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THE EFFECTS OF LAY COUNSELLING ON POSTTRAUMATIC STRESS IN BLACK ADOLESCENTS

BY

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SUPERVISOR
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I hereby declare that this dissertation is my own work and that it has not been submitted for a degree at any other University.

A. Brozin
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ABSTRACT
Youth and children constitute seventy percent of the population in South Africa. It is these children who carry the potential for the future of our nation. They may be precluded from reaching their potential if we do not urgently address the problems brought about by violence. Highly evident is the increased incidence of PTSD within the violence-stricken communities in South Africa. PTSD among black youths is so high that it can be described as an epidemic.

Due to the limited therapeutic resources available, it is imperative that a programme of action aimed at reducing the negative impact which PTSD has and continues to have on children is designed. Thus, following a diligent study of the literature, it was decided to train lay counsellors / volunteers in terms of a previously devised Cognitive Behavioural Group intervention formulated by Cowley, Hetz and Rosin (1994) in order to reach out to these children who have been so aversively affected by violence. Utilising the services of lay counsellors rather than professionals is cost effective and time effective.

A large sample of PTSD positive subjects were selected from three different schools on the basis that they satisfied the DSM IV criteria for PTSD. The subjects participated in a six week intervention programme. A large number of lay counsellors were trained and selected to facilitate the intervention programme.

The administration of the intervention by the lay counsellors did not alter the effectiveness of the Cognitive Behavioural intervention. The results obtained were in accordance with those obtained by Cowley et al., (1994) in the paired sample tests which were deemed appropriate for this kind of research.
OPSOMMING

Tieners en jong kinders maak sewentig persent van die Suid Afrikaanse bevolking uit. Hierdie kinders is ons land se toekoms. Die kans dat hulle nie hul potentiaal bereik nie, is hoog indien daar nie dringend aandag aan die probleem van geweld gegee word nie. PTSD kom wyd voor en vermeerder sterk binne gemeenskappe in Suid-Afrika wat voortdurend deur geweld getref word. PTSD onder die swart tieners is so hoog dat dit beskryf kan word as 'n epidemie.

As gevolg van beperkte terapeutiese hulbronne wat beskikbaar is, is dit noodsaaklik dat programme ontwerp word om die volgehou negatiewe aanslag wat PTSD op kinders het teen te werk. Na 'n oorsig van die bestaande literatuur is dit besluit om leke raadgewers of vrywilligers op te lei. 'n reeks Kognitiewe Gedrags Groepsintervensie geformuleer deur Cowley, Hetz en Rosin (1994), is gebruik om uit te reik na kinders wat nadelig deur geweld geraak is. Benutting van die leke raadgewers eerder as professionele persone is gedoen aangesien dit meer tyd en koste effektief is.

'n Groot groep kinders met PTSD is geselekleer uit verskillende skole op die basis dat hulle aan die DSM IV kriteria vir PTSD voldoen. Die persone het aan 'n ses weke intervensie program deelgeneem. 'n Groot groep leke raadgewers is opgelei om die intervensie program uit te voer.

Die doel van die studie is om aan te dui dat die doeltreffendheid van die intervensie nie verminder is deur die opleiding van leke raadgewers nie.

Die administrasie van die intervensie van die leke raadgewers het nie die effektiwiteit van die Kognitiewe Gedrags Groepintervensie benadeel nie. Die resultate was in ooreenstemming met die van Cowley et.al.(1994) in die afgepaarde groepe statistiese metode wat toepaslik is vir hierdie soort van navorsing.
CHAPTER ONE: LITERATURE REVIEW

1. INTRODUCTION

"Children are not strangers to stress. Over a significant span of human history they have been more often the victims of the slings and arrows of an uncaring society than the recipients of its beneficent protection." (Garmezy, 1988, p.49)

Research literature indicates that South Africa is currently rated as one of the most violent countries in the world. (CPA, 1993; Bundy, 1992). The high levels of violence which at present dominate the South African socio-political landscape are primarily a function of past and present political, social and economic policies. Few spheres of our society remain unscathed by the escalating violence and thus issues of stress, violence, coping and resiliency have become a focus of interest within Psychology. However the majority of research conducted to date has been focused upon adults and the developmental aspects of children have been severely underplayed.

Stavrou (1992) states that in research conducted with victims of violence 65-85% of individuals suffer from the symptoms of Post-traumatic Stress Disorder whether they are directly or indirectly exposed to a violent situation. In their potential for long term recovery children appear to be more at risk than do adults, without the support of a significant adult and/or the relevant treatment (Stavrou, 1992).

The existing health and welfare services in South Africa are inadequate to meet the needs of the individual and this results in frustration and depression. It is thus imperative that communities are empowered to become involved in helping themselves without professionals. Research undertaken by Simpson (1993) reveals that there is currently an acute shortage of adequately trained health care workers to assist the ever-mounting number of South African children affected by public violence. This problem is further exacerbated by the fact that:

a) services offered to child victims of violence are frequently fragmented and
b) agencies offering these services often operate in isolation.
The success of intervention strategies depends on the training of lay health care workers (NCRC, 1994)

Dawes (1990) states that there does not appear to be much agreement as to what constitutes "childhood." While some studies use conception as the point where childhood begins and the onset of adult responsibilities and independence as its end, many use chronological age limits to demarcate this broad developmental phase. Consequently, contradictions abound. In certain instances, for example, childhood refers to the period between birth and 18 years (e.g., HSRC, 1994; NCRC, 1994; Gibson, 1989); yet in others, it refers to the period stretching from birth to 19 years, and even 22 years of age (e.g., Setiloane, 1990).

Within the scope of this thesis the period of "childhood" includes any individual under the age of eighteen years.

1.2 The South African Context

The trauma of violence and the breakdown of family structures in South Africa have reached crucial proportions. Carefree childhood hardly exists in the war torn townships. Their family life is disrupted violently; they are orphaned and left to fend for themselves; their homes are being burnt down; and their cry for help is hardly heard by the overburdened social structure of the country.

It was hoped that South Africa's transition into a democratic society would put an end to the escalating violence in this country. However the violence has continued to escalate alarmingly and is believed to be at its highest.

The system of apartheid which characterised South African society for the better part of the present century, can be considered to be one of the most pernicious forms of public violence this country has known. Although it may be impossible to prove if township conditions would have been different under other political structures the racial domination and oppression created an extremely marked contrast between the living conditions of the oppressed and the oppressor and with it exceptionally high levels of violence.
A number of South African studies indicate that symptoms ranging from extreme anger, fear, and shock to debilitating helplessness and despondency, are displayed by children who have been traumatised by public violence (Smith and Holford, 1993; Dawes, 1992; Dawes and Tredoux, 1990; Gibson, 1989).

### TABLE 1:
**CRIMES AGAINST CHILDREN REPORTED TO THE S.A. POLICE:**
**1989-1991**

<table>
<thead>
<tr>
<th>CRIME</th>
<th>1989</th>
<th>1990</th>
<th>1991</th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Murder</td>
<td>172</td>
<td>202</td>
<td>174</td>
<td>548</td>
</tr>
<tr>
<td>Physical Assault</td>
<td>2251</td>
<td>2720</td>
<td>3060</td>
<td>8031</td>
</tr>
<tr>
<td>Sexual Assault</td>
<td>5585</td>
<td>6111</td>
<td>6548</td>
<td>18244</td>
</tr>
<tr>
<td>Totals</td>
<td>8008</td>
<td>9033</td>
<td>9782</td>
<td>26823</td>
</tr>
</tbody>
</table>

Table 1. HSRC (1994)

In a study conducted by Dawes and Tredoux (1990) 9% of the children used in the study exhibited conditions ranging from Conduct Disorder to Post Traumatic Stress Disorder. Here it must be noted that this is indeed a conservative representation of the actual number of children severely traumatised by the violence in South Africa as many children frequently present with symptoms several years after exposure to incidents of violence.

Over and above normal childhood worries children in South Africa are confronted with violence, police brutality, poverty and overwhelming deprivation. Stavrou (1992) states that the most common responses to violent events are fear, emotional changes (emotional numbing, anxiety, guilt and restlessness), difficulty sleeping (nightmares and difficulties falling asleep), difficulties with thinking (constantly thinking about and re-experiencing the traumatic event, problems concentrating), social difficulties (aggressive), eating problems, and somatic complaints (headaches and stomach pains). These symptoms mentioned above are reminiscent of those of Post Traumatic Stress Disorder.
TABLE 2:
SOME CHARACTERISTICS OF ADOLESCENTS FROM BLACK
RURAL AND URBAN TOWNSHIPS

35.8% are left without any supervision after school hours
50.8% preoccupied by a fear of thieves
37.1% preoccupied by the possible death of their parents
09.0% use marijuana at least thrice per week
76.5% exhibit five or more depression symptoms
59.6% exhibit two or three symptoms of PTSD
66.9% had experienced at least one traumatic incident which they cannot forget

According to the DSM III R, five symptoms or more are indicative of major depression.

Source: Beukes and Heyns (1994)

The term violence is generally accepted as referring to political violence e.g. unrest between hostel dwellers, the repressive action of the security forces against the people. However children are confronted with the violence of ordinary crime e.g. assault and sexual abuse. The effects of violence form an integral part of the process of violence. Interactionally, "cause and effect" may become a reciprocal process. People either become helpless, a symptom of PTSD thus allowing perpetrators of violence to control the society or offer aggressive resistance which may result in the escalation of violence. However in a society where violence is so entrenched either way it is difficult to eradicate or control violence.


1.2.1 Factors mediating the effects of public violence on the psychological well-being of children

The impact of public violence on children is influenced by the interaction of a number of intra-individual and situational factors (Gibson, 1989). While these factors (listed below) may in some cases
ameliorate a child's reaction to violence in the short-term, they do not completely eliminate the potential damage which can be wrought by such violence.

The physical, social and material consequences of the violence

Research indicates that the degree of trauma caused by political violence, to a large extent, depends on the physical, social and material consequences which follow in its wake (Dawes, 1994a; Netshiombo, 1993). The loss of parents due to political violence also increases the likelihood of children being traumatised (Smith and Holford, 1994)

The nature of the violence

Research indicates that lack of clarity on the part of children in regard to who is perpetrating violence and why it is being perpetrated, significantly augments the trauma normally associated with political violence (Dawes, 1994a)

The socio-economic status of the child

Netshiombo (1993) and Gibson (1989), state that low socio-economic status generally correlates positively with post-traumatic symptoms in children who have been exposed to political violence. Children from lower socio-economic groups are more exposed to various other stressors, particularly those arising from structural violence, such as, disordered living conditions and malnutrition (Letlaka, 1990).

The child’s age

Research literature indicates that children of different age groups are differentially vulnerable to the effects of political violence (Dawes, 1990). Magwaza et al (1993) state that younger children exposed to incidents of violence are more likely to exhibit PTSD whereas older children are more susceptible to anti social patterns of behaviour. Dawes (1994a) indicates that this may be a function of developmental differences in social, emotional and cognitive capacities
The child's temperament

Children who possess an essentially positive temperament appear to cope better with incidents of political violence than children with a fundamentally negative temperament (Dawes, 1994a; Gibson, 1991; Dawes, 1987)

Passive vs active orientation

Children who have an active coping style appear more resilient in the face of political violence than children with an essentially passive coping style. e.g. under apartheid it was observed that children who were political activists were much less likely to exhibit post-traumatic stress symptoms after exposure to incidents of public violence than children who were not at all involved in the struggle (Dawes, 1994a; Gibson, 1991; Netshiombo, 1993; Dawes, 1987)

The gender of the child

Dawes (1994a) states that there is discernible relationship between the child's gender and reactions to incidents of political violence. Pre-adolescent boys generally present with more stress-related symptoms after exposure to public violence than their female counterparts, this situation is reversed during adolescence. Adolescent girls are more likely to exhibit symptoms such as depression and anxiety in situations characterised by high levels of public violence (Dawes, 1990)

The availability and quality of support symptoms

Dawes (1994a) states that children who can rely on the support of parent's and/or older siblings when exposed to incidents of political violence, appear to be more resilient than those who do not enjoy such support. This is particularly true for pre-school children (Netshiombo, 1993) who generally do not have many other effective social support systems such as schools and peer groups to substitute for the family when it is disrupted. Research by Simpson (1993) and Letlaka (1990) reveals that very young children's separation from their primary care-givers during, or following, incidents of political violence
significantly increases the traumatising effects of such violence on these children (Smith and Holford, 1993)

Past experiences

Past experiences of public violence also determine the impact on children, in that exposure to incidents of public violence can either 


t sensitise or steel the child to current incidents of violence (Dawes, 1994a). However this appears to be dependent on the quality of the child’s relationship with his or her primary care-giver (Dawes, 1994a).

The child’s appraisal of the violence to which he or she had been exposed

Research indicates that if children can make sense of the violence to which they are exposed, they are much less likely to be traumatised by it than if violent encounters are incomprehensible (Mkhize, 1993; Gibson, 1991; Letlaka, 1990; Straker, Moosa & Sanctuaries Team, 1990; Dawes, 1987). According to Dawes and Tredoux (1990), this is one of the reasons children generally experience intra-community violence as more stressful than state inspired violence.

As Simpson (1993) observes, South Africa as a whole, is severely traumatised and as such does not offer much support to the child victims of violence.

1.2.2. The destruction of the family

“Most [homeland] children grow up without their fathers and many without their mothers. Most are suboptimally nurtured by guardians [mostly, ageing grandparents] who are seldom as competent or as uniquely motivated ....as a loving, resourceful ....[parent] would be.

*(Thomas, 1987,p.14)*

Poster (1976) states that it is the family which provides the ideal context within which the optimal development of the child can occur. This perception basically derives from the belief that the family unit is pre-eminently suited to satisfy not only children’s most basic psychological needs, but also their emotional, cognitive and other
higher order needs (Papalia and Olds, 1989). According to the Department of National Health and Population Development (1993), the family is "ideally suited to deal with all these aspects to help the child towards developing as a well adjusted and productive member of society." (p. 2)

Apartheid "has steadily denuded [the black family] of its ability to provide a structured, nurturing ambience ...[for] the developing child" (Cooper, 1990, p. 2). The pressures of apartheid and its attempts to destroy all viable black social structures made it extremely difficult for the majority of families in South Africa to provide the context within which these needs could be satisfactorily fulfilled.

The family as a social unit has the ability to provide children with a refuge from the ravages of an often very hostile world, thereby offering them a relatively safe space within which to develop. However in South Africa this was hardly possible. The fact that these black townships are severely overcrowded, underserviced, dreary, poverty stricken and crime-ridden created unbearable tensions in family life, often leading to high levels of anger and aggression. This in turn frequently led to the violent abuse of children (DNHPD, 1993; Dowdall, 1990).

