters used to determine recovery. This would appear to be because the clients are still in a state of ongoing change, and any parameter set quite arbitrarily cuts through the main cluster of client scores and divides up the recovering subjects into different proportions. By 6 months later, the clients seem to have naturally divided into two clear groups, and the thresholds are only making minor distinctions between those in the overlap between clinical and non clinical cases.

Adjusting the cut-off values for determining clinically significant change, or varying
the confidence limits for reliable change, did not improve the ability of the CORE scale to identify clients who later relapsed, having initially recovered during treatment, or whose recovery stalled when treatment ended.

In this present study all test clients had very high CORE scores before treatment and were all clearly assessed as belonging to the clinical group by both cut-off values. All clients would have been considered as needing counselling regardless of which cut-off value was chosen.

Treatment was ended in this study by negotiation and agreement between the counsellor and client when it was considered that the client had made sufficient clinical improvement to be able to manage on their own.

The observation in this present study is that exit assessment of clients with CORE greatly underestimates the overall long term benefit derived from treatment.

3.4.8 Selection of the CORE System Clinical Control Group

The recalculation of the CORE cut-off value at 1.127 for nurses was based on two sets of data: those of a non clinical control group of nurses, n = 4049 (RCN 2002), and those of the original clinical control group used to calibrate the CORE System.

This semi-conservative revision of the cut-off value replaced only one set of data, that of the non clinical control group. The present study did not collect its own data for an independent clinical control group nor did it identify an independent source of data for a clinical control group. There was, therefore, no independent set of results available to this present study to re-evaluate or validate the original clinical control group used to calibrate the CORE test. In light of shortcomings already highlighted with the non clinical control group of the CORE System, it would appear that a revalidation of the clinical group should also be considered. The present study could only critique the original clinical control group.

Just as several concerns were raised previously with regard to the selection of the CORE System's non clinical control group, some concerns were also raised about the
selection of its clinical control group. The clinical status of the clinical control
subjects was based on the fact they were on a waiting list for therapy but had not yet
commenced therapy. In some cases their placement on the list may simply have been
by GP referral. No evidence is presented validating their clinical status by other
established psychometric instruments, and referral may have been referral for fuller
assessment and not a definitive assessment that the person had general psychiatric
problems and needed counselling.

There would also appear to be no feedback from the clinical subjects’ therapists of
their assessment of the clients at their first therapy session, as to whether the subjects
were clinical and in need of therapy. A known phenomenon with mental health is that
many people get better without or in spite of their therapy. This is called ‘drift to the
mean’ or ‘waiting list drift’, the latter phrase referring to patients recovering while
waiting, often for long periods, for counselling or therapy services where supply often
does not meet demand.

By not rigorously excluding those who did not need therapy or who no longer needed
therapy from the clinical control group, the effect would be to decrease the mean of
the group and increase its standard deviation. If the parameters of the clinical control
group were revised, with an increased mean and reduced standard deviation,
combined with the revision of the non clinical control group similar to that already
explored with nurses, it could only but increase the power of the instrument.

In the meantime, the built in CORE cut-off of 1.29 (female) and this current studies
proposed 1.129 (nursing) cut-off must both remain tentative, because they both
involve calculations using parameters of the CORE clinical control group which itself
needs further validation.

3.4.9
Proposed 4 Zone CORE Model

The CORE single cut-off creates two very definite zones on the scale, non clinical and
clinical, but this is only on a balance of probability basis and not beyond reasonable
doubt. The 3 zone method outlined in Section 3.4.4 does confidently identify those

220
who are clinical and those who are not clinical, but, when applied to clients on completion of treatment, it leaves a large group of clients in an equivocal zone. Each approach has its strengths and weaknesses.

The single cut-off model and the three zone model are illustrated side by side in Table 3.34 below.

**Table 3.34**

*Illustration of the CORE Single Cut Off and Three Zone Models*  
*(Values in brackets calculated on 1.127 cut-off)*

<table>
<thead>
<tr>
<th>Single Cutoff</th>
<th>Non Clinical</th>
<th>Clinical</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.29</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Three Zone</th>
<th>Non Clinical</th>
<th>Equivocal</th>
<th>Clinical</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.58</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(0.58)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.81</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1.5)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From Table 3.34, it can be seen that the one cut-off value of the single cut-off model might be useful in bringing greater clarity to the large equivocal zone at the centre of the three zone model. Equally the upper and lower cut-off values of the three zone model could bring greater clarity to the clinical and non-clinical zones of the single cut-off model by identifying those whose clinical or non-clinical status is 95% confident.

The values in brackets are the cut-off values recalculated using the nurse CORE control group instead of the CORE Systems student based control group.
The next two tables below, Table 3.35 and Table 3.36 merge the single cut-off model and the three zone model to produce the four zone model.

Table 3.35
The Creation of the Four Zone CORE Model

Table 3.36
CORE Four Zone Model for Nurses

Table 3.35 and Table 3.36 show how the standard single cut-off model of the CORE System and this present study's three zone model for 95% confidence are merged to
form the four zone model, which should combine the strengths of each model. The values used in Table 2.36 are calculated using the nurse control group mean of 0.63 and standard deviation of 0.53 from the Working Well Survey (RCN 2002).

The zones on the four zone model, based on a nursing population, are as follows.

- **0 - 0.58**  Non clinical
- **0.58 - 1.127**  Probably Non Clinical
- **1.127 - 1.5**  Probably Clinical
- **>1.5**  Clinical

The Clinical and Non Clinical Zones are based on 95% confidence, the Probably Clinical and Probably Non Clinical Zones are separated on a balance of probability basis.

This gives a clearer sense of the scale of recovery of the clients and is useful to evaluate the clinical significance of ongoing recovery, if the CORE System is used, as in this present study, for post therapy follow up.

**3.4.10 Applying the Four Zone CORE Model to the Assessment of the 36 Clients After Treatment**

The 36 clients CORE scores on completion of treatment are plotted onto the four zone model in Table 3.37 below.

### Table 3.37

**Outcome Assessment of Clients by the CORE Four Zone Model (n = 36)**  
*(Nursing Based Cut-offs)*

<table>
<thead>
<tr>
<th>CORE Score</th>
<th>Assigned group</th>
<th>Test Subjects (Client numbers)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 0.58</td>
<td>Non clinical</td>
<td>1, 30*, 32, 34, 35</td>
<td>11.4%</td>
</tr>
<tr>
<td>0.58 - 1.127</td>
<td>Probably Non Clinical</td>
<td>4, 5, 8, 9, 15, 22, 26, 27, 29</td>
<td>25.7%</td>
</tr>
<tr>
<td>1.127 - 1.5</td>
<td>Probably Clinical</td>
<td>2, 6, 10, 11, 13, 14, 16, 17, 20, 23, 24, 25, 28</td>
<td>32.3%</td>
</tr>
<tr>
<td>&gt;1.5</td>
<td>Clinical</td>
<td>3, 7, 12, 18, 19, 21, 31, 33, 36</td>
<td>25.7%</td>
</tr>
</tbody>
</table>

* = client not in the 95% confidence clinical zone before treatment.
Inspection of Table 3.37 shows that 74% of the clients after treatment moved out of the clinical zone, 32% of them into the probably clinical zone, 26% into the probably non clinical zone and 11% into the non clinical zone. This gives an overall view of the spread of recovery and identifies the stage of recovery of each client.

The CORE four zone model was applied to the 16 clients sampled in the 6 month follow up. The results are presented in Table 3.38 below.

<table>
<thead>
<tr>
<th>CORE Score</th>
<th>Assigned group</th>
<th>On Completing Treatment</th>
<th>6 Month Follow up</th>
<th>Clients</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 0.58</td>
<td>Non clinical</td>
<td>0</td>
<td>56.3%</td>
<td>2, 4, 5, 10, 13, 16, 17, 23, 27</td>
</tr>
<tr>
<td>0.58 - 1.127</td>
<td>Probably Non Clinical</td>
<td>25%</td>
<td>12.5%</td>
<td>3, 9</td>
</tr>
<tr>
<td>1.127 - 1.5</td>
<td>Probably Clinical</td>
<td>56%</td>
<td>12.5%</td>
<td>19, 20</td>
</tr>
<tr>
<td>&gt;1.5</td>
<td>Clinical</td>
<td>19%</td>
<td>18.7%</td>
<td>7, 8, 14</td>
</tr>
</tbody>
</table>

From Table 3.38, it can be seen how the recovery rate profile of the group changes between completion of treatment and the 6 month follow up. The proportion in the non clinical group rises from 0% to 56%, and the proportion in the probably clinical group falls from 56% to 12.5%. The proportion of clients in the clinical zone remains stable around 19%, although there is some change in the actual individuals who are found in this group. This reveals the strength of the ongoing improvement in clients after completion of treatment.

The actual strength of that ongoing recovery only becomes apparent when individual clients and their scores are examined in detail. Of the 16 clients sampled in the follow up, 10 (62.5%) showed ongoing reliable improvement and 5 of these clients showed equal or greater improvement in the 6 months after treatment than they did during
treatment (clients 2, 3, 10, 13 & 16).

On the other hand, 4 (25%) of the 16 clients made no further reliable change (Clients 7, 9, 19 & 20). Two of these were in the clinical zone after treatment and remained there: one was in the probably clinical zone, and one was in the probably non clinical zone.

For client 9, who was in the probably non clinical zone after treatment, not to make any further progress would seem reasonable. The other clients who are not moving, clients 7, 19 and 20, seem to be stuck in their recovery and are having long term problems.

Client 19 made reliable change during treatment but not enough to move out of the clinical group. In the next 6 months they made a further small but not reliable drop in their CORE score, but sufficient to bring them down into the probably clinical group by a margin of only 0.03. However, since their PENN Inventory score rose from 23 to 49 during this same period, returning them to the PTSD distribution on the PENN scale, they should probably be regarded as still in the clinical zone. Client 19 was the person who having initially recovered from relatively mild PTSD was re-victimised and appeared to be re-traumatised, developing a new profile of symptoms which were very strongly characteristic of PTSD. The fact this client remained in the clinical zone of CORE after treatment, whilst recovering fairly well from their PTSD, may indicate they had other ongoing problems which may have contributed to an ongoing vulnerability to re-traumatisation.