Human Sciences Research Council (1994) reveals that intra-family violence is assuming alarming proportions. Instead of offering children a haven from the hardships caused by apartheid practices, many families in this country are frequently responsible for the further brutalisation of children (DNHPD, 1993). The hardships of township life and the inability of parents to offer their children emotional support has according to Robertson (1990) led to a disproportionately large number of black children presenting with a variety of debilitating psychological problems, most notably, pervasive anger, constant anxiety, depression and behaviour disorders (Beukes, 1994; Shmukler, 1990; Majodina, 1989).
1.3 Discussion

From extensive research the most salient feature that comes to mind is the fact that South Africans are at grave risk for the development of Post-traumatic Stress Disorder and its secondary effects.

Dawes (1992) stresses the need for professionals to train and supervise lay care workers. Lay care workers must be drawn from within traumatised communities as they will understand and share experiences with the victims unlike many professional health care workers.

If the training given to these lay care workers is adequate, the latter can be utilised as health care workers as well as multiplicators. In other words, these trainees can in turn become trainers of other trainees, thus setting in motion a process whereby an ever increasing number of people within communities are equipped with the basic skills to assist traumatised individuals (Dawes, 1992).

Netshiombo (1993) states that "...trained in "treatment" of "disturbed" and "problematic" individuals [mental health professionals and institutions ]...are not equipped to deal with the large number of persons requiring diverse forms of help who present ...themselves in the wake of civil strife" (p.5).

For the above reasons it appears imperative to train lay counsellors and determine their efficacy in the context of South African traumatised youth presenting with Post-traumatic Stress Disorder.
2. HISTORY OF POST TRAUMATIC STRESS DISORDER

"It is strange to think how to this very day I cannot sleep a night without great terrors of the fire, and this very night I could not sleep to almost two in the morning through thoughts of the fire."(Daly, 1983 p66) This extremely vivid example was documented in the 1666 diary of Samuel Pepys six months after he had witnessed The Great Fire of London. In his diary Pepys referred to the sequelae of this disaster including attempted suicide.

Another diarist Charles Dickens, was involved in a railway accident at Staplehurst in Kent. Dickens stated "I am not quite right within, but believe it to be an effect of the railway shaking." Dickens subsequently developed a phobia of railway travelling and wrote "I am curiously weak - weak as if I were recovering from a long illness."(Forster, 1969)

Information pertaining to the effects of traumatic experiences has been documented for centuries. However clinical post traumatic stress disorder (PTSD) is a relatively recent entry in the official nosology.

Post traumatic stress syndrome has been chronicled for more than 100 years under an abundance of labels; The term "compensation neurosis" was introduced by Rigler in 1879 following an increase in invalidism reported after railway accidents with the introduction of compensation laws in Prussia in 1871.

The term "schreckneurose" (fright neurosis) was used by the 19th century nosologist Emil Kraeplin in 1886. Schreckneurose was defined as being "composed of multiple nervous and psychic phenomena arising as a result of severe emotional upheaval or sudden fright which would build up great anxiety; it can therefore be observed after serious accidents or collisions" (Kraeplin, 1886)
Mott (1919) coined the term "shell shock." He suggested that the condition arose due to a physical lesion of the brain, and together with Ernest Southard documented the neurological and psychological effects of war related traumas. Southard (1919) documented the war induced startle response of a French corporal during a shelling incident, "his pulse was variable, at rest it stood at 60; if a table nearby was struck suddenly, it would go up to 120. (p309). Meyers (1940) who had experience with over 2000 cases of shell shock made the distinction between shell shock and "shell concussion." He defined shell concussion as a "neurological condition that was induced by a physical trauma" (Saigh, PA 1991) Whereas shell shock was regarded as a psychic condition brought about by exposure to extreme stress.

Kardiner (1914) suggested that war created essentially one syndrome and that this was no different from traumatic neurosis in peacetime. Kardiner stated that the terms or labels of shell shock, battle neurosis, battle fatigue and combat exhaustion all meant entirely the same thing. "They all refer to the common acquired disorder consequent on war stress" (Trimble, 1985)

Adler (1943) described the post traumatic mental complications of survivors of Boston's Coconut Grove Fire. Her article is pertinent in that clear reference was made to the trauma of the victims-related ideation, nightmares, insomnia and avoidance behaviours.

The advent of World War II prompted a more systematic study of post war psychological problems. In Men Under Stress the symptoms of returnees suffering from combat neurosis was documented by Grinker and Spiegel (1945) These symptoms consisted of restlessness, depression, impairment of memory, aggression, sympathetic overactivity, nightmares, alcoholism, phobias and suspicion.

Archibald et al (1962) compared the symptoms of 57 WW II veterans with chronic combat fatigue to the symptoms of 24 veterans who had not been exposed to combat. The study revealed that veterans who had been exposed to combat or other stressors of war, displayed a number of stress related symptoms long after the actual event (Saigh, 1991)
It is thus through the advent of changing ideas that hypotheses are created, and paradigms facilitated. The clear designation by the authors of the DSM III has resulted in PTSD being formally recognised and codified reflecting a most important part of psychiatric practice and a better understanding of this frequent but frequently misunderstood part of human experience. (APA, 1980)

2.1 DSM - I

Encouraged and facilitated by the prevalence of war related psychiatric morbidity after WW II, the American Psychiatric Association Committee on Nomenclature and Statistics incorporated gross stress reaction as a psychiatric category in its DSM I of 1952. (Adams and Sutker, 1993) According to the 1952 nosology, the diagnosis was justified in situations involving exposure to "severe physical demands or extreme stress, such as in combat or in civilian catastrophe." (Saigh, 1991 p40) The DSM I continued by stating that "in many instances this diagnosis applies to previously more or less normal persons who experience intolerable stress." (p40) However operational criteria were not provided for in the DSM I.

Much pioneering research was conducted during the 1950's and 1960's which involved the reactions of civilians to natural and industrial calamities.

The National Academy of Sciences; reasoning that information from civilian disasters could be used to ascertain the effects of war related disasters, were instrumental in finding a number of investigations in order to assess individuals who had been involved in and had survived earthquakes, major fires etc. e.g. Bloch, Silber, and Perry (1956) in a study interviewed 88 children who survived a tornado, which wreaked havoc and devastation of Vicksburg, Mississippi in 1953. This study proved that traumatised adults, experience trauma related reactions and behaviours. (Saigh, 1991)

2.2 DSM II

In 1968, the APA issued the DSM II. The 1968 nosology omitted gross stress reactions despite the international recognition that the category
of gross stress reaction had achieved. Instead the APA introduced a
category of 'transient situational disturbance'. (Adams and Sutker,
1993). The 1968 appellation was "reserved for transient disorders of
any severity that occur in individuals without any underlying mental
disorders and that represent an acute reaction to overwhelming
stress" (APA, 1968, p48)

Also listed in the DSM II was a number of age related
subclassifications i.e. adjustment reaction of childhood or adult life.

In 1974, a paper on rape trauma syndrome was published by Burgess
and Holstrom. They concluded that rape victims experience acute and
long term phases of distress. The acute phase was characterised by
physical soreness from the attack, tension headache, sleep
disturbance, nightmares, gastrointestinal pains, genitourinary
disturbances, fear, anger and guilt. The long term phase was
associated with rape related nightmares, ideation and avoidance, 
fears and sexual dysfunction. (Burgess and Holstrom, 1974)

When viewed holistically, it is evident that various scientists used
various terms, which in a sense all refer to the fact that individuals
who are traumatised may develop a number of extensive emotional
problems. Saigh (1991) states that the use of different terms in order
to describe the same phenomena, in many cases retarded the
progress of practitioners and scientists.

2.3 DSM III

Encouraged by the DSM II's limited reliability, dearth of operational
criteria and modest coverage (only 108 classifications were listed) the
APA developed a task force in order to update the 1968 taxonomy of
mental disorders in 1975. The DSM III (APA, 1980) defined PTSD in
terms of specific symptoms which exist in conjunction with a history of
traumatic stress. According to the 1980 taxonomy, PTSD involved
the "development of characteristic symptoms following a
psychologically traumatic event that is generally outside the realm of
human experience." (APA, 1980, p236) It was also revealed that the
"stressor producing the syndrome would evoke significant symptoms
of distress in most people and is generally outside the range of such
common experiences as simple bereavement, chronic illness, business losses or marital conflict (APA, 1980, P237)

Specific diagnostic criteria in order to identify a disorder was provided for in the 1980 nosology. DSM III, following its publication in 1980 gained considerable recognition and served as a 'lingua franca' in the USA among mental health practitioners.

The internal consistency and completeness of the DSM III stress disorder criteria were put under investigation by Van Kampen, Watso, Kucala and Vassar (1986). These investigators concluded that "the DSM III diagnostic accuracy would not be compromised by deleting reduced emotional expression, numbed response to intimacy, survivor guilt, memory impairment and concentration problems from the diagnostic criteria (Van Kampen et al., 1986, p.174). Van Kampen also stated that diagnostic accuracy might be enhanced by incorporating lack of direction in the DSM III stress disorder and that current anxiety and depression were unrelated to combat exposure.

The PTSD classification also gained considerable recognition amongst mental health practitioners. However despite the apparent success of the DSM III the DSM III R was published in 1987.

2.4 The current nosology: DSM III R and DSM IV

The classification of PTSD in the 1987 nosology followed that of the DSM III "by recognising the development of symptoms following a psychologically distressing event that is outside the range of usual human experience." (APA, 1987, p 247).

The core features of PTSD in DSM III R are:
1. A distressing event that is outside the range of usual human experience
2. Re-experiencing the trauma in nightmares, intrusive thoughts or flashbacks
3. Numbing of responsiveness, avoidance of thoughts or acts related to the trauma
4. Symptoms of dysphoria and arousal. The diagnosis of PTSD requires the persistence of symptoms for at least one month. (APA, 1987)

The DSM III R provided examples of the different classes of trauma which could bring about the disorder, which its predecessor, the DSM III failed to do. Direct exposure to puissant stress characterised by "threat to one's life or physical integrity" (APA, 1987, p 247) reflects one type of trauma. A further second type / class of trauma involves seeing "another person who has been or is being seriously injured or killed as a result of an accident or physical violence" (APA, 1987 pp247-248)

Finally the DSM III R states that verbal mediation "which entails learning about a serious threat or harm to a close friend or relative constitutes the 3rd class of trauma," (APA, 1987, p 248)

The DSM III R indicates that symptoms of depression and anxiety are common and in many cases may be so severe that additional diagnoses are needed. Impulsive behaviour and symptoms of an organic mental disorder e.g. memory impairment may also be witnessed. Finally the DSM III R also reports that where individuals are exposed to a life threatening trauma in the company of other individuals, guilt about surviving (while others maybe did not) may be evident

2.5. DSM IV: Diagnostic Features

The DSM IV (American Psychiatric Association, 1994) discusses the following diagnostic criteria for PTSD

<table>
<thead>
<tr>
<th>TABLE 3: DIAGNOSTIC CRITERIA FOR POST TRAUMATIC STRESS DISORDER.</th>
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<tbody>
<tr>
<td>A. The person has been exposed to a traumatic event in which both of the following were present:</td>
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</table>


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 the physical integrity of self or others.

2) The person's response involved intense fear, helplessness, or horror.
Note: In children this may be expressed instead by disorganised or agitated behaviour.

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

1) recurrent and intrusive distressing recollections of the event, including images, thoughts or perceptions. Note: In young children, repetitive play may occur in which themes or aspects of the trauma are expressed.
2) recurrent distressing dreams of the event. Note: In young children, there may be frightening dreams without recognisable content.
3) acting or feeling as if the traumatic event were recurring (includes dissociative flashback episodes, including those that occur on awakening or when intoxicated). Note: In young children trauma-specific re-enactment may occur.
4) intense psychological distress at exposure to internal or external cues that symbolise or resemble an aspect of the traumatic event.
5) physiological reactivity on exposure to internal or external cues that symbolise or resemble an aspect of the traumatic event.

C. Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma) as indicated by three (or more) of the following:

1) efforts to avoid thoughts, feelings, or conversations associated with the trauma.
2) efforts to avoid activities, places or people that arouse recollections of the trauma.
3) inability to recall an important aspect of the trauma.
4) markedly diminished interest or participation in significant activities.
5) feeling of detachment or estrangement from others.
6) restricted range of affect (e.g. unable to have loving feelings).
7) sense of a foreshortened future (e.g. does not expect to have a career, marriage or a normal life span).

D. Persistent symptoms of increased arousal (not present before the trauma), as indicated by two (or more) of the following.

1) difficulty falling or staying asleep
2) irritability or outbursts of anger
3) difficulty concentrating
4) hypervigilance
5) exaggerated startle response

E. Duration of the disturbance (symptoms in Criteria B, C and D) and is more than one month.

F. The social disturbance causes clinically significant distress or impairment in social, occupational or other important areas of functioning.

Specify if:
ACUTE: if duration of symptoms is less than 3 months
CHRONIC: if duration of symptoms is 3 months or more
Specify if:
WITH DELAYED ONSET: if onset is at least 6 months after the stressor.

Kaplan and Sadock (1994) discussed PTSD according to DSM-IV as follows:
The essential feature of Posttraumatic Stress Disorder is the development of characteristic symptoms which follow exposure to an extremely traumatic stressor which involves direct personal experience of an event involving actual or threatened death or serious injury, or threat to a person's physical integrity; or the witnessing of an event that involves death, injury, or a threat to the physical integrity of another person; or learning about unexpected or violent death, serious harm, or threat of death or injury which is experienced by a family member or other close associated (Criterion A1).
The individual's response to the event must involve intense fear, helplessness, or horror (or in children, the response must involve disorganised or agitated behaviour) (Criterion A2).

The characteristic symptoms resulting from the exposure to the extreme trauma include persistent reexperiencing of the traumatic event.

(Criterion B), persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (Criterion C), and persistent symptoms of increased arousal (Criterion D).

The full symptom picture must be present for more than one month (Criterion E), and the disturbance must cause clinically significant distress or impairment in social, occupational or other important areas of functioning (Criterion F).

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 taken hostage, terrorist attack, torture, incarceration as a prisoner of war or in a concentration camp, natural or manmade disasters, severe automobile accidents or being diagnosed with a life-threatening illness.

For children sexually traumatic events may include developmentally inappropriate sexual experiences 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 assault, accident, war or disaster or unexpectedly witnessing a dead body or body parts.

Events experienced by others that are learned about include, but are not limited to, violent personal assault, serious accident, or serious injury experienced by a family member or a close friend; learning about the sudden, unexpected death of a family member or a close friend; or learning that one's child has a life-threatening disease.
The disorder may be especially severe or long lasting when the stressor is of human design (e.g., torture, rape). The likelihood of developing this disorder may increase as the intensity of and physical proximity to the stressor increases.

The traumatic event can be reexperienced in various ways. Commonly the person has recurrent and intrusive recollections of the event (Criterion B1) or recurrent distressing dreams during which the event is replayed (Criterion B2). In rare instances, the person experiences dissociative states that last from a few seconds to several hours, or even days, during which components of the event are relived and the person behaves as though experiencing the event at the moment (Criterion B3).