Client 7 made reliable change during treatment but not sufficient to move out of the clinical group. During the six month follow up, they made a further but not reliable reduction and remained just inside the clinical group. Their PENN score on completion of treatment and at follow up remained stuck at 34, just below the PENN Inventory cut-off value of 35. This client was stalled in their recovery and possibly still had sub-syndromal PTSD.

Client 20 made reliable change sufficient to move from the clinical to the probably non clinical zone during treatment, but made no further change after treatment on
either CORE or PENN. On the modified PENN scale they were still also stationary with a score of 25, just inside the lower threshold of the general psychiatric distribution.

Two other clients, clients 8 & 14, having made approximately 60% reductions during treatment, showed reliable deterioration in their scores in the next six months returning to the clinical group. Client 14 had the highest pre-treatment CORE score of the clients in the follow-up sample and the second highest pre-treatment CORE score of the 36 clients in phase 2. They made a substantial reliable reduction in CORE, but not PENN, during treatment dropping down into the probably clinical zone. However during the six month follow up, they made a substantial increase in CORE score to return to the clinical zone. Both after treatment and at follow up, their PENN score remained above the stricter 42 PENN Inventory cut-off developed by this present study. This client may be a potential case of chronic PTSD which is often very unresponsive to treatment.

Client 8 made substantial reliable improvement during treatment dropping down into the probably non clinical zone, but made a substantial reliable increase in the six months following treatment to return to the clinical zone. Their PENN scores fell during treatment and did not rise again during the follow-up period. Whilst the PTSD has not returned, some anxiety and depressive problems have returned.

It was observed that clients with pre-treatment CORE scores above 2.5, regardless of the amount of progress made during treatment, seem to have more difficulty making further improvement on their own after completion of treatment or have difficulty holding on to the progress they have made.
3.5 CORE ASSESSED RECOVERY

The CORE test is designed as an audit tool rather than an assessment tool. Its purpose is to provide a standardised tool to measure outcomes of counselling and psychotherapy treatment. Its function is to monitor Reliable and Clinically Significant Change specifically in its major subscales of Well Being, Physical Symptoms and Functioning. It has not been validated as a diagnostic tool or cross-validated with other psychological assessment instruments.

Having already identified a 51% reduction in the mean CORE score for the group of 36 clients in response to treatment, and having examined individual recovery in terms of Reliable and Clinically Significant Change, the next stage was to examine how the 34 items of the CORE test and its subscales responded to treatment.

3.5.1 Recovery on CORE Items

The mean responses for the 36 clients to each of the 34 CORE items were plotted in descending order in Table 3.39 below.

Table 3.39

| Mean Client Response Before Treatment to Each of the 34 CORE Items |

<table>
<thead>
<tr>
<th>CORE Item Numbers</th>
<th>CORE Score Before Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>4</td>
</tr>
<tr>
<td>27</td>
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<tr>
<td>18</td>
<td>3</td>
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...
Table 3.39 shows a very wide range of responses to the 34 individual items. The six lowest scoring items, C24, C9, C22, C16, C34, & C6 comprise the Risk subscale of CORE which includes both risk of harm to self and to others. Whilst some individual clients did make quite strong responses to a few of these items, Risk does not appear to be a common clinical feature of the clients as a group. Item C20, with a mean group response of 3.66, is a very strong and common characteristic of all clients before treatment.

A list of the 34 CORE items and what each score on the Likert scale means can be found in Appendix C.

For example,

Item 20, (group mean score = 3.67) a score of
- 3 = my problems often are hard to put aside
- 4 = my problems most or all of the time are hard to put aside

Item 2, (group mean score = 3.64) a score of
- 3 = I have often felt anxious or nervous
- 4 = I feel anxious or nervous most or all of the time.

These responses refer to the previous week, so the clients reported that they had not been able to stop thinking, worrying and being anxious about their problems in the previous week. The problems they refer to include not only what has been done to them, the victimisation they have experienced, but also the strange experiences they are currently experiencing, which are, in fact, symptoms of PTSD. These strange experiences include C28 unwanted intrusive memories or images, and C15 panic attacks.

In order to determine how different the client group responses were from those of normal nurses, the mean responses of the nurse control group (Working Well Survey n = 4049) (RCN 2002) were subtracted from the clients' mean responses for each item. The results are plotted in descending order in Table 3.40 below.
Table 3.40 shows the scale of the difference in the responses between the clients and a normal nurse control group. Comparing Table 3.40 with Table 3.39, a few minor changes occur in the order of the items.

For example, item C5 moves from 5th strongest item in Table 3.39 to 22nd strongest response in Table 3.40. Item C5 refers to feeling totally lacking in energy and enthusiasm, and is the strongest item response by the nurse control group.

The control group's mean score for item C5 is 1.51, which falls between responses of occasionally to sometimes feeling this way in the last week.

Feeling totally lacking in energy and enthusiasm is a strong feature of the clients in the present study, but it is also a common feature of nurses in general, and the clients are not as different from normal nurses on this item as they would be on some others.