Intense psychological distress (Criterion B4) or physiological reactivity (Criterion B5) often occurs when the person is exposed to triggering events that resemble or symbolise an aspect of the traumatic event (e.g., anniversaries of the traumatic event; cold, snowy weather or uniformed guards for survivor death camps in cold climates; hot, humid weather for combat veterans of the South Pacific; entering an elevator for a woman who was raped in an elevator).

Stimuli associated with the trauma are persistently avoided. The person commonly makes deliberate efforts to avoid thoughts, feelings, or conversations about the traumatic event (Criterion C1) and to avoid activities, situations, or people who arouse recollections of it (Criterion C2). This avoidance of reminders may include amnesia for an important aspect of the traumatic event (Criterion C3).

Diminished responsiveness to the external world, referred to as "psychic numbing" or "emotional anaesthesia", usually begins soon after the traumatic event. The individual may complain of having markedly diminished interest or participation in previously enjoyed activities (Criterion C4), of feeling detached or estranged from other people (Criterion C5), or of having reduced ability to feel emotions (especially those associated with intimacy, tenderness and sexuality) (Criterion C6).
The individual may have a sense of a foreshortened future (e.g. not expecting to have a career, marriage, children or a normal life span) (Criterion C7). (Criterion D2) or difficulty concentrating or completing tasks (Criterion D3).

The individual has persistent symptoms of anxiety or increased arousal that were not present before the trauma. These symptoms may include difficulty falling or staying asleep that may be due to recurrent nightmares during which the traumatic event is relived (Criterion D1), hypervigilance (Criterion D4), and exaggerated startle response (Criterion D5). Some individuals report irritability or outbursts of anger.

**Specifiers**

Acute: This specifier should be used when the duration of symptoms is less than three months.

Chronic: This specifier should be used when the symptoms last three months or longer.

With delayed onset: This specifier indicates that at least six months have passed between the traumatic event and the onset of the symptoms. (APA, 1994)
3. POST-TRAUMATIC STRESS DISORDER IN CHILDREN

3.1. Introduction

"If it is true that peoples wealth is its children, then South Africa is bitterly tragically poor. If it is true that a nations future is its children, we have no future, and deserve none." (Qoboza in Bundy, 1993 p 1) The price South African children have paid, and continue to pay due to the incredibly high levels of public violence is substantial.

An extensive literature exists which is devoted to the study of trauma and trauma related symptomatology in adults. By comparison such literature concerning children is limited. Research directed exclusively at PTSD in children, accounts for a small percentage of existing investigations. However, a significant body of research has recently emerged that documents pathological responses to traumatic stresses in children, including the recognition that some stresses often produce symptoms which are consistent in PTSD (Eth & Pynoos. 1985; Goodwin 1985; Malmquist, 1986).

A definition of trauma

Trauma has been defined as an emotional state of discomfort and stress resulting from memories of an extraordinary, catastrophic experience which shattered the survivors sense of invulnerability to harm.(Figley, 1985)

A definition of post-traumatic stress reactions

Post-traumatic stress reactions are defined as conscious and unconscious behaviours and emotions associated with dealing in the memories of the stresses of the catastrophic and immediately afterwards (Figley, 1985).

Traumatic stress

There are 5 basic threats which are associated with the presence of traumatic stress in children:
1. Fears about physical harm.
2. Threats against the child's life.
3. Concern over safety of attachment figures.
4. Threats to self image.
5. Sense of isolation surrounding these threats and fears (Ayalon 1982; Goodwin 1985).

Terr (1979) writing about the children of Charcholla abducted in their school bus, states: “Since the age range was 5 to 14 one might expect to find important differences in their responses to trauma based on their stages of development. Such surprisingly was not the case. There was an amazing similarity of response across the entire age range.” (Eth and Pynoos, 1985, p. 616).

Four developmental considerations warrant careful examination:

1. The symptom presentation and content of PTSD may vary according to age, although the general phenomenology is often similar.
2. Children’s early efforts to cope with traumatic anxiety & helplessness are a function of maturity.
3. The developmental influence that can enhance or impede trauma resolution.
4. The interplay of the processes of trauma resolution and other childhood tasks.

Immediately school work, play and interpersonal relationships are hampered.

Browne and Finkelhor (1986) state that if it is generally assumed that the developmental stage of a child is a determining factor when assessing the impact of trauma on a child. Three additional factors suggested to affect a child’s response to trauma:

1. The degree of ambiguity surrounding the source of the trauma.
2. Whether the trauma is man made or of natural causes.
3. The outcome of the traumatic event(s)

(Ayalon, 1982)

The effects of the trauma are perceived to be longer lasting & more severe when the cause of the trauma is man made (DSM 111).

The child’s early efforts to be able to cope with helplessness and traumatic anxiety are a function of the maturity of the child. To date, a number of taxonomies of childhood coping similar to those conceptualised for adults are available. The developmental influence may impede or enhance trauma resolution. Children according to age
are susceptible to the effects of intrapsychic familial and societal pressures (Figley, 1985).

Although the general phenomenology is often similar, the symptom presentation and content of PTSD may vary, depending on the age of the child. The specific nature of the traumatic occurrence & its meaning to the child may serve as another variable. (Figley, 1985).

The manifestation of adolescent trauma begins to resemble the composite of the adult post traumatic syndrome. A principle reaction of traumatised adolescents is a precipitation of a premature entrance into adulthood or a premature closure of identity formation. The adolescent will embark upon a period of post-traumatic acting out behaviour which may be characterised by school truancy, substance abuse, precocious sexual activity and delinquency (Newman, 1976).

A number of modifications have been included in the DSM III-R criteria which are based upon clinical descriptions reported in the literature (APA, 1987; Brett et al., 1988) to reflect developmental factors which may impact upon symptom presentation in children.

1. Re-experiencing the event through repetitive play containing themes/aspects of the trauma.
2. The loss of newly acquired developmental skills or a regression to an earlier developmental level, as manifested through withdrawal and a diminished interest in significant activities.
3. A sense of a foreshortened future and/or inability to achieve expected life goals in career and family.
4. Omen formation.
5. Psychological symptoms, such as separation anxiety, generalised fear and/or personality changes.

Eth & Pynoos (1985) state that children who are exposed to severe stressors clearly develop PTSD. Thus the need to include subjective perception within the stressor criterion is perhaps more apparent with regard to children than adults. Children exposed to stresses
appear to demonstrate a symptom profile similar to that displayed in adults (Lyons, 1987).

Children's similarities to adults in complying with DSM 111 - R criteria do not necessarily imply similarities in the course of PTSD or its treatment (Schwartz & Kowalski, 1991). Just as features of the disorder vary with the developmental stage of the child (Terr, 1985), the variety of environmental events capable of producing PTSD phenomenology also varies in children from that observed in adults (Gislason & Call, 1982).

Terr (1991) states that there are 2 classes of trauma which may precipitate the development of PTSD in children namely:

Type 1 Trauma: This involves single traumatic events which are unexpected and rather sudden - e.g. witnessing a homicide or being the victim of a violent crime. A Type 1 disorder may arise due to exposure to a single traumatic event, as classically defined by Freud (1920). Symptoms resulting may include clear detailed memories of the trauma, omen formation and visual misperceptions (Terr, 1991).

Type II Trauma: This incorporates sexual abuse, ritualistic abuse, or continuous physical abuse of a child. A type II disorder results from multiple or long standing experiences in extreme stress & trauma such as ongoing sexual abuse. Denial or psychic numbing, rage and unremitting sadness may become personality styles for Type II individuals (Terr, 1991).

3.2. Research Evidence

An abundance of research literature on PTSD concerning adults exists based on DSM 111 R with little on children. By comparison it is only recently that the effects of traumatic stresses or children have been studied. (Eth & Pynoos 1985; Pynoos, 1990; Sugar, 1989; Terr, 1985) It was really only with the interest in adult reaction to trauma after the Vietnam War that finally the much needed attention toward psychic trauma in children developed (Terr, 1979).
PTSD in children is categorised according to the type of stress prevalent (life threatening natural disasters, warfare, violent crime/assaults, accidents, rape and sexual abuse) (Eth & Pynoos 1985; Goodwin 1988; Pattern et al 1989; Wolfe et al., 1989)

3.2.1. Natural disasters

Most studies have indicated that the impact of disasters on children do have a negative psychological impact, especially in the short term. In one longitudinal study it was found that 40% of children who were involved in a school bus accident had a severe or moderate stress reaction one week after the accident, but this level decreased to 6% nine months after the accident (Milgram et al, 1988).

In another longitudinal study, McFarlane (1987) stated that about one third of parents reported continuing preoccupation with exposure to a bush fire in Australia in their children up to two years post the event. Thus it appears that children of different ages exposed to different types of traumatic events do develop at least some PTSD symptoms. However, the majority of these studies have not directly focused on the presence or absence of a PTSD diagnosis, and thus researchers are still uncertain as to whether all the symptoms of PTSD are experienced by children and/or the PTSD syndrome as it is currently defined (McFarlane, 1987).

Kord et al (1991) in renewing empirical child disaster research on children who had experienced natural & human made disasters, found that pre-school age children showed less global psychological distress that older children (Bloch et al 1956). However a high incidence of specific behavioural disturbance was noted in pre-school children. (Burke et al 1982;). With regard to school age children, post disaster stress response was characterised by trauma specific fears & anxieties; problems in school, sleep disturbances and somatic concerns. (Burke et al 1982; Pynoos et al 1987).

In studying the effects of the Buffalo Creek Dam collapse in 1972, Green, Korol, Grace, Vary, Leonard, Glesser and Smitsone-Cohen (1991) found that approximately 37% of children were given a probable diagnosis of PTSD. A number of factors e.g. age and gender
effects and the impact level of exposure & parental functioning were examined and found to contribute to the adaptation of the traumatic event (Green et al 1991).

In a study which examined the effects of Hurricane Hugo (Berkeley County, South Carolina), Shannon, Lonigan, Finch and Taylor (1994) concluded that children who are exposed to extreme magnitudes of natural disaster report sufficient symptoms to establish a DSM 111-R derived classification of a PTSD syndrome.

3.2.2. Warfare

In his monograph "children of war", Rosenblatt (1983) states, "There are places in the world like Northern Ireland, Israel, Lebanon, Cambodia & Vietnam that have been at war for the past twenty years or more.......the children living in these places have known nothing but war in their experiences."

Until recently investigators have not directly assessed the effects of war on children (Ziv & Israeli, 1973) e.g. assessment of British children exposed to aerial bombing during World War II involved interviews with their parents, the children themselves were rarely interviewed. These studies have been reviewed by Terr (1985).

In the assessment of war related PTSD in children, three studies have employed DSM 111 criteria. Thirty Central American refugees aged seventeen years or younger, and who were referred for psychiatric treatment were interviewed by Arroyo & Eth (1985). Twenty eight of these subjects were from El Salvador, and two teenage subjects were combatants who had participated in the torture and killings of their citizens. On completion of a full psychiatric evaluation, Arroyo & Eth diagnosed DSM 111 PTSD in 10 children (33%) and adjustment disorder in 9 others (30%).

In 1986, a standardised psychiatric interview was conducted by Kinzie and colleagues, with 40 high school students who had been imprisoned in Cambodian concentration camps between 1975 and 1979. These children spent two years living in the Cambodian
refugee camps, and then emigrated to the United States at approximately the age of fourteen. The children had been exposed to death, forced labour, beatings, starvation, and separation from their families. The interview was conducted 4 years after the children had left Cambodia. The 40 students (25 boys) ranged in age from 14 - 20 (mean age =17). Twenty students (50%) had DSM 111 post-traumatic stress disorder; 5(12%) and 15(38%) had Research Diagnostic Criteria major, minor & intermittent depressive disorder, respectively. Three (8%) had DSM - 111 panic disorder, and 7 (18%) had DSM - 111 generalised anxiety disorder (GAD). Among the 20 PTSD cases, 17 (85%) had concurrent depressive disorder. No instances of schizophrenia, antisocial conduct and drug or alcohol abuse was evident. Interrater reliability for the PTSD diagnosis was 85%.

Six students who had fled Cambodia before Pol Pot secured power were also interviewed. These control subjects reported few symptoms and were assigned no diagnoses. Thus emigration alone was deemed insufficient in accounting for the psychopathology found in the traumatised individuals (Kinzie et al., 1986).

At three year follow up, a structured interview was used in order to establish DSM 111 R PTSD in 48% of the 30 subjects studied (Kinzie et al., 1989). Applying DSM 111 R to the original data the authors noted that 3 subjects who had originally been diagnosed as DSM-111 PTSD cases failed to meet DSM-111 R criteria. whereas two others would have been diagnosed as PTSD cases had DSM-111 R PTSD criteria been used.

In another study of 840 Lebanese children, who had been referred for psychological evaluation because of emotional problems experienced related to their exposure to war, 273 (32%) met DSM - 111 PTSD criteria. (Saigh, 1989). The taped and written transcripts of the inventory administration, were evaluated by two counselling psychologists. Results indicated that 230(27%) of the children as PTSD cases. Of these 230 cases, 58 (25%), 128 (56%), 13(6%), and 31 (14%) had been traumatised either through direct experience, observation, verbal mediation or some combination thereof.
Thus in contrast to early reports of minimal distress in children exposed to warfare, recent studies have uncovered rates of PTSD ranging from 27% to 48% (Kinzie et al., 1986)

3.2.3 Violent crimes

Several recent investigations have reported the incidence of PTSD symptomatology and diagnosis in children. Children exposed to non-war related violence have exhibited PTSD. In studies of children who experienced a school bus kidnapping (Terr, 1979, 1983, 1984), children who witnessed parental murder (Malmquist, 1986) and children who witnessed parental sexual assaults, (Pynoos & Nader 1988) all the children were diagnosed as experiencing PTSD.

Recent clinical evidence suggests that children who are exposed to violence are more likely than those not exposed, to suffer from a variety of social and emotional problems. These include low self-esteem, learned helplessness, anger & aggression. In addition they experienced problems in school, peer relationships and intrafamilial problems. Many of these studies reported PTSD symptomatology as a consequence of this exposure to violence (Pynoos et al., 1987)

McNally (1991) in reviewing the type of stressor characteristics that lead to PTSD, concluded that exposure to violence was more likely to produce PTSD in children than were other types of disasters.

In a study conducted by Terr (1983) on 18 children who had been kidnapped by the parent with whom they were not living with, results showed that six (33%) of the children DSM III criteria for PTSD, and 5 (28%) exhibited the "after effects of severe fright" (p 151). Although detailed descriptions of the symptoms exhibited by the children were not provided, nightmares and post traumatic play were indicated.

A number of significant clinical features of PTSD in a group of 25 children who were kidnapped and then burned alive in a truck trailer, was documented by Terr (1983). The children were evaluated at a one year and then four year follow up; and as a group the children exhibited an increase of the following: thought suppression, intense shame, denial and repression of earlier post-traumatic symptoms,
unlinking of memories and repression of earlier post-traumatic symptoms, unlocking of memories from affects, misconceptions, a sense of foreshortened future, death, dreams and re-enactment play. Many of the children feared that their kidnapper would return or that there would be another kidnapping. In contrast with that of adults with PTSD Terr (1983) stated that all 25 children were able to give a fully detailed account of the kidnapping, an absence of psychic numbing (at the 4 year follow up) and absence of intrusive dysphoric flashbacks.