From Table 3.40, it can be seen that the items on which the clients differed most from...
the controls before treatment were as follows:

- being unable to put problems aside C20
- feeling unhappy C27
- feeling overwhelmed by problems C17
- feeling despairing C23
- unwanted images or memories have been distressing them C28
- feeling panic or terror C15
- feeling alone and isolated C1
- disturbed by unwanted thoughts and feelings C1
- prevented from doing important things by tension and anxiety C11
- feeling tense anxious or nervous C2
- feeling like crying C14
- feeling humiliated or shamed by other people C33
- difficulty getting to sleep and staying asleep C18
- feeling criticised by other people C25
- feeling unable to cope C7
- not feeling OK about self C4.

The clients differ from a normal nursing control group by more than 2 points (two grades of intensity) on the above 16 items. As a group, they report experiencing all these items frequently during the week before commencing treatment. As will be shown later they have been experiencing these symptoms for a mean of 14 weeks before coming for counselling. During that period of illness, the above symptoms were sufficient in intensity to prevent them from being able to work, or they were disabled by them. The above list of items gives an accurate picture of the main experiences of psychological distress and the feelings the clients have before coming for counselling.

It should be noted that the group of clients score significantly higher (95%
confidence) than the controls on all but 3 of the 34 CORE items. The three items not significantly raised in the client group are C22, C34 & C6. These three items are from the Risk subscale of CORE. Some observations on how the Risk subscale performed with the client group are examined later in section 3.7.

Apart from the Risk Subscale the client group shows a very strong and significant increase across all items and all major and minor subscales of CORE. All indicators point to a high degree of general psychological disturbance or disordering in the clients, the client group showing equally raised responses on the minor subscales of anxiety, depression and trauma.

This present study did not find any other studies where CORE was used with a group of clients with a single diagnosis which was independently confirmed by other psychometric testing. So it is not known if this observed general increase across all the main subscales is a feature of those with PTSD or a characteristic of the CORE test itself.

One observation of the list of CORE items in Appendix C is that approximately half the CORE questions are worded in terms of feelings, feeling despair, feeling optimistic, feeling unhappy etc. By contrast most items in the PENN Inventory, Appendix B, are worded much more in terms of objective things which the client has said or thought or ways they have behaved.

Despite the different form of wording used, very similar items such as unwanted thoughts and images, anxiety, panic and nervousness appear among the top scoring items on both the PENN and CORE scales.

Having established the client groups' pre-treatment responses and their difference from the nurse control group on each of the 34 CORE items, the next step was to examine the changes in the clients' item scores in response to treatment.

The mean difference in CORE item scores from before to after treatment was determined and plotted in descending order in Table 3.41 below.
Table 3.41 shows that all items scores were reduced in response to treatment, there was a wide range of reduction from 1.9 for item C23 to 0.05 for item C6. The items in which the clients reported the greatest difference before treatment relative to the nurse control group decreased most during treatment. This would be expected since the issues causing the clients greatest distress, would have been the issues given priority in the counselling. This confirms that all the clients' main presenting concerns and issues were being effectively dealt with during the counselling.

In percentage terms the reduction in CORE item scores ranged from 31% to 88% with a mean reduction of 51%. All items showed a substantial improvement during treatment, and no aspects of the clients' condition were unaffected by the counselling. The strongest and most reported areas of improvement (94% of clients reporting improvement on these items) were an increase in happiness, C27, and a decrease in despair, C23. Both of these are items on the minor subscale of depression. However,
because the other two items in the depression minor subscale, which address thoughts of self blame, C30, and lack of energy, C5, make less improvement, depression is only the third highest improving minor subscale.

The minor subscales showing most improvement are trauma and anxiety followed by depression. These are three of the four minor subscales making up the main subscale of Symptoms (P), making it the main subscale showing most improvement during the period of treatment.

However, with the exception of the Risk subscale which behaves somewhat erratically, the other main subscales of Well Being (W) and Functioning (F) only make slightly less improvement than Symptoms (P).

3.5.2 Change or Recovery on CORE Scale

Significant change and recovery are not necessarily the same; recovery is always measured relative to a suitable control group. The counselling may have brought about a significant and even substantial change, but how close are the clients’ responses after treatment to those of the nurse control group? The differences in mean response to each CORE item between the clients after treatment and the nurse control group were calculated and plotted in descending order in Table 3.42 below.
Table 3.42
Difference in Mean CORE Item Response Between Treated Clients (n = 36) and Controls (n = 4049)

In Table 3.42, bars above the zero line signify that the clients' mean score was above the control group mean score for the particular item. Bars below the line signify that the clients' mean score was below the control group mean score. Table 3.42 shows that the clients after treatment still scored higher than the controls on most items. For items C20 to C21 in Table 3.42, this difference was significant at 95% confidence. For items C29 to C19, it was not significant. For item C3, in which the clients scored lower than the control group, the difference was also significant at 95% confidence.

On 24 items, the clients after treatment still scored significantly higher than the controls (95% confidence). The top 12 CORE items in which the clients still scored higher than controls were as follows:
- putting problems to side C20
- disturbed by unwanted thoughts, unwanted images or memories C28 & C13
• being prevented from important things by tension or anxiety C11
• feeling overwhelmed by problems C17
• feeling humiliated or shamed C33
• not optimistic C31
• difficulty getting to sleep C18
• tense and anxious C2
• panic or fear C15
• lonely and isolated C1
• not feeling able to cope C7.