In a study of children who had witnessed the murder of one of their parents, Malmquist (1986) stated that all of the children met the DSM 111 criteria for PTSD. Symptoms noted included anxiety, restlessness, hypervigilance, and impaired concentration and memory. 94% of the children exhibited a decrease in school performance.

Details of the traumatic event were recalled vividly, and the children were able to express anger, but not overt guilt: Indeed, unpredictable recollection of the event were termed “flashbacks” by Malmquist (1986). Acting-out behaviour e.g. theft and vandalism developed after the traumatic event.

Although the symptoms of assaulted children have been extensively examined, the reactions of children who witness assaults have been overlooked (Pynoos & Nader 1989).

A study was conducted by Pynoos & Nader (1989) which involved 10 children, seven boys and three girls, in which these children witnessed the sexual assault of their mothers. Results of this study stated that these children exhibited symptoms from each of the major criteria of PTSD in DSM-111.

Pynoos and Nader (1989) stated that children who witness sexual assault are likely to exhibit significant symptoms of PTSD. Although differences existed in the severity of reaction, it was noted that all 10 children met the DSM-11 criteria for PTSD. One child had a moderate reaction, and the other children had a severe reaction, as measured by the PTSD Reaction Index.
In a study conducted on children who had experienced a sniper attack on their school playground, almost 50% met the criteria for PTSD one month after the disaster. Proximity to the violence was significantly related to the severity of PTSD. (Pynoos et al, 1987)

Schwartz & Kowalski (1991) interviewed 64 children (5-14 years) who had been exposed to a fatal shooting at an elementary school. Results showed that 15% stated that they would live to be less than 70, 19% would not have children, 13% would not get married and 2% saw the future as all bad.

The studies cited above indicate that exposure to criminal violence produces rates of PTSD ranging from 27% - 100%. Fitzpatrick & Boldizar (1993) state “an enormous amount of knowledge has been gained in developing strategies to recognise and treat those who have affected; it is critical that we bring that knowledge [of PTSD] on treating the veterans of a different war.” (p.430).

“Parallels between the jungles of Vietnam and urban America do exist, but the current war in our inner cities is producing a greater number of casualties with younger victims, & possibly even greater stakes” (Fitzpatrick & Boldizar, 1993, p. 430).

3.2.4. Accidents

A revised version of the PTSD Reaction Index was utilised by Martini et al (1990) to evaluate five children who were injured when a speedboat crashed into spectators whilst watching the Pittsburgh Regatta. The PTSD Reaction Index was also used in order to interview the parents of these children. Three of the five children met DSM111 -R criteria for PTSD as confirmed by either self report or parental report.

Recent reports indicate that serious accidents produce PTSD in children. However, only in one published study did investigators apply structured interviews enabling DSM-111 or DSM - 111R diagnoses (Martini et al 1990).
3.2.5. Sexual Abuse

Studies conducted on the impact of sexual abuse in children are controversial. Some investigators question whether sexual abuse constitutes a trauma. (Browne & Finkelhor, 1986).

A study was conducted by McLeer, Deblinger & Atkins (1988) in order to assess the frequency of PTSD in 31 sexually abused children, by means of structured interviews (DICA & DICA-P) and standardised questionnaires.

All the children in this study had been abused on at least one occasion, and there was no upper limit to the number of abusive episodes. The average time lapsed since the last abusive episode was 8 months with a median of 4 months. The children ranged in age from 3 to 16 years, with 25 girls and 6 boys, the mean age being 8.4 years. Results stated that 48.4% of the children were diagnosed with PTSD according to DSM-111-R criteria - 75% were abused by their natural father, 67% by strangers and 25% by trusted adults. PTSD symptoms were experienced by many of the children who did not meet full PTSD criteria. 58% of the sample scored 12 or above on the Children's Depression Inventory (Kovacs, 1981) indicating clinical depression. 81% of the sample exhibited one or more re-experiencing symptoms, and 64% exhibited autonomic arousal.

Thus this study portrayed that in a psychiatrically referred group of sexually abused children, PTSD is common.

Wolfe, Gentile & Wolfe (1989) stated that the impact of sexual abuse in children may be seen as a PTSD. Analyses included 71 sexually abused children & their mothers and involved 1) measures of abuse severity, 2) the children's attributional style & 3) the adjustment of the child. Results supported the PTSD formulation in that a) consistent with the DSM - 111-R criteria for PTSD, sexually abused children displayed such symptoms.
b) Individual and contextual factors thought to mediate the impact of other forms of trauma e.g. rape and combat, also appeared to mediate the impact of childhood sexual abuse. (i.e. the severity of the sexual abuse and the child's attributional style regarding the causes of positive and negative events)

In a study conducted by Kiser et al. (1991), findings indicated that 55% of a sample of children who experienced physical and/or sexual abuse developed clinical symptoms characteristic of PTSD. Abused children, who did not develop symptoms associated with PTSD displayed more depression and externalising behaviours e.g. delinquency & aggression. Thus, although the development of PTSD is associated with severe abuse, it may also serve a protective function or represent a socially adaptive means of coping with the trauma of abuse.

McLeer et al., (1988) stated that PTSD appears to be more prevalent in children who are abused by parents, adult strangers or adult care givers than children who are abused by another child.

Heightened anxiety, impaired impulse control, enuresis, sleep disturbances and socially inappropriate behaviours tend to be exhibited by physically and/or sexually abused children. (Kiser, Hestor, Millsap & Prewitt, 1991).

Through the continuous repetition of the trauma in dreams, fantasy, self-destructive behaviours, aggressive play and delinquency, enable the child to 'cope'. Browne & Finkelhor (1986) state that symptoms of clinical depression are common and may include depressive affect, impaired self concept and feelings of absolute helplessness. Despite several surveys indicating a substantial prevalence of sexual abuse in the childhood of adults in the 1940's and 1950's the abuse of children remained a rather neglected topic until Kemp published the "Battered Child Syndrome" in 1962 (Kemp et al., 1962).

Goodwin (1985) was the first clinician to describe post-traumatic symptoms in children who were the victims of incest. These symptoms included fear, startle reactions, re-enactment of the trauma, flashbacks, sleep disturbance, and depression. Goodwin adapted
Kardiners descriptions (1941) of "shell shocked" combat veterans to victims of child sexual abuse.

Kiser et al (1988) observed that in a sample of 10 children who were sexually abused in a day care setting, ranging in age from 2 - 6 years old, 9 of the children exhibited PTSD symptoms. The most frequently occurring symptoms included; acting out behaviour as if the traumatic event was re-occurring due to environmental stimuli, avoidance of activities which reminded the child of the traumatic event, and an intensification of symptoms after exposure to events resembling the molestation.

In a study which compared the prevalence of psychiatric disorders in a clinical sample of sexually abused children who were referred for outpatient evaluation; McLeer, Callaghan, Henry and Wallen (1994) tested two hypotheses:

Hypothesis 1: There would be more PTSD in the sexually abused group than in the non-sexually abused group.
Hypothesis 2: More diagnoses would be evident in the non-sexually abused group than in the sexually abused group.

Results indicated that in the sexually abused group, the prevalence of PTSD was significantly greater i.e. 42.3% of sexually abused children and 8.7% of non-sexually abused children met the full criteria of PTSD.

McLeer et al, (1994) concluded that earlier findings were confirmed suggesting that children who are sexually abused are at a greater risk for developing PTSD.

3.3. Discussion

The above research studies vividly portray the occurrence of PTSD in children. Due to the debilitating effects of PTSD in children, and its resistance to traditional treatments, children who ultimately develop PTSD may be at risk for serious prolonged dysfunction. This may underscore the importance of research designed to elucidate the natural history of PTSD in childhood and to determine the most effective manner to treat children and adolescents (McLeer et al, 1994)
McNally (1991) states that exposure to violence, crime and warfare triggers PTSD in children more consistently than other traumatic stressors.
4. THE ETIOLOGY OF POST-TRAUMATIC STRESS DISORDER

4.1. Introduction

The study of potential etiological factors in the development of PTSD, has in the space of a few short years progressed from simple nature vs nurture studies to studies in which the search for contributing factors is conducted in biological, psychological and social arenas. (Foy et al., 1992).

PTSD is the only diagnostic category which includes an etiological variable ie. "exposure to a psychologically distressing event that is outside the range of usual human experience." (APA, 1987, p. 249) and would evoke distress in almost anyone. Thus PTSD is viewed as a pathological reaction to trauma(s). This creates the illusion that the etiology of PTSD is known. However, if this was true, then why do not all women who have been raped, all car accident victims, and all soldiers exposed to violent combat develop PTSD? (Jones & Barlow, 1990)

Foy, Sipprelle, Rueger and Carroll (1984) were among the first researchers to present some of the first empirical data on variables which might contribute to the development of PTSD.

A number of etiological factors have been highlighted in the empirical literature on PTSD. Pretrauma variables, have been examined, including family history, psychosocial adjustment and physiological reactivity to the stress. The subjects immediate response to the traumatic event and the nature of the trauma have also been identified and investigated.

PTSD symptomatology primarily consists of 3 symptom clusters - namely; re-experiencing, increased arousal and numbing and avoidance. Events are re-experienced in one of the following ways:
1. Recurrent and inclusive distressing recollections of the event.
2. Recurrent dreams of the event.
3. Sudden acting of feelings as if the traumatic event was recurring. This includes a sense of reliving the experience, illusions, hallucinations and dissociate flashbacks, even those that occur upon awakening - often when intoxicated (Kiser, 1991)
4. Intense psychological distress at exposure to events that symbolise or resemble an aspect of the traumatic event (Green, 1991)

Avoidance and Numbing Phenomena
These include the persistent avoidance of things associated with the trauma or numbing of general responsiveness. They include:
- Efforts or thoughts or feelings associated with the trauma.
- Efforts to avoid activities or situations that arouse recollections of the trauma.
- Inability to recall an important aspect of the trauma.
- Markedly diminished interest in significant activities.
- Feelings of detachment or estrangement from others.
- Restricted range of affect.
- Sense of foreshortened future.
Survivors use many different techniques to ward off thoughts about the trauma including attitude switching, narrowing of attention, inflexible and constricted thought, altered meanings and the warding off of reality by the use of fantasy and memory failure (Foy et al, 1993)

Symptoms of increased arousal
These include persistent symptoms as indicated by at least two of the following:
- Difficulty in falling or staying asleep.
- Irritability or outbursts of anger.
- Difficulty in concentrating.
- Hypervigilance.
- Exaggerated startle response.

Many schools of thought have been proposed in order to explain PTSD. However, only those theories which are beneficial in diagnosis, understanding and treatment will be put forward in this dissertation.
4.2. The Psychodynamic model

Fairbank and Nicholson (1987) state that there are a number of complementary approaches within the psychodynamic paradigm. The concept of energy overload is indicative of early psychodynamic formulations of trauma. When an individual's external stimuli outweighed the individual's stimulus barrier, the event was termed traumatic. When an emotionally intense event penetrated an individual's ego defences and floods it with uncontrollable anxiety, Freud (1920) argued that this is when a trauma exists. It is when these ego defences "fail" that the intrusive re-experiencing phase of PTSD is evident. Denial and psychic numbing is the result of defensive over control.

According to the psychodynamic model the stimuli of the traumatic event has the ability to totally overwhelm the individual's ego and defence mechanisms. This results in the ego being no longer able to maintain a homeostatic equilibrium and thus the ego regresses, leading to the ascendancy of the aggressive drive of the id. When this occurs, the individual experiences manifestations of the id anxiety. In such a situation of anxiety, regression, repression and denial are adopted by the ego manifesting in avoidance and numbing of responsiveness as evident in PTSD.

Psychoanalytical models however are firstly not sensitive to the needs of the majority of South Africans and they are also difficult to be empirically evaluated.

4.3. The Biological model

A biological model was proposed by Van der Kolk (1984), based on the animal model of inescapable shock (Maier & Seligman 1976) in order to explain the etiological mechanics of PTSD in humans. Van der Kolk (1984) proposed that it is the limbic system which is affected by the extended acute shock. A decrease in norepinephrine results in a conditioned response which subsequently leads to an increase in norepinephrine receptor hypersensitivity. Numbing, constriction of affect, decline in motivation and difficulties with occupational
functioning reflect this decrease of norepinephrine under conditions of inescapable traumatic events. Hyperactive symptoms e.g. startle responses, nightmares and intensive thoughts, reflect a chronic hypersensitivity of the norepinephrine receptors resulting from the inescapable stress of the trauma.

This model therefore states that biochemical alterations in response to stressors occur immediately. Chronic non-adrenergic reactions and concomitant copioid withdrawal results when exposure to subsequent stressors enhances these changes. However, Oei et al (1990) states that this model is unable to adequately explain the delayed development of symptoms frequently reported in the literature. It is only the immediate development of symptoms which appear to be explained by Van der Kolk, (1987) symptoms which appear some time after the traumatic event are unexplained as is emotional numbing experienced by victims of trauma.

Due to the abundance of difficulties, Kolb (1987) developed another biologically oriented model of PTSD. He proposed that an event which is traumatic for a particular individual will cause the development, alteration and/or death of neuronal pathways. Thus, the characteristic symptoms of PTSD are due to cortical and subcortical alterations. Kolb (In Oei et al, 1990) states that synaptic alterations due to the trauma will enhance a person's ability to attend to life threatening stimuli. Further sensitisation and concomitant changes in synaptic functioning will occur if the trauma and/or intense arousal occur frequently and is not of sufficient intensity.

This model does not explain the presence of PTSD in some individuals, whilst not occurring in others. It appears that an individual with a history of traumatising experiences is at a far greater risk because of early sensitisation to threat cues (Oei et al, 1990).

Finally, this model does not address additional variables which appear to be significant in the development of PTSD.
4.4. The Cognitive model

4.4.1. Victimisation - Rebuilding Shattered Assumptions

"Whether we like it or not, each of us, because he has a human brain, forms a theory of reality that brings order into what otherwise would be a chaotic world of experience." (Epstein, 1980, p.34).

Each day of our lives, we as humans, function on the basis of assumptions and personal theories which enable us to plan activities, formulate goals and order our behaviour.

Parkes (1971, 1975) proposes that a person's views of reality constitute their "assumptive world", i.e. "a strongly held set of assumptions about the world and the self which is confidently maintained and used as a means of recognising, planning and acting.... Assumptions such as these are learned and confused by the experience of many years" (Parkes, 1975, p. 132).

Fundamentally, our basic assumptions are implicit rather than explicit, and generally are relatively inaccessible to introspection. (Parkes, 1971)

Thus traumatic events including victimisation's e.g. criminal acts, disasters and accidents give rise to intense stress and anxiety as the victimisation experience can't be assimilated. An individual's world, based on assumptions over the years is unable to account for such events, hence all assumptions and theories of reality are shattered, resulting in tremendous psychological upheaval. The stress syndrome as described by PTSD is in a large way attributed to the victim's assumptions about themselves and their world being shattered. It is dependent upon the individual involved, as to the number and extent of basic assumptions which are destroyed. However, there appear to be 3 types of assumptions, in common to most individuals, that are specifically affected.

1. The belief in personal invulnerability.
2. The perception of the world as meaningful and comprehensible.
3. The view of ourselves in a positive light.

Bard and Sangrey (1979) state that people who are victimised experience a "loss of equilibrium. The world is suddenly out of whack. Things no longer work the way they used to." (p 14)

The assumption of invulnerability
In our daily experience we appreciate that criminal activity is common, that car accidents do occur and that cancer affects a large proportion of the population; however, we simultaneously believe that "it can't happen to me." We thus exist on the basis of an "illusion of invulnerability." (Perloff, 1983) We see ourselves as being less likely than others to be victims of crime, disease and accidents (Perloff, 1983).

When an individual is victimised, the assumption of invulnerability is destroyed, and the victim is now unable to adhere to the belief that "it can't happen to me." Wolfenstein (1957) states that a victim experiences helplessness, vulnerability and intense anxiety which accompany his/her lost sense of safety and security, in a world which was once benign but is now perceived as malevolent. This malevolence is now extremely vivid and undeniable as it has struck home (Figley, 1985).

The world as meaningful
Our assumption of invulnerability is, in part, based on the belief that in our world, events are comprehensible and orderly (Antonovsky, 1979). As Scheppele and Bart (1983) propose, we believe that misfortune can be prevented if we are good, worthy individuals. We believe that people deserve what they get and get what they deserve, as put forward by Lerners just-world theory (1970, 1980).

Thus our world appears meaningful and controllable and we perceive it as optimally benign. However, when an individual is victimised, the world is no longer meaningful. The victimisation does not make sense and does not fit within the perceived social laws one has had of the world.
Positive self-perceptions
Individuals generally operate under the assumption that they are decent, worthy people i.e. they maintain a relatively high level of self-esteem. When victimisation occurs, questioning of these self-perceptions occurs. Negative self images are activated in the victim and he/she perceives his/herself as being frightened, weak, helpless and needy. (Krupnick, 1980). In addition, the victim tends to experience a sense of deviance. This self-perception of deviance has the affect of re-inforcing negative images of being unworthy and weak (Coates & Winston, 1983).

4.5. Cognitive Information-Processing Models

4.5.1. Horowitz's cognitive-information processing model

Horowitz (1986) describes a psychodynamic model of PTSD with strong cognitive information processing components. Here PTSD is viewed as a consequence of an individuals inability to integrate a traumatic event into his/her cognitive scheme successfully. The psychological elements of a traumatic event will remain in an individuals active memory phase until the traumatic event is successfully integrated into existing schemata. Vivid representations of the traumatic event will be produced by the individual on all levels of functioning which periodically emerge as intrusive, emotionally upsetting and uncontrolled images of the event (Green, Wilson & Lindy, in Figley 1985). Due to numbing symptoms being viewed as a defence against intrusion, the individual will alternate between avoidance and intrusion stages i.e. Denial has the effect of hampering cognitive processing and will reduce accompanying anxiety. It is when denial defences become ineffectual that intrusion occurs.

A cognitive model of information processing has been proposed by Horowitz (1976, 1979) in order to explain PTSD. 'Completion tendency' is assumed by Horowitz in which "The mind continues to process important new information until the situation or the [cognitive ]
models change, and reality and models reach accord" (Horowitz, 1979 p.249).

Horowitz states that victims of traumatic events progress through a number of stages, when assimilation of the trauma occurs: outcry, avoidance, intrusive imagery, re-experiencing of the event, transition stages of avoidance and intrusion, depends upon the victims personality as well as the severity of the traumatic event. Consequently, a model of PTSD as it affects the survivors of stressor events as was developed by Horowitz (1979).

Criticism of Horowitz's model

Jones and Barlow (1990) state that Horowitz's model is not successful in developing the issue of differential development of PTSD in individuals who are exposed to the same stressor. Although Horowitz's model is successful in accommodating the symptoms of PTSD, it fails to incorporate perceptions of control and coping. It is however capable of explaining the development, maintenance and delayed development of symptoms, and has the benefit of some empirical support.

Lang's concept of fear structures

Information processing models have been developed by Foa, Steketee, & Olosov-Rothbaum (1989) and Chemtob, Roitblat, Hamanda, Carlson & Twentyman (1988). These models have been formulated based on Lang's (1977 a, 1979) analysis of fear structures.

4.5.2. Foa, Steketee and Olasov Rothbaum (1989) cognitive information-processing model

Lang (1979) hypothesised that the cognitive network of fear structures is composed of 3 primary elements namely;
1. Information about the stimulus situation.
2. Information about physiological, cognitive and behavioural responses to the stimulus.
3. The meaning of the connection between the stimulus and the response e.g. "Everything in life is unfair and unpredictable; I'm going
to go crazy and lose control if I allow myself to think about what happened to me."

It has been postulated by Foa et al (1980) that a fear structure differs from other memory structures because it contains information about threat. Because of firstly the significance of the trauma and secondly the fact that the trauma has violated the individuals safety assumptions, Foa et al, posit that the fear structure associated with the trauma differs from those involved in other anxiety disorders. Hence, situations previously considered safe, now become cues for danger.

Due to the nature and extreme intensity of the trauma, fear structures associated with the trauma become more intense and larger; thus are more easily activated than that of other fear structures. As a result, many stimuli may activate the individuals fear structure and its behavioural, cognitive, physiological and affective concomitants. The variables of 'predictability' and 'controllability' play a vital role in the development and maintenance of the fear structure. As Foa et al (1989) state, "the boundaries between safety and danger become blurred" (p 167), and thus the world then becomes, for the individual, less predictable and controllable, such that they live in a chronic state of fear.

Limitations

The mechanisms through which these variables help activate an individuals fear network, are not explained. The model also fails to explain how symptoms like emotional numbing or delayed reactivity come about. This model also does not explain the presence of PTSD in some victims of trauma and not in others. It is however postulated that perceived threat and previous trauma experience with control are important variables to PTSD development, but, this model does not explain their precise etiological role (Jones & Barlow 1990).

Despite these limitations, this model does recognise the importance of predictability and does further our understanding of PTSD (Jones & Barlow 1990).
4.5.3. Chemtob, Roitblat, Hamada, Carlson and Twentyman (1988) cognitive information-processing model

Chemtob et al. (1988) use a hierarchical network in order to describe the development and maintenance of PTSD. They propose that fear structures or schematic networks are comprised of hierarchically organised and interconnected nodes which represent all elements required for a specific act e.g. fight or flight. This model postulates that individuals with PTSD function and respond to their environment and perceived threat in 'survival mode' which was adaptive during the trauma. This pattern is considered by Chemtob et al. (1988) to represent the activation of the fear memory structure. For an individual, with PTSD, threat related arousal is always activated to some extent. This increases the likelihood that individuals will search for and identify information which is threatening. The remaining elements of the fear networks are organised in a feedback loop, in a manner that threat related arousal potentiates threat-seeking behaviour. This results in a narrowing of attention focus and a greater possibility that ambiguous information is interpreted as life-threatening. Once such a threat is perceived, threat related arousal further increases causing another cycle through the feedback loop.

James & Barlow (1990) state that activation of this network is also believed to inhibit the activation of alternative more adaptive networks.

Limitations

Chemtob et al. (1988) do not discuss why some individuals will function in this 'survival mode' whilst others exposed to similar trauma do not.

However, despite this limitation, Chemtob et al. (1988) developed a model of information processing which has both theoretical and empirical support, and which attempts to explain the re-experiencing phenomenon most pertinent in PTSD.
4.6. Conditioning Model

Mowrer's (1947) two factor theory has been utilised by researchers (Kilpatrick, Veronen & Best, 1985; Keane, Zimering & Caddell, 1985) involved in studying PTSD in order to conceptualise the etiology and symptoms of this disorder. This theory postulates that instrumental and classical conditioning both contribute to avoidance conditioning.

The classical condition of a fear response is the first stage in this model; here a previously neutral stimulus is paired with an unconditioned stimulus (UCS) which results in a fear response (UCR). The neutral stimulus, thus becomes a conditioned stimulus (CS) for fear responses (CR).

Through this process of higher order conditioning and stimulus generalisation, the conditioned fear response maybe attributed to additional neutral stimuli which are paired with the conditioned response or generalised to stimuli similar to the conditioned stimulus.

Due to the higher order conditioning and stimulus generalisation - the number of cues which are able to elicit the aversive memory and its physiological counterpart may increase dramatically.

In the second stage, which is comprised of the development of learned responses i.e. avoidance or escape responses, which decrease or terminate the discomfort arising from the presence of the conditioned stimuli. When escape or avoidance of the conditioned stimulus has been learned, the avoidance behaviour is negatively reinforced by a reduction in the fear response.

In conceptualising the etiological mechanisms in PTSD, Keane, Zimering & Caddell (1985) and Kilpatrick, Veronen and Resik (1982) utilised this two factor learning theory.

Keane et al (1985) proposes that this learning theory accounted for the conditioned startle responses, avoidance behaviour and stimulus generalisation found in combat veterans with PTSD.
The two factor theory was also utilised by Kilpatrick et al (1982) in order to account for the fear and anxiety experienced by individuals who were victims of sexual assault. Exposure to the life-threatening event of rape evokes intense fear, which is then elicited by exposure to a number of similar stimuli or by other stimuli associated with the traumatic event of sexual assault.

Avoidance behaviours are learned because they have the effect of reducing or terminating the presence of the aversive conditioned stimuli. Thus the principles of instrumental learning help explain the avoidance learned by many individuals with PTSD.

4.7. Proposed PTSD Etiological Hypothesis

Instead of theorising along, behavioural, psychological or cognitive lines, Foy et al (1992) have put forward a more basic approach in order to advance empirical studies with victims of trauma. Foy et al (1992) term this approach a 'life events model', which focuses on the predictable relationship between an adverse life event and its ensuing psychological distress.

Foy et al (1992) propose that for acute PTSD symptoms to occur, there needs to be overwhelming trauma together with an immediate stress reaction (conditioned emotional response). According to Foy et al (1992) trauma may arise from 3 routes;
1. Direct personal experience.
2. Observational experience e.g. witnessing the death or near-death of another individual.
3. "Vicarious" experience e.g. learning about the death of a loved one. (Saigh 1989)

Whether symptoms are present in an episodic manner or persist for one month or more, is a complex issue, which involves a distinction between variables involved in onset vs maintenance of PTSD symptoms. Where there are chronic PTSD symptoms occurring, additional mediating variables, probably interact as "risk" or resiliency factors with the primary etiological factor, trauma.
Three primary possibilities are proposed to explain the manner in which these additional variables interact with the etiological event:

1. The additional factor could present the individual with vulnerability through experiencing distress beyond the actual potential of the trauma by itself.

2. A second type of interactive relationship involves an additional mediating variable which is independently capable of eliciting distress.

3. Thirdly, a possible interaction between an additional variable and the traumatic event is potentiation. A potentiating variable interacts with the traumatic event in order to increase the PTSD reaction beyond the simple additive effect of the two variables (Cooke, 1985).

![Diagram](image)

Figure 1. Proposed PTSD etiological hypothesis by Foy, Osato, Housekamp and Neumann, in press, in Saigh (Ed.), Posttraumatic Stress Disorder: Behavioral Assessment and Treatment, Elmsford, NY: Maxwell Press.
4.8. Jones and Barlow (1992) proposed etiology and maintenance of PTSD.

The figure below (FIGURE 2) represents Jones & Barlow's 1992 hypothesised model of the development of PTSD (in Saigh 1992). Jones and Barlow also propose that variables which are involved in the etiology and maintenance of anxiety disorders and anxious apprehension are also implicated in PTSD.

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**Figure 2:** A model of the etiology of PTSD. From Anxiety and its disorders: The nature and treatment of anxiety and panic, by D.H. Barlow, 1988, New York: Guilford Press.
Biological vulnerability

Family and twin studies: Biological vulnerability is not a new notion in this field of research. By utilising methodologies including family histories, family studies and twin studies, research has demonstrated familial aggregation in the anxiety disorders.

Psychophysiological studies: Jones & Barlow (1988) propose that a genetic component maybe a predisposition to a diffuse stress responsivity reflected as chronic autonomic overarousal or noradrenergic liability. This hypothesis has been supported by research e.g. Panickers regularly exhibit higher resting heart rate compared to matched controls (Ehlers, Margraf, & Roth 1987; Gorman, Fyer et al, 1988; and Rapee & Barlow 1990). This finding has also been extended to include subjects with combat related PTSD too (Blanchard, Kolb, Pallmeyer & Gerardi, 1982; Blanchard, Kolb, Gerardi, Ryan & Pallmeyer, 1988; Malloy, Fairbank & Keane, 1983).

Thus results of family history and twin studies suggest that the propensity to ‘baseline’ hyperactivity may be in part, a genetically transmitted response tendency. This, is supported by the relatively consistent finding that combat veterans without PTSD have a lower basal heart rate (Barlow, 1988).

Psychological vulnerability: Psychological vulnerabilities, like biological predispositions are thought to mediate the development and maintenance of anxiety disorders. Research involving both animals and humans, although still at a relatively early stage, is beginning to show that variables (including prior experience with a sense of control over life events and social support) embraced under this rubric play a role in the etiology and maintenance of anxiety disorders. (Barlow 1988)

Negative life events:
Negative life events are frequent precursors to the onset of anxiety disorder. e.g. Barlow (1988) states that recent estimates suggest that approximately 80% or more of patients with panic disorder can clearly
recall such an event, although this event may not be related to an initial panic attack. Jones & Barlow (1990) propose that people who are vulnerable to the stress of negative life events may, on occasion, react to such event in a similar way that one reacts to physical threats. A positive correlation between PTSD symptoms and current levels of life stress was evidenced by Green & Berlin (1987). McFarlane (1988) in a study comprising victims of bush fires, found that individuals with chronic PTSD had more adverse life events both before and after the fire.

Nature of the stressor:
Events which are perceived as unpredictable or uncontrollable are more aversive and more likely elicit a "true alarm." (Barlow, 1988).

The serenity and extent of combat exposure has been witnessed to be a powerful antecedent of PTSD symptoms in war veterans e.g. Foy et al 1984). The importance of stressor severity and subjective appraisal of life threat has been supported in a number of studies with victims of other traumatic experiences e.g. natural disasters, rape, (Becker et al 1984; Kilpatrick et al 1985).

Alarms; true, false and learned:
A distinction needs to be noted between the type of alarm that has been activated. True alarms are regarded as a fear response which occurs when individual is confronted with a life-threatening event. False alarms, on the other hand, occur in the absence of such an event. Learned alarms are seen as conditioned fear response to either interceptive (as in panic disorder) or external (simple phobia) cues.

PTSD may reflect, in part, the conditioning that takes place when a true alarm is activated under life-threatening conditions. This type of response is adaptive e.g. in combat or rape, and is a protective mechanism, often necessary for the survival of the individual.