There were 9 items showing no significant difference, 6 of these items comprised the entire Risk (R) subscale (items C6, C9, C16, C22, C24 & C34), and the other 3 items were from the Functioning (F) subscale (items C19, C26 & C29). As a group the 36 clients after treatment have no indicators of an increased risk to self or others compared the control group of nurses. However on their total CORE score and the three other main subscales of Well Being (W), Symptoms (P) and Functioning (F), their scores were still significantly raised relative to controls.

The single item in which the client group scored significantly lower (better) than the control group after treatment, item C3, refers to feeling one has someone to turn to for support when needed. This shares some features with the single item from the PENN Inventory, item P3, in which this same group of 36 clients scored significantly less (better) than controls on completing treatment. PENN item P3 refers to being able to share enjoyment with another. Together items C3 & P3 indicate an enhanced ability to connect with at least one other significant person in a two-way relationship, involving getting support and sharing fun and enjoyment.

3.5.3

Ongoing Recovery on CORE Scale in 6 Month Follow Up

A sample of 16 (44.4%) of these 36 clients were followed up 6 months after completion of their treatment. In the follow up, 10 (62.5%) of the 16 clients sampled, showed further reliable ongoing change in their CORE scores during the 6 months period. This improvement was matched in 9 of the 10 cases by a reliable improvement also in their PENN scores, and in the other case, by no reliable change in their PENN
score (95% confidence). The 10 clients showing ongoing improvement were clients 2, 3, 4, 5, 10, 13, 16, 17, 23 & 27.

Another 4 (25%) of the 16 clients in the follow up sample showed no further reliable change in their CORE scores, clients 7, 9, 19 & 20.

A further 2 (12.5%) of the 16 clients in the follow up sample showed a reliable increase in their CORE scores in the 6 months after treatment, clients 8 & 14.

It was an unexpected observation to find 62.5% of clients making ongoing improvement in their CORE scores after treatment, almost as much as during treatment and in some individual cases much more improvement than during treatment. These 10 clients (62.5%) showed a similar pattern of ongoing recovery on their PENN scores, with 60% of their overall PENN recovery during treatment and 40% after treatment. The characteristics of this ongoing post-treatment recovery were therefore examined in more detail.

The mean CORE item responses of the 10 ongoing improvers, 6 months after treatment, were compared to the mean responses of the nurse control group. The results are plotted in descending order in Table 3.43 below.
Table 3.43

Difference in Mean CORE Item Scores Between the Sample of 10 Clients Showing Ongoing Improvement after Treatment and Control Nurses

From Table 3.43, it can be seen that the 10 ongoing improvers had lower (better) scores than the control group on a large number of items as indicated by a bar below the zero line. This enhanced score relative to controls was significant (95% confidence) for the following 6 items:

- feeling supported C3
- feeling warmth and affection for others C19
- having energy C5
- being able to do most things they need to do C21
- happy with the things they are doing C12
- feeling OK about themselves C4.

Items C3 and C19 were previously noted above in Table 3.42 to be the two items on which the group of 36 clients had better scores than the control group on completion of their treatment. However, at the time of completing treatment, only the better score for C3 was statistically significant.

At the time of completing treatment, it was not possible to ascertain if the clients' strong positive response to feeling supported C3, and feeling warmth or affection for
someone else C19, referred to the counselling relationship with the counsellor. Continued improvement in these areas in the 6 months after treatment, when there was no contact with the counsellor, clarifies that the clients have in fact built or rebuilt their own personal support systems, something the counsellor encouraged them to do during the treatment period. These clients are not dependent on their therapist or therapy for good social functioning and have re-established their independence.

These ongoing improvers score higher than the control group on item C13, disturbed by unwanted thoughts and feelings, and C28, distressed by unwanted images or memories. In the case of C13, unwanted thought and feelings, this difference was significant at 95% confidence, and for C18, distressed by unwanted images or memories, the difference is very close to but just less than significant at 95% confidence. When items C13 and C28 are combined in the minor subscale of trauma, the trauma minor subscale of the clients is significantly higher than the control group at 95% confidence.

The PENN Inventory is specifically designed to detect symptoms of PTSD and asks similar questions about unwanted memories and images, but the 10 ongoing improvers did not report significantly higher responses than controls on such questions on the PENN scale. This is initially difficult to explain until the structure and wording of each scale, and what each enquires about, are examined in more detail.

The CORE scale uses rating questions about the occurrence of such events and has small initial increments: 0 = never, 1 = occasionally, 2 = sometimes. The PENN scale uses closed cafeteria questions: the focus of the phrasing of P19, which refers to unwanted thoughts, is not so much on their occurrence or on them being distressing, but more on the person’s ability to deal with these incidents and regain focus and control. CORE and PENN may therefore be asking quite different questions: CORE asks if these events occur, PENN asks if the person can keep or quickly regain control
when they occur. Distressing intrusive thoughts, feelings, images and memories do continue to recur but less often than before treatment, and less often than following treatment, but the clients understand what is happening and are able to control the situation effectively, and therefore can maintain an enhanced positive feeling about themselves in spite of this. Their state or recovery still requires active management of recurring symptoms.

It was observed that item C13 (disturbed by unwanted thoughts and feelings) made 85% of its total overall recovery during the treatment stage, but only 15% of its improvement after treatment, this after treatment improvement figure being based on the 10 ongoing improvers. The change during the 6 months after treatment was not significant (df = 9, T = 1.000, p = .343). Intrusive thoughts and feelings are among the strongest and most persistent symptoms of the clients. It was the 7th strongest item relative to controls before treatment, the 2nd strongest item relative to controls after treatment, and the strongest item relative to controls 6 months after completing treatment.

All other indicators point to complete recovery in these 10 ongoing improvers, mean PENN = 14.4, mean CORE = 0.46. This CORE score in the CORE Four Zone Model proposed earlier would put them as a group in the Definitely Non Clinical Zone with 95% confidence. On the Well Being (W), Symptoms (P) and Risk (R) main subscales, the 10 ongoing improvers show no significant difference from controls, and on the Functioning (F) main subscale, they show significantly enhanced performance (all at 95% confidence). Most of the enhancement of functioning is due to 2 items from the minor subscale of Functioning in Close Relationships, Items C3 and C19. Despite this they still experience unwanted thoughts, feelings and images associated with their experience of victimisation in the workplace.

Of the sample of 16 clients followed up 6 months after treatment, 10 (62.5%) showed significant ongoing change and attained what must be considered full recovery. This however is only a group mean, and, although it provides a useful value for
assessing the effectiveness of the treatment approach used, it must not be forgotten that within these means some individuals continue to struggle on occasions with a few areas, and most are still having to actively manage intrusive thoughts and feelings about their victimisation in the workplace. These have not gone away even 6 months after completing counselling.

Further examination of post-treatment ongoing recovery showed that the items which make up the Risk (R) subscale showed no significant further improvement. The following 8 items showed the most improvement during the 6 months after treatment:

- being able to put problems to side C20
- feeling happy C27
- feeling OK about self C4
- feeling optimistic about the future C31
- sleeping better C18
- feeling less like crying C14
- feeling less overwhelmed by problems C17
- feeling less tense, anxious or nervous C2

These 8 items were among the top 12 items showing most change during treatment and continued their momentum of change after treatment.

Because CORE is a relatively new outcome assessment tool, there has been little published work on the CORE Scale. There does not appear to have been any published longitudinal follow up studies to confirm the finding of this present study, that 62.5% of clients make ongoing reliable and substantial improvement during the six months after completing treatment.

The pre and post-treatment scores of the 10 ongoing improvers on the PENN scale, the CORE scale and the CORE subscales W, P, F & R were compared to the scores of the rest of the 36 clients, and no significant differences could be found (p = <.05).

There was nothing unusual about this subset of 10 ongoing recoverers to account for
this phenomenon of ongoing recovery, and no reason could be found not to assume that 62.5% ongoing recovery was a characteristic of the entire client group.

This ongoing recovery is an important finding for outcome assessment or audit following treatment. This is because the 10 ongoing improvers only attained 53% of their overall recovery during the treatment stage and a further 43% of their recovery in the 6 months after completing treatment. If these 10 clients were assessed on completion of treatment, only 5 (50%) of them would score below the CORE test's standard 1.29 threshold, yet all would score below 1.29 if assessed 6 months after treatment.

It would be useful to have a more longitudinal study re-testing at 12 and 18 months after treatment to determine the full outcome of treatment.

Whilst the overall CORE score of the 10 ongoing improvers attained 53% of its final measured improvement during the treatment stage, not all CORE subscales improved at the same rate. Well Being only attained 45% of its overall improvement during treatment period, whereas Functioning attained 62% of its overall improvement during the treatment period. This suggests that the counselling may have greater direct impact on Functioning, which includes coping and problem management as well as interpersonal and relational skills.

During the treatment stage, the Symptom (P) subscale attained 52% of its overall improvement which is close to the average improvement of 53%. However some of its minor component subscales improved at quite different rates. The minor subscale of physical symptoms only improved by 39%, while the minor subscale of trauma improved by 73% during treatment. The minor subscale of physical symptoms comprises two items, trouble with aches, pains, or other physical problems, C8, and difficulty getting to sleep or staying asleep, C18. These items seem to take longer to resolve, or perhaps they do not begin to resolve until other features of the client's condition are attended to. Neither of these physical issues can be directly addressed.
through a counselling process; they are result of high adrenaline (high stress) levels, and it is only as the sources of the stress are effectively dealt with, that they would be expected to reduce.

The CORE Handbook refers to 'A Phase Model of Psychotherapy Outcome: Causal Mediation of Change' (Howard et al 1993), which proposes a Three Phase Model of progressive improvement during therapy. In this model, each of the following steps precedes the next and is a "probabilistically necessary condition for the next". In other words, the previous must make progress in order for the next step to begin to happen:

- subjectively experienced well being
- reduction in symptomology
- enhancement of life functioning.