It is likely, in patients with PTSD in response to single or repeated true alarms, that fear has become associated with both internal and external cues, which are associated with the initial event (Kolb, 1987).
Thus, stimuli reminiscent of the individual’s traumatic experience, will continue to activate the alarm reaction in the absence of any real danger, and is manifested in panic attacks, flashbacks and other PTSD symptomatology.

Anxious apprehension and re-experiencing:
An important and crucial step to pathology would be the development of anxious apprehension about learned alarms. It is only this process, with its strong cognitive components that can account for the downward spiral of symptomatology associated with PTSD. This downward spiral may be comprised of the unremitting re-experiencing of learned alarms and associated traumatic memories, affective instability associated with alternate numbing and exacerbation of negative emotions, as well as the occasional delayed emotional experience of PTSD symptomatology.

True alarms, and subsequent learned alarms will be experienced by the individual, as unpredictable, uncontrollable, aversive events. The individual will react to these events with chronic overarousal and additional cognitive symptoms of hypervigilance to trauma-related cues, a hypervigilance commonly observed in PTSD, accompanied by attention narrowing. Chronic overarousal, would comprise a negative-arousal feedback loop, similar to that postulated by Chemtob, Roitblat, Hamada, Carlson, and Twentyman (1988) and Foa, Steketee, and Olasov Rothbaum (1989). As the original alarm comprised many strong arousal-based components, the existing chronic overarousal combined with a hypervigilance to arousal that might signal the beginning of a future alarm would ensure a succession of learned alarms and associated traumatic memories.

A steady stream of intensive thoughts and images may arise due to the chronic overarousal characteristic of anxiety disorders and particularly PTSD. Hence, individuals will tend to avoid stimuli which are emotionally relevant. Jones & Barlow (1992) state that, individuals with PTSD, will also experience observed emotional blunting in order to avoid the triggering of learned alarms.

Without the development of anxiety, individuals experiencing severe trauma may, on occasion, experience a non-clinical learned alarm or
flashback to the trauma when encountering triggering stimuli without the overlapping negative affective burden associated with the development and maintenance of PTSD.

4.9. Psychosocial Model

Green, Wilson & Lindy (1985) developed a working model in order to guide clinical work and research.

The primary sequence in this model is the occurrence of an event which is catastrophic for all individuals, the cognitive (conscious and unconscious) processing of that catastrophic event; and a final (positive or negative) adaptation in terms of functioning. The processing of the event (its appraisal, alternations between intrusion and avoidance, and whether it reaches a point of psychic overload) takes place within an individual and a social context. Thus, whether a person is able to assimilate the trauma gradually and restabilize is dependent on what individual characteristics he/she brings to bear when perceiving, understanding and dealing with the event. It is also dependent on the social environment in which the event and the working through occur.

The model proposed by Green et al (1985) is one which describes processing of an event at an individual level. Thus, it focuses on the person’s particular experience of an event and how that ultimately influences a final adaptation. This notion implies that different people who are present at the same event will have different outcomes because, not only will their experiences differ, but the individual characteristics they bring to bear upon the psychological processing are different, and this processing may take place in differing recovery environments.
5. THE TREATMENT OF POST-TRAUMATIC STRESS DISORDER

5.1. Introduction

The assessment and treatment of PTSD comprises a challenging set of factors, including the need for special professional and personal qualities on the part of the clinician. These include the willingness and sensitivity to probe quite directly into various aspects of trauma experiences, the ability to honestly face one’s own reactions and those of the survivor to such probes, and the sensitivity to navigate the murky boundaries between uncovering that which the survivor has been trying, oftentimes so desperately to avoid contact with and the full integration of the trauma experience into one's current experience.

A number of varying treatments i.e. crisis intervention, psychoanalytic, behavioural, experiential, psychopharmacological, and treatment modalities i.e. individual, family, group, have been proposed, since PTSD was first identified. Recently, a shift has occurred in the interest of cognitive-behavioural treatments.

Research conducted with adults has suggested the use of specific strategies in treating specific problems. However, research on child therapy and child psychology is rather deficient. A report conducted by a President's Commission on Mental Health (1978) stated that 10 - 20% of children may require mental health services and hence called for additional research on child treatment strategies. It has also been suggested that 15 - 22% of children have mental health problems that require treatment, (Costello, 1990; Tuma, 1989; Zill & Schoenborn, 1990). However, less than 20% of these children receive the much desired treatment (Tuma, 1989).
5.2. **Behavioural treatments**

Much efficacy has been achieved in treating specific fears or phobias with adults, however, little research literature exists on the use of these treatments with children. Kendall (1992) states that emotive imagery, desensitisation, modelling, contingency management, shaping, self-control training and in vivo exposure, are important effective components of an integrated treatment plan.

5.2.1. **How can established fear structures be demolished?**

Foa & Kozak (1986), in an attempt to develop the construct of emotional processing, integrated concepts of fear, experimental data and clinical investigations, adopted Lang's bioinformational theory (1977, 1979) and perceived fear as a cognitive structure comprising 3 classes of elements:

1. Stimuli
2. Response
3. The meaning associated with the stimuli and response.

It was proposed by Foa & Kozak (1986) that two conditions are required for the reduction of fear to be achieved.

1. The individuals fear memory must be activated.
2. New information must be provided that includes elements that are "incompatible with some of those that exist in the fear structure, so that a new memory can be formed. This information, which is at once cognitive, has to be integrated into the evoked information structure for an emotional change to occur." (Foa & Kozak, 1986, p.22).

Lang (1977) stated that, a fear memory is accessed when an individual is presented with fear information that matches some of the information structure in memory. In order for the entire fear memory to be achieved, the information units must be matched. Large fear structures such as those associated with PTSD are easily matched and consequently easily activated.
A large structure, although easier to activate, maybe difficult to access.

1. The more elements contained in the structure, the more difficult it is to match them.

2. Avoidance may be promoted due to the strong response elements in the PTSD structure, and thereby may cause short, inadequate activation of the structure.

Fear is more effectively reduced through long exposures, and this tendency to escape prevents modification of the fear structure. The majority of PTSD sufferers, despite the tendency to escape or avoid, may access their fear structure, long enough in order to permit the integration of corrective information. This would manifest in modification of the fear structure and reduction of PTSD symptomatology.

It has been postulated by Foa & Kozak (1986) that the process of short term habituation by itself constitutes information that alters an individuals fear structure. When physiological responses decrease during confrontation with feared situations, interceptive information about the absence of arousal is generated. This information is inconsistent with the response information contained in the fear structure and hence, results in a weakening of the pre-existing links between stimulus and response elements. The resultant less cohesive structure is less readily evoked by information that matches only some elements in the structure, and, therefore, fear responses are likely to be elicited.

Stimuli previously believed to be "safe" begin to signal danger and thus the fear structure increases. Intensity of response elements of the fear structure may also differentiate between acute and chronic sufferers.

A situation may be perceived to be dangerous, for an individual with PTSD because of the lack of safety signals, resulting in the individual being constantly on the alert.

Exposure based procedures and anxiety management techniques (AMT) are commonly utilised in the treatment of anxiety disorders.
5.2.2. Exposure techniques

Exposure treatment, is a set of techniques with a common denominator, comprising the confrontation of feared situations.

Exposure techniques maybe classified according to:
1. The medium of exposure i.e. imaginal vs in vivo.
2. The length of exposure i.e. short vs long
3. The level of arousal during exposure i.e. high vs low

Wolpe (1958) states that systematic desensitisation occupies one extreme position where exposure is brief, imaginal and minimally arousing. Occupying the extreme opposite position, is in vivo flooding (Marks, 1972) where exposure to life events is prolonged and designed to elicit high levels of anxiety.

5.2.2.1. Systematic Desensitisation
Systematic desensitisation consists of an imaginal exposure to a feared situation or object. It was the first contemporary exposure technique for reducing arousal to phobic stimuli. In systematic desensitisation, the therapist will describe a short scene which concentrates on the individuals feared stimulus e.g. “You are five feet away from the snake.” The patient is instructed to imagine the scenario as vividly as possible for a short period of time. Although some fear is said to be necessary, attempts are made to minimise fear during imagery, usually through relaxation. Scenarios are presented hierarchically, with the least fearful one first. The presentation of the scene will be discontinued if the patient reports anxiety, relaxation will be re-introduced and the scene is presented again. Each scene is repeated until it fails to elicit anxiety. In vivo and imaginal graded exposure without relaxation are variants of systematic desensitisation.

5.2.2.2. Implosive Therapy (flooding)
The implosive therapy technique utilised is an adaptation of the technique developed by Stampfl and Levis (1967). The memory of the
traumatised individual is ultimately the target of the implosive therapy technique.

In implosive therapy, an individual's traumatic event is repeatedly presented imaginably, until the scene no longer evokes high levels of anxiety. i.e. extinction through exposure. Hence implosive therapy aims to eliminate avoidance of the memory, and through exposure, reduce anxiety to the traumatic event.

Implosive therapy aims to decrease the individual's anxiety response to memories of the traumatic event rather than to change the nature of the trauma. With successful treatment, avoidance of the memories and associated levels of anxiety are markedly reduced.

Relaxation training followed by repeated presentation of the scenes are the two principle phases of treatment.

1. Relaxation Training
Relaxation training has two aims:
   a) To enable the patient to be able to imagine a scene
   b) To decrease the patients residual anxiety, when traumatic scenes are presented.

Training the patient in progressive muscle relaxation techniques may involve four sessions. An adaptation of Bernstein and Borkovec's (1973) progressive muscle relaxation training is utilised in the following manner:
   i) The patient learns 16 muscle group relaxation using a tension-relaxation sequence for each muscle group.
   ii) Muscular tension is dropped from the sequence and the patient is trained in relaxation alone of the 16 muscle groups.
   iii) Cue controlled training is taught to the patient, in which he/she is instructed to repeat cue words e.g. "loose", "heavy", "warm", as the patient relaxes his/her muscles. These cue words gradually become associated with relaxation and may be utilised to accelerate the response within the therapy session and in situations that warrant the use of an adaptive coping response. During this period, the patient is encouraged to practice relaxation at home with an audiotaped instruction to facilitate learning of the response.
2. Pleasant Imagery Training
The patient is instructed in pleasant imagery, based on the work of Lang (1977), at the end of the fourth session. The client is asked to picture a scene which evokes pleasant thoughts and associations e.g. lying on a beach on a tropical island, while the therapist presents details of the setting to be visualised. The client is instructed to attend to both the stimulus (external cues) and response elements (internal cues) of the imagined scene.

Pleasant imagery aims to enhance and increase the patients state of relaxation and also to determine the ability of the patient to imagine a non-aversive scene with the guidance of the therapist. Therapy may continue if the patient is able to form clear visual images and can also imagine other sensory cues e.g. sound, smell, touch.

3. Prior to the initiation of implosive therapy, the patient is asked to list, in ascending order, his/her traumatic memories according to their anxiety-inducing properties. A subjective rating is assigned by the patient to each of the events that are to be treated using a 0 - 10 self-report anxiety scale (where 0= not at all anxious, and 10= most anxious. The least anxiety provoking event or scene is presented first, to maximise the likelihood that the client will imagine the cues of the scene, despite their apparent aversiveness.

There are four basic components to conducting implosive therapy:

a) setting the scene 
b) presentation of symptom-contingent traumatic cues 
c) the use of additional cue-categories  
d) session parameters

Each of these components will be considered below:

a) Setting the scene
In order to minimise thoughts completely and enhance imagery, the patient is asked to practice relaxation exercises at the beginning of each implosive therapy session. The therapist then commences to develop the scene in which the traumatic event occurred, by means of visual, auditory, tactile and olfactory imaginal cues being presented. The therapist relies heavily on the feedback of the patient for accurately, detailed scene descriptions. Both stimulus e.g. “What did
you see, hear, smell?” and response e.g. “What are you feeling?”
cues are critical when introducing the scene.

b) Presentation of symptom-contingent traumatic cues
Once the setting of the traumatic event is established, and the patient
is able to visualise the scene, the therapist will supportively guide the
patient through imagination of the traumatic event e.g. the therapist
might ask, “then what did you do?” Thus, the patient is gradually
presented with cues of the specific event, emphasising and prolonging
in imagination the elements of the memory that are most anxiety-
provoking. Every patient will have specific details from the trauma that
are idiosyncratically important and anxiety provoking. These details
will be identified within a session and will be emphasised and
presented a number of times during the session. Critical details may
also be identified during the course of scene presentation through
non-verbal indicators of anxiety (e.g. when the patient moans, fidgets
etc.) that are observed during specific cue presentation.

c) The use of additional cue categories
In addition to symptom-contingent cues, Levis (1980), outlines two
additional stimulus cue categories that are included in implosive
therapy treatment: reportable, internally elicited cues and unreportable
cues hypothesised to reportable, internally elicited cues (hypothesised
cues). The patients aversive thoughts, feelings or images which are
associated with the traumatic event fall into the category of reportable,
internally elicited cues. These cues represent the patient’s cognitive
reaction to the event and feelings such as guilt, anger and grief may
be included.

Hypothesised cues, according to Levis and Hare (1977) remain active
in the patient’s current life following higher order conditioning to the
original traumatic event. In order for extinction to occur, hypothetical
cues could be incorporated in additional flooding scenes.

d) Session parameters
Termination of scene presentation is based upon the therapist’s
evaluation of anxiety reduction to that scene. Throughout each
flooding session the therapist can monitor patient anxiety levels by
requesting subjective ratings on the 0 - 10 anxiety scale. Typically, the
patients anxiety will be at a moderate level (5-6) at the outset of the session, increase to maximum levels (9-10) during traumatic and hypothetical cue presentation, and then decrease from the maximum level following repeated or prolonged presentation of the scene.

In order to close each session in a positive manner, the therapist guides the patient through deep muscle relaxation. A discussion of the event, the individual's response to the scene, the possible triggering of related features of the memory and the provision of considerable support by the therapist to the patient, then follows.

Thus implosive therapy with PTSD aims to reduce the patient's anxiety to a traumatic event, related stimuli and disturbing cognitions via an extinction procedure to achieve symptom reduction and improved psychological functioning.

5.3. Extinction of cues relating to the trauma

Mineka (1979) states that an abundance of scientific literature exists which supports the notion that prolonged exposure to conditioned stimuli (CS) in the absence of the unconditioned stimuli (UCS) results in a decrement in anxiety.

An increase in anxiety will result when an organism is unable to avoid exposure to the CS. However, if prolonged or repeated presentations of the CS occur, anxiety in the organism will decrease, which is the ultimate goal of a behaviour therapy approach in the treatment of PTSD. The therapeutic techniques of implosive therapy and systematic desensitisation have as their basic tenet extinction of anxiety through exposure to the CS (Rimm and Masters, 1979). Implosive therapy and systematic desensitisation have been utilised with a number of stress disorders, and they function through similar mechanisms (extinction) and are well-accepted therapeutic approaches to anxiety reduction. (Kazdin & Wilcoxin, 1976; Levis & Hare, 1977).