The CORE Handbook suggests that their subscales of Well Being, Symptoms and Functioning should be able to detect this phasing of response, the proposed order of recovery being Well Being (W), Symptoms (P) and then Functioning (F). However, in this study noted a different phasing of response during treatment, firstly Functioning (F), then Well Being (W) and then Symptoms (P). Furthermore, the observation and calculation of a strong positive correlation across all main subscales before and after treatment (apart from the Risk (R) subscale which will be examined later on its own) further suggests that most of the improvement on all subscales occurs in parallel rather than sequentially.

In the ongoing improvers Item C13, unwanted thoughts and feelings, is the only item in which improvement stalls when the clients are still significantly above the score of the control group. Counselling would actively identify disturbing thoughts and feelings and get the client to explore, analyse and reconstruct their associated cognitive processes about the particular events.

More longitudinal work is needed to determine if this continuation of intrusive symptoms leaves clients at a greater risk of being re-traumatised.
3.5.4

Non-Improvers at the 6 Month Follow Up

Having looked in detail at the ongoing improvers a few observations were of note about the other 6 (37.5%) of the 16 clients sampled after 6 months, who did not make further progress after treatment or relapsed. Before treatment, the total CORE scores of the 6 non-improvers were slightly higher, the ongoing improvers pre-treatment mean was 2.2, and the mean for non-improvers was 2.6. This difference was statistically significant ($t = 2.575$, $df = 14$, $p = .022$). Other small but significant differences were found on the Functioning (F) subscale: ongoing improvers = 2.17, non-improvers = 2.71 ($t = 2.169$, $df = 14$, $p = .048$). The minor Functioning subscales of Functioning in general and Functioning in social settings showed similar small differences ($p = <.05$). The above differences disappear or become non-significant after treatment. The non-improvers actually make greater improvement during the treatment than some of the ongoing improvers.

However on one single item, C10, difficulty in talking to others, there was a significant difference between ongoing improvers and non-improvers both before and after treatment: before treatment, non-improvers scored a mean of 3.0 for item C10, ongoing improvers scored 1.8, ($t = 2.201$, $df = 14$, $p = .045$), and after treatment, non-improvers scored a mean of 1.66 for item C10, ongoing improvers scored 0.6, ($t = 2.779$, $df = 14$, $p = .015$).

The higher score for non-improvers for item C10 indicates greater difficulty talking to other people, which may reflect in a greater amount of social isolation and perhaps less well-developed personal support systems. Both of which may restrict further progress when the counselling relationship is ended. Under counselling conditions, the subsequent non-improvers improve as well as the subsequent ongoing improvers; the problem seems to be when the counselling relationship ends.

These differences are all small, and the levels of confidence in most cases are the minimum acceptable ($p = <.05$). Therefore it would be very difficult to recognise on the basis of their CORE response if a particular individual might not be able to
maintain the momentum of recovery. This gets more difficult after treatment when most of the differences between the two groups disappear. However it identifies an area for the counsellor to explore with future clients in order to assist them to maximise their recovery.

It was observed that the 6 non-improvers did have slightly more counselling sessions, mean = 10.5, compared to the ongoing improvers with a mean of 7.6, but this is not unexpected since their presenting CORE score, degree of psychological disorder, was also slightly higher before treatment. However, since the client played an important role in determining when counselling ended, this may also show that these particular clients were less ready to end the counselling relationship.

As a group, there were no sufficiently substantial differences found in the non-improvers to be used as a simple predictor of who would or would not make ongoing improvement after treatment. The non-improvers appear to be a heterogeneous group with a variety of reasons for not improving or for deteriorating. Client 9 made no further improvement, but with a PENN score of 13 and a CORE score of 0.76 after treatment, they were already well inside the non clinical distribution on both scales, so further substantial improvement would not be expected. Clients 7 and 14 still had high PENN scores of 34 and 43 respectively after treatment, client 14 not having made reliable change in their PENN score during treatment. It would appear that clients who do not make reliable or clinically significant change on the PENN scale during treatment are unlikely to make further improvement after treatment. For one client, client 19, the explanation for their relapse lies in their wider situation, having moved job to escape one difficult situation and apparently recovered, they found themselves in another difficult work situation in which they were victimised again and re-traumatised.

Following up the non-improvers on long term sick welcomed further counselling. The other non-improving clients had returned to work and found it difficult to get off work for counselling. Left to their own devices many clients had returned to trying to cope on their own, using some of the skills they had developed during counselling.
Combined Assessment of Recovery by PENN & CORE

The items listed below combine the top 13 out of 34 CORE items and the top 11 out of 26 PENN items on which clients showed the greatest difference in score compared to their respective control groups before treatment. The list would accurately describe the broad spectrum of main symptoms with which clients presented at their first assessment session.

The items marked * are also items listed in the DSM-IV criteria for PTSD.