5.3.1. Why doesn't extinction occur over time?

Figley (1978) and Horowitz (1976), state that despite frequent reliving of the traumatic event, extinction may not occur. They propose that
when exposure occurs to all elements (CS's) of the memory, so that those components of the memory that are extinguished are not reconditioned by the unexposed components of the traumatic memory. Exposure to the entire memory of the trauma would promote extinction and foster adaptive recovery from the trauma. Hence, Figley (1978) and Horowitz (1976) postulate a number of reasons why exposure does not always occur naturally:

a) A victim of a traumatic event will endeavour to review the event for specific cues and details that will promote memory, adaptation (coping) and learning. This process would be considered normal for any significant event experienced by an individual, however when the event is traumatic e.g. the individual's life is threatened, this process of memory review incorporates a recollection of stimulus cues, many of which have taken on a negative quality through conditioning. Because the memories are so anxiety provoking and aversive, motivation to enhance consolidation of the memory is compromised by the aversion associated with the memory. Hence, the individual will attempt to completely avoid recollection.

b) A number of alternative factors will limit the survivor's exposure to the entire memory. Trauma, experienced as a result of combat, will result in the individual's immediate review of the aversive memory being reduced by opportunities for continued expression of anger and hostility, in the form of further combat experiences. In addition, the military environment will serve to further reinforce competing emotions such as aggression and hostility, whilst experiences that allow exposure to the traumatic memory are ignored or punished. Consequently, little exposure to these memories will occur following combat-related trauma.

c) Affective state dependent retention (Bower, 1981) is a process proposed to be another factor in reducing exposure to the elements of traumatic memories. As the traumatic event was accompanied by sustained, extreme levels of psychological and psychophysiological arousal, the memory storage was completely in a physiological state, vastly different from that in which the memory review will occur. Hence, elements necessary to enhance the reduction of anxiety are not accessible to the individual in an unaroused state.
Weingartner et al (1977) state that memories which are stored in one affective state can best be recollected only when that state is stimulated. Thus access to the traumatic memory is limited by the change in state, thus allowing the individual few occasions for exposure. However when the individual’s physiological arousal is induced, the individual’s behaviour can be influenced by the memory of the trauma, as the physiological arousal is much like that which is evident during the traumatic memory.

In summary, little exposure or extinction to the cues of the traumatic memory may occur as a function of:

i) avoidance of aversive memories
ii) negative reinforcement for competing emotions and behaviour
iii) positive reinforcement for competing emotions and behaviour
iv) affective state dependent storage of memories

As a result, a significant life event can have continued psychological and behavioural effects in which the individual does not attribute his/her behaviour to the specific traumatic event.

5.4. Anxiety Management Techniques

Anxiety management techniques (AMT) endeavour to reduce anxiety in an individual by equipping the individual with particular skills in order to control fear. AMT includes:

- Relaxation training e.g. (Jacobson, 1938)
- Stress Inoculation training (Meichenbaum, 1974)
- Cognitive restructuring (Beck, 1972; Ellis, 1977)
- Breathing retraining (Clark et al, 1985)
- Social skills training (Becker et al, 1987)
- Distraction techniques (e.g. thought stopping, Wolpe, 1973)

The technique most used is that of deep muscle relaxation training, as described by Wolpe (1985).

Stress management package

Unlike implosive therapy, which focuses on the trauma, stress management techniques are applied according to the current symptomatology of the individual. Thus the individual will be taught
specific coping skills to enable him/her to cope more effectively with PTSD.

The particular stress management techniques for PTSD are applied by means of an educational format. The patient is informed that therapy does not achieve symptom reduction by removing the everyday stressors from his/her life. Rather the patient is instructed how to more effectively control his/her emotional reactions to stressors and consequently opt for more appropriate responses to situations which are stress provoking.

Specific symptoms of PTSD will vary according to each individual and thus the primary task of the therapist and patient is to identify the symptoms to be treated. The patient is instructed to rank order the symptoms according to the amount of dysfunction the symptoms cause in his/her life. Techniques that apply to those symptoms ranked highest are then presented. Additional symptoms are covered gradually throughout the course of treatment. Homework assignments enable the patients to practice techniques presented in the therapy sessions and monitor symptom changes.

1. Relaxation training
Relaxation training is viewed as a more central component of the stress management package e.g. relaxation training is conducted regularly throughout treatment with emphasis on the reduction of muscle groups relaxed during a given session. Homework assignments are utilised to facilitate patient practice of the relaxation technique. The patient is given an audiotaped relaxation script for this purpose and many eventually be able to relax him/herself without use of the tape.

With regard to the following symptoms of PTSD, relaxation has specific applicability;
a) Sleep disturbances / nightmares:
Figley and Southerly (1977) state that in order to aid sleep onset at the beginning of the evening and following awakenings, the patient is encouraged to utilise relaxation.
b) Intrusive thoughts:
Zimering, Caddell, Fairbank and Keane, (1984) postulate that an individual may experience extreme anxiety following an intrusive thought, which has the ability to disrupt the patient's functioning in major areas of his/her life. e.g. vocational performance, interpersonal relationships, marital relationships.

c) Increased irritability and anger: McDermott (1981) states that veterans with PTSD often experience difficulty in control of aggression. This he states may be due to chronic levels of high anxiety. Thus to maintain lower levels of anxiety, relaxation is used, hence reducing the probability of an anger episode occurring.

2. Stress Inoculation Training

Stress Inoculation Training is a self-instructional method developed by Meichenbaum (1974) for the purpose of teaching clients to cope with anxiety. It involves discussing the nature of emotion and stress reactions, rehearsing coping self-statements and relaxation skills, and testing these skills under actual stress conditions. The focus is on coping and functioning despite the aversive affect rather than completely mastering the affect.

3. Cognitive Restructuring

Another component of the stress management package utilises cognitive restructuring techniques. Essentially, a Rational Emotive therapy (Ellis, 1962) approach is applied to specific symptoms of PTSD.

The patient is taught the ABC model (Activating event - Beliefs - Consequence) in order to assist in analysing problem situations. Particular emphasis is placed on identifying irrational beliefs and negative self-statements that appear to have originated following the patient's traumatic experiences. The patient is instructed to dispute negative self-statements and irrational beliefs and to replace them with rational, realistic beliefs and positive self-statements. The therapist coaches the patient on recognising unreasonable cognitions and on generating alternative, rational beliefs. Rational beliefs may be rehearsed both in the session and outside the session for those
situations that are particularly troublesome and occur with high frequency.

The following symptoms are particularly amenable to the use of cognitive restructuring; a) increased irritability and anger and b) interpersonal difficulties.

a) Increased irritability and anger: The patient is instructed how to recognize his/her unreasonable expectations about his/her environment and those around him/her. Priority is given to helping the individual recognize those irrational beliefs and how these could lead to anger episodes.

b) Interpersonal difficulties - feelings of detachment and withdrawal from others: (DeFazio, Rustin and Diamond, 1975) Here the patient is encouraged to disclose appropriately to significant others, with the understanding that another's reactions cannot always be predicted. The therapist may choose to use modeling and role-playing to first counterattack irrational cognitions regarding the outcome of the veteran's self-disclosure, and then demonstrate possible alternative methods of self-disclosure.

An example of cognitive restructuring
The therapist will first present the A-B-C paradigm for automatic, irrational thoughts (Beck & Rush, 1979) [where A= antecedent, B= belief, C= consequences.]

The therapist asks the victim to generate a situation unrelated to e.g. the assault in which she became upset e.g. not receiving a raise at work, and then proceeds to fill in the A, B and C. The therapist will complete the A and the C and will ask the victim to generate the B i.e. the beliefs/statements the victim was telling herself that were inducing increased arousal.

Below are the steps for cognitive restructuring

1. Complete A and C
2. Complete B, bringing it down to automatic assumption e.g. "He rejected me. I need to be loved and accepted to feel worthwhile."
3. Reality testing of the assumption under B.
4. If the evidence is insufficient, dismiss it. The patient may dismiss the assumption or obtain more information.
5. If sufficient evidence exists, respond rationally and adaptively e.g. "It would be preferable if he didn’t reject me, but it doesn’t say anything about my worth as a person."

Guided self-dialogue
Here the individual is taught by the therapist to focus on his/her internal dialogue. Dialogue which is irrational, faulty or negative is labelled and replaced or substituted by dialogue which is rational, facilitative or task enhancing.

The therapist then instructs the client to ask and answer a series of questions or to respond covertly to a series of statements.

For each category i.e. confrontation and management, preparation, coping with feelings of being overwhelmed and reinforcement, the client and therapist will generate a series of questions or statements that encourage the client to:

a) assess the actual probability of the negative event
b) manage overwhelming anxiety
c) control self-criticism and self-devaluation
d) engage in the feared behaviour
e) reinforce herself for attempting the behaviour and for following the protocol

Thought Stopping
Here the victim is instructed to deliberately concentrate on the thoughts that have been troubling him/her. After doing so for 35 to 40 seconds, the therapist shouts “STOP”, while hitting the desk or clapping his/her hands. Once this has happened, the therapist asks the victim what happened. Typically with thought stopping, the individual will state that his/her troubling thoughts ceased. This process is repeated several times.

The next step involves having the individual stop her thinking of her troublesome thoughts with silent verbalisations of the word STOP. The individual is instructed to apply this procedure firstly to thoughts that are moderately disturbing and then to thoughts which are more extreme. The victim, if necessary may wear a rubber band around her wrist, snap it, and say "STOP!" when intrusive thoughts occur.
5.5. Group Treatment
A number of different approaches have been developed to treat PTSD (Fairbank & Nicholson, 1987). However, little literature has been published concerning group therapy for individuals with PTSD. The only studies dealing with the treatment of combat-related PTSD through group participation that received wider dissemination dealt with "rap groups" or encounter groups, and their respective results and successes.

5.5.1 Why group therapy?
Within the group framework patients have the opportunity to work on intrapsychic and social problems. Brende (1981) stated that work within a group with other PTSD victims permits patients to break with the pattern of rage, guilt, grief, shame, hiding and a sense of dehumanisation, abandonment and betrayal. Patients have the opportunity to develop an identity within a peer-group, learn socialisation techniques in a protected surrounding with social support, and together the group has a sense of shared purpose and hope.

Group treatment with other victims is considered by a number of clinicians to be the treatment choice for PTSD. Group therapy offers several advantages:
1. Reduction of isolation and provision of a sense of community, comfort and support (network therapy)
2. Reduction of feelings of stigma and restoration of self-pride.
3. Confrontation by peers that seems more acceptable and reality-oriented because it comes from those with similar experiences.
4. The opportunity to process "unfinished business" from the trauma and post trauma experiences in a supportive and understanding environment.
5. Help to express emotions freely.

5.6. The Effectiveness of Cognitive- Behavioural Techniques

Literature on the treatment of PTSD, being a fairly new diagnostic category is sparse (APA, 1980). Few well controlled investigations
exist, and of these sound studies almost all are exclusively limited to behavioural techniques. The majority of treatment literature on PTSD with combat veterans relies on case studies and is of limited generalisability. Few reports exist on the treatment of PTSD resulting from other traumas e.g. accidents or disasters. Thus the literature on treatments for PTSD will be considered in light of the preceding criteria.

5.6.1. Accident victims
PTSD arising as a result of accidents has also been successfully treated with behavioural techniques. McCaffrey and Fairbank (1985) reported on two cases: one after a helicopter crash and the other after a series of automobile accidents. Treatment included relaxation training, imaginal exposure and self-exposure in vivo. Improvement in specific PTSD symptoms e.g. nightmares, was substantial.

A 32 year old woman who was involved in a head-on collision, was treated by Fairbank, De Good and Jenkins (1981), for a persistent post-traumatic motoric startle response (i.e. jerking the steering wheel when a car approached). Treatment consisted of three weekly sessions of relaxation training and daily exposure to highway driving. Results indicated that the woman's self-reported anxiety decreased during the relaxation training phase, and remained at a reduced level during the driving exposure phase, and decreased further at a 6 month follow-up assessment. Self-monitored motoric startle responses fluctuated during the relaxation phase, and totally remitted during the driving exposure phase, and remained in remission at follow-up.

In a study conducted by Muse (1986) involving three motor accident victims, who presented with chronic pain syndromes and PTSD, all of the patients improved greatly. All of the patients received 2 to 4 months of traditional pain clinic treatments, including exercise therapy, biofeedback training, supportive group counselling and medication. At the termination of these pain treatments, the patients received traditional systematic desensitisation. Results indicated a reduction in therapist-observed and patient-reported fear and anxiety, PTSD symptoms, depression and pain and with a continuation of normal, day-to-day activities.
5.6.2. War veterans

The behavioural treatments for PTSD were initially utilised with war veterans. A number of single case studies, demonstrate the effectiveness of a number of techniques in which victims were exposed to material related to the original traumatic event (Fairbank, Gross & Keane, 1983; Fairbank & Keane, 1982; Johnson, Gilmore & Shenoy, 1982; Keane & Kaloupek, 1982; Schindler, 1980). Flooding in imagination (Fairbank & Keane, 1982; Keane et al., 1989) as well as flooding in vivo to trauma related events (Johnson et al., 1982) appeared to be equally therapeutic. The majority of these treatments, included additional techniques such as anger control or relaxation training.

Schindler (1980) utilised systematic desensitisation in treating a recurring nightmare of a 29 year old male Vietnam veteran. This was based upon Cellucci and Lawrence’s, (1978) finding that systematic desensitisation was successful in reducing nightmares. At a two week booster session the patient reported no nightmares and decreased anxiety about sleeping and dreaming. Treatment gains were maintained at a 7 month follow-up.

Penniston (1986) compared the effect of EMG biofeedback-assisted desensitisation with a no-treatment condition, using 16 Vietnam combat veterans with PTSD. Results of this study indicated the superiority of the EMG desensitisation, in reducing nightmares, muscle tension and flashbacks.

In research conducted by Keane et al (1989), 24 PTSD Vietnam veterans were randomly assigned into treatment sessions of relaxation and imaginal flooding or to a waiting list control group. During each session, subjects were initially instructed to relax. The subjects subsequently received 45 minutes of imaginal flooding, followed by relaxation. The treated group reported significantly less depression (BDI & MMPI), state anxiety (STAI- State), fear (FSS), hypochondriasis (MMPI) and hysteria (MMPI) at posttreatment and at follow up. Therapist rated re-experiencing of the trauma, startle-reactions, memory and concentration problems, impulsivity and irritability were all significantly lower than in the control group.
5.6.3. Sexual abuse

The effectiveness of a cognitive behavioural programme, designed for sexually abused children with PTSD, was examined by Deblinger et al. (1990). Results indicated significant improvements at post-treatment on all measures. The child intervention technique of gradual exposure appears to disconnect the classically condition association made between anxiety and abuse-related stimuli, while also disrupting the instrumental connection between the avoidance of innocuous abuse-related stimuli and reduction of anxiety.