P = PENN Item, C= CORE Item, * = a DSM-IV PTSD symptom

- feeling alone and isolated (C1)*
- confusion (P14)*
- feeling overwhelmed by problems (C17)
- being easily distracted (P9, P19)*
- being unable to put problems aside (C20)
- sleep disturbance (P21)*
- not understanding themselves (P15)
- difficulty remembering things they need to (P22) *
- jumpy and on edge (P4)*
- feeling tense anxious or nervous (C2)*
- prevented from doing important things by tension and anxiety (C11)*
- feeling panic or terror (C15)*
- disturbed by unwanted thoughts and feelings (C13)*
- unwanted images or memories have been distressing them (C28)*
- difficulty dealing with intrusive bad memories (P24)*
- difficulty setting, working towards and achieving goals (P18, 20, 23)
- feeling humiliated or shamed by other people (C33)
- feeling unhappy (C27) feeling despairing (C23)
- feeling like crying (C14) feeling criticised by other people (C25)
The CORE and PENN items listed below are the items showing most improvement during treatment. All the following CORE items improved by at least 2 grades on the five point rating scale 0 to 4. All the following PENN items improved by at least 1.33 grades on the four point likert scale, 0 to 3.

Change in Symptom Profile Following Treatment

- less feeling alone and isolated (C1)
- reduced confusion (P14)
- feeling less overwhelmed by problems (C17)
- better understanding of self (P14)
- better able to put problems to one side (C20)
- being less distracted (P9)
- less tense anxious or nervous (C2)
- improved memory (P22)
- less sleep problems (C18)
- being able to take enjoyment (P3)
- increased happiness (C27)
- improved sleep pattern (P21)
- decreased despair (C23)
- better concentration (P11)
- less feeling humiliated or shamed by others (C33)
- less jumpy (P4)
- more feeling OK about self (C4)
- less feeling like crying (C14)
- dealing with unwanted thoughts and focus (P19)
- less often prevented from doing important things by tension and anxiety (C11)
- better able at setting, working towards and achieving goals (P18, 20, 23)
- less unwanted images or memories causing distress (C28)

The above list of improvements reported by the clients on completion of treatment.
3.6 COMPARING PENN & CORE

There have been no published comparative studies of the CORE and PENN scales. Since both scales are responsive to psychiatric problems, it might be expected that there would be a meaningful correlation between the scales when applied to the same subjects going through recovery from a psychiatric disorder such as PTSD.

3.6.1 Correlation of PENN and CORE

Two sets of CORE and PENN data were collected, pre- and post-treatment, on 36 clients and a third set of data were collected from a sample of 16 clients in the follow up. This gave a total of 88 sets of corresponding CORE and PENN scores. A strong positive correlation was demonstrated between the two scales (n = 88, Pearson’s coefficient = .890, two-tailed significance = <.001).

On the basis of the strong positive correlation between PENN and CORE scores, a linear curve fit and regression was calculated using SPSS. The best fit curve is plotted in Table 3.44 below.
In Table 3.44, the dotted line represents the actual values and the solid line represents the calculated line based on regression analysis.

The coefficients of the regression line are shown in table 3.45 below.

**Table 3.45**

**Coefficients of the Regression Plot of PENN and CORE Scores**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>6.968</td>
<td>1.674</td>
<td></td>
<td>4.162</td>
</tr>
<tr>
<td>CORE (All)</td>
<td>16.727</td>
<td>.923</td>
<td>.890</td>
<td>18.131</td>
</tr>
</tbody>
</table>

a. Dependent Variable: PENN Inventory Score

From Table 3.45, it can be seen that the gradient of the regression line is 16.727, and its intercept on the Y axis is 6.968. The formula relating the dependent variable PENN to the variable CORE is \[ \text{PENN} = 16.727 \times \text{CORE} + 6.968 \]
It can be seen in Table 3.44, that whilst most points lie close to the calculated plot, a few individuals have higher or lower than expected values on CORE or PENN than their score on the corresponding scale would predict. The individual clients represented by these dispersed points were looked at in more detail. The general observation was that points well above the plot line represented clients with straightforward uncomplicated PTSD with no other major comorbid psychological problems. Points well below the line represented clients with strong comorbid problems such as anxiety and depression. The plot itself represented the mean between these positions.

The strong relationship between PENN and CORE is due to the fact that both scales are responsive to general psychiatric problems, and such problems are usually comorbid with PTSD. In fact, as described in the literature review, anxiety and depression are as likely sequels of exposure to traumatic events in their own right, as is PTSD. However, the PENN and CORE scales can change independently of each other. The R Square value of 0.79263 indicates that only 79% of the variance in PENN is attributable to variance in CORE.

One client in the present study, who had a complicated story, illustrates this point. Client 19 had relatively mild PTSD symptoms by the PENN scale before treatment: before counselling, their scores were PENN = 41, CORE = 2.5, PENN/CORE ratio = 16:1. They appeared to be having more difficulty with anxiety and depression type symptoms, with which they made some recovery during treatment. After counselling their scores were PENN = 23, CORE = 1.7, PENN/CORE ratio = 13:1. Their PENN made a proportionately larger improvement during treatment.

Following treatment, this client moved to escape one bad situation and found themselves in another bad situation. As their post-treatment scores indicated, they had not yet fully recovered from their general psychiatric problems. This left them in a vulnerable position with limited energy to cope with the challenges of the new workplace situation. They developed PTSD again. At the time of follow up, their scores were PENN = 49, CORE = 1.47, PENN/CORE ratio = 33.3 As the