Wolff (1977) used systematic desensitisation to treat the fear of a 20 year old female, who had been raped at age 13. From the time of the assault the victim had not been able to spend a night alone. Results indicated that seven sessions of systematic desensitisation resulted in the patients ability to sleep alone at night.

Turner (1979) stated that in a series of nine cases, systematic desensitisation was associated with improvement in measures of fear, anxiety, depression and social adjustment.

Turner’s (1979) findings were corroborated by Frank and Stewart (1983), with a sample of 17 assault victims. The procedure adopted by Frank and Stewart (1983) deviated from the standard use of systematic desensitisation in four respects:
1. Scenes were composed of long narratives, instead of short scenes.
2. Scenes included pleasant descriptions.
3. Therapists moved from one hierarchy to another in a single session.
4. Each scene was presented a fixed number of times by the therapist.

A decrease in the individuals targeted fears, and an increase in their social adjustment was observed after fourteen sessions of systematic desensitisation. The authors noted that 75% of the individuals voluntarily exposed themselves in vivo to situations previously desensitised in imagination.

These results although substantial, are difficult to interpret due to the absence of a control group. Since the criteria for the inclusion in the study allowed the individuals to receive treatment immediately.
following the rape, some of the observed improvement may be attributed to the natural reduction of symptoms over the first several months following the assault.

5.6.4. Rape victims
Blanchard and Abel (1976) described a case report using biofeedback with a rape victim. Systematic biofeedback training enabled the victim to control her tachycardia, in both her natural environment and in the laboratory.

The effects of cognitive therapy targeted at depression and anxiety were studied in 25 rape victims who entered treatment approximately 2 weeks after the assault (Frank and Stewart, 1983). This treatment was modelled on Beck's (1972) procedure.

Frank and Stewart's (1983) treatment comprised three phases:
1. Maladaptive thinking was challenged and novel thinking encouraged.
2. Cognitive distortions were identified and rational, adaptive responses constructed.
3. Basic assumptions about the world were explored.

Although no direct comparison between systematic desensitisation and cognitive therapy was reported by the authors, examination of the mean change scores of the two groups suggested that the treatments produced equivalent outcomes (Turner and Frank, 1981).

Holmes and St. Lawrence (1983), in reviewing treatments for rape victims stated that the "most promising treatment strategies appear to be those which provide victims with specific coping mechanisms and alternative responses to anxiety." (p.430). Two treatment packages aimed at providing such coping strategies for rape victims were developed by Kilpatrick et al (1982).

Kilpatrick et al (1982) developed Stress Inoculation Training (SIT) for victims who remained fearful three months after being raped. The original programme, compared 20 therapy hours and homework assignments and consisted of 2 phases namely an educational phase and a coping skills phase. The programme was described as a
cognitive-behavioural approach to the management of rape-related fear and anxiety that utilises coping skills to reduce the anxiety. Rape-related fear was explained as a classically conditioned phenomenon. Anxiety was described according to Lang's (1968) multichannel systems, which included motoric, cognitive and physiological responses. Anxiety was presented as occurring in stages rather than an all-or-nothing phenomenon.

Phase two of SIT began with deep muscle relaxation training and breathing control, and focused upon the acquisition and application of coping skills. The Jacobson (1938) method of tensing and relaxing muscles was utilised for the deep muscle relaxation. The breathing control exercises emphasised slowed diaphragmatic breathing similar to the exercises taught in yoga or Lamaze, natural childbirth classes. Subjects were then instructed on communication skills through role playing, and covert modelling was also taught. Thought stopping (Wolpe, 1958), was utilised to control for the intrusive effects of obsessive thinking. Guided self-dialogue was considered by Kilpatrick et al (1982) to be the most important. Each individual was instructed to focus on internal dialogue and to identify irrational, faulty or negative self-statements. Following Meichenbaum's (1974) SIT and cognitive restructuring procedure, rational and positive statements were generated and substituted for a negative one. In order to determine how effective this programme was, 15 female rape victims were selected who exhibited elevated fear and avoidance to specific phobic stimuli 3 months post rape (Veronen and Kilpatrick, 1983). A clear treatment effect was exhibited on rape-related fear, anxiety, phobic anxiety, tension and depression. These data, although promising, are limited in terms of interpretation due to a control group not being included.

In a study conducted by Resick et al (1988), which comprised 37 rape victims, compared six, 2 hour sessions of three types of group therapy namely:

a) SIT
b) Assertion training
c) Supportive psychotherapy plus information.

The three treatment groups were compared to a naturally occurring waiting-list control group. The SIT procedure was similar to the
package described by Kilpatrick, Veronen and Resick (1982) with two exceptions:

a) Assertiveness training, role play and cognitive restructuring were excluded
b) Exposure in vivo was included

The specific techniques were adopted from Lang and Jakubowski (1976) and from Rational Emotive Therapy (RET; Ellis, 1977). Results of this study indicated that each of the treatments were highly effective in bringing about a reduction of symptoms. Lower outcome scores were evident on each of the treatment groups as compared to the controls. At a 6 month follow up on rape related fears, improvement was maintained.

In a study conducted by Foa et al (1990), SIT, exposure treatment, supportive counselling and a no-treatment control were compared. All individuals in the study met the criteria for a DSM III R Axis PTSD diagnosis, and were all assaulted at least 3 months prior to the receipt of treatment.

The SIT treatment comprised nine 90 minute sessions bi-weekly. The treatment programme included information gathering, education and treatment planning, brief breathing retraining, deep muscle relaxation, thought stopping, cognitive restructuring modelled after Beck and Ellis, Meichenbaum’s (1974) guided self-dialogue, covert modelling and role play.

Each session commences with a review of the previous sessions activity and an update on the use of coping skills in the victim’s natural environment and review of the victim’s homework assignments. The format for teaching coping skills and detailed instructions for each skill follow below:

1. Defining the coping skill: Define the skill. What channel e.g. cognitive, autonomic, will this coping skill fit? Why is it important to the patient?
2. Rationale and mechanism: The behaviour, reactions or symptoms that will be relieved or aided by the new coping skills, are explained to the patient. Similarities and differences between this skill and other skills are also explained.
3. Demonstration: A skill is demonstrated for the patient and a verbal explanation regarding its actual implementation is given.
4. Application 1: The patient first practices the skill with a problem that is unrelated to the assault.
5. Review: Check to see whether the patient can explain what he/she did and how it worked.
6. Application 2: The patient is instructed to practice with an example from a rape-related study.

It is important to note, because skills are acquired at different rates by different individuals, some flexibility is required in the session-by-session format. Also progress may vary according to the particular individual concerned.
6. LAY COUNSELLING

6.1. Introduction

In days gone by a voluntary worker was usually labelled as a "jolly-hockey-sticks" type of lady who, out of sheer boredom, meddled in the affairs of others. Hopefully this image no longer exists, and a volunteer is no longer perceived as unskilled or as a religious fanatic.

Today, legions of skilled volunteers or lay counsellors throughout the world are serving troubled fellow human beings, and many men and women are ready to enter voluntary counselling services.

6.2. The South African Context

A most perturbing facet of South Africa’s post apartheid communal existence is the high incidence of PTSD among the disadvantaged community. It is noteworthy that the incidence of PTSD amongst urbanised black youths is so high that it can be described as an epidemic. Since therapeutic resources are limited or absent in many environments it is essential to develop a project to cater for the needs of traumatised communities.

The price that South African children have paid and continue to pay as a result of the high levels of public violence is substantial. It is thus imperative that these children receive help at a grass roots level to counteract the effects of PTSD.

The family is often perceived as providing the ideal context within which child development can occur. This perception basically derives from the belief that the family unit is pre-eminently suited to satisfy not only children's most basic psychological needs but also their emotional and cognitive needs. However there is an increasing degree of disintegration of the family unit in South Africa. Frequently the family cannot serve effectively as a support system for children during crises.
This disintegration of black families has severe implications for the development and well being of our children, and indeed for the future of our country as a whole.

6.3. Why the need for lay counsellors in South Africa?

If psychology is to be effective in the new South Africa, psychologists and other trained professionals will need to share their knowledge, skills and resources. Thus in order to assess and treat the effects of PTSD in a cost effective and time effective manner, the training and making use of lay counsellors as opposed to professionals is imperative.

6.4 The recruitment, selection and induction of lay counsellors

A major problem facing any voluntary service is the recruitment of volunteers. Maguire and Corbett (1987) state that many branches of voluntary services tend to take on a distinct character of their own because people naturally tend to be attracted to groups made up of people broadly like themselves and partly also because of the methods normally used to recruit volunteers.

The majority of voluntary services recruit volunteers by word of mouth. Individuals who are approached in person, usually tend to fit in well with existing members, and are more likely to go through the training and selection than those individuals who have responded to newspaper articles or advertisements. It is imperative that people are recruited from different backgrounds to prevent labelling from occurring.

The service needs to be aware that many recent victims, may volunteer their services. Such volunteers should not automatically be excluded or included. Such a volunteer may still be in need of a lifeline of his/her own, hence not be able to offer a lifeline to others.

6.4.1. The selection of lay counsellors

Volunteer services often experience much difficulty in the recruiting of volunteers. Other volunteer services state that volunteers should self-select themselves, in or out of the service. This type of attitude, may discredit the service and cause a secondary victimisation of the client.
The selection of volunteers should occur before and after training and this should be the responsibility of the Management Committee. Candidates must be aware from the outset, that may not be suitable for training.

6.4.2. The induction of lay counsellors
Criteria such as the policy of the service, membership details and the cost of the training course need to be imparted to potential counsellors. It is important that volunteers are made aware of the amount of time they will be expected to give, and the tremendous importance their support will be to people in need.

Effective training for lay counsellors should provide for the following:
1. Recognition of lay counsellors as adults with skills and experiences of their own
2. Effective training designed to help the volunteers do their jobs skilfully
3. Relevant training
4. Consideration of the lay counsellors' time commitment when planning training

6.5. A comparison of empathy in Professionals and Trained Lay Counsellors
A definition of empathy
The term empathy runs the risk of losing its meaning due to being used in a number of different contexts. Empathy originated in aesthetics, and its literal meaning is ‘feeling into.’ (Klein, 1977)

Manickam and Kapur (1985) state that empathy has been defined in different ways by different theorists. It has been defined by Miller and Eisenberg (1988) as being an emotional response, evoked by the affective state or situation of the other individual.

Freud (1920) proposed that in our understanding of what is foreign to our ego, it is empathy that plays the largest part.

Empathy is defined by Traux (Traux and Carkhuff, 1967) as both the therapists sensitivity to current feelings and his/her verbal facility to
communicate the feelings in a language attuned to the clients current feelings.

In a study conducted by Manickam and Kapur (1985), a group of 12 lay counsellors, and 12 professionals were compared according to the empathy of the two groups. Results indicated that the level of empathy of the professionals was higher when compared to the trained lay counsellors. Manickam and Kapur (1985) stated that their finding was in agreement with earlier studies which showed that the kind of training matters with regard to empathy (Traux and Carkhuff, 1976).

However these above findings were rebutted by Manickam (1990). Here it was found that there was no significant difference between the two groups (i.e. professionals and trained lay counsellors). In this study, subjects were selected by purposive sampling, and comprised two groups and a trained lay counsellors group.

The professional group was made up of 9 psychiatrists, 2 clinical psychologists and 1 psychiatric social worker. Their age range was between 25-34 years and their mean age was 27.25. This group was comprised of 7 males and 5 females.

The trained lay counsellors group was matched to the professional group in number and gender. Here the age range was 26-48 years and the mean age was 32.25 years. In this group, eight were involved in a vocation unrelated to counselling and psychotherapy and the remainder were not currently employed. All subjects underwent a 6 month training in counselling organised by the Hindu Seva Pathisthana, Bangalore. At the onset of the study, three had no previous experience, four had one month experience and five had more than three years experience in counselling.

Results of this study indicated that the lay counsellors were found to be as empathic as professionals. This founding is supported by the findings of other research (e.g. Bergin and Jasper, 1969; Berman and Norton, 1985). Carkhuff (1968) had noted that lay persons have the same level of empathy as that of professionals and patients of lay counsellors do as well as or better than the patients of professionals.
However the findings of the above study (Manickam, 1990), goes against the finding of Traux and Carkhuff (1967) who proposed that the kind of training matters with regard to empathy. Manickam (1990) states that although Manickam and Kapur (1985) stated that professionals are more empathic than lay counsellors, their study has several methodological limitations.

6.6, Closing comments
The mental health needs of South Africa are vast, and there is a great need to train paraprofessionals to meet such a need. Literature indicates that lay counsellors can function as effectively as professionals in the helping role (Carkhuff and Traux, 1965; Carkhuff, 1968; Berman and Norton, 1985)

In India lay counsellors (Fuster, 1974; Welsch, 1978; Prasantham, 1975) are trained with the objective of imparting counselling skills. But there has been no attempt to study the effectiveness of these trained lay counsellors.

People need each other to survive. A skilled voluntary worker, a person who cares and knows what he/she is doing, can make a significant change in the quality of the lives of people, especially in South Africa, where the need is so great. This task can be achieved by lay counsellors.
7. CONCLUSION
Bundy (1992) states that research reveals that South Africa currently rates as one of the most violent countries in the world. South Africans are confronted, on virtually a daily basis with the most gruesome acts of public violence. In research conducted on victims of violence, Stavrou (1992) stated that 65-85% of individuals exposed to violent situations, directly or indirectly, suffer from PTSD.

Simpson (1993) states that there is a shortage of skilled mental health workers in South Africa, who are adequately trained to assist the ever mounting number of South African children affected by violence.

Dawes (1992) stresses the need for professionals to train and supervise lay counsellors. Various researchers suggest that involving people from traumatised communities in intervention programmes can greatly enhance the entire community's sense of control over their lives and environment (Dawes, 1992)

Netshiombo (1993) states that over and above training lay health care workers and the public at large, there is also a dire need to provide adequate training for health care professionals to deal with massively traumatised communities.

Gibson (1991) states that the school system has been found to be an important source of social support, which is essential if treatment for PTSD is to succeed. In the school situation, traumatised children are often exposed to peers who share similar experiences. This factor can be of major assistance and benefit in the therapeutic setting (Gibson, 1991)

Thus in light of the above, this study aims to achieve the following:

* It attempts to evaluate the effectiveness and value of trained lay counsellors, from a cognitive behavioural perspective in the treatment of PTSD in children.
The study was conducted based on the recommendations of successful recent research carried out by Cowley, Rosin and Hetz (1994). Cowley et al (1994) recommended that:
1. It is important for future research to investigate how effective their programme would be with lay counsellors leading the groups.
2. Future research should utilise larger sample groups, from a variety of different schools.
3. A follow up study should be done in six months to ensure there has been no relapse of symptoms.

All of the above recommendations have been implemented in this study.
CHAPTER 2: METHODOLOGY

1. INTRODUCTION

"To [most children in this country] there has never been a day without violence, without the police caspers, funerals, stayaways, and more recently the [intra-community] killings and destruction." (NCRC, 1994, p. 47)

At present, it is virtually impossible to compute how many thousands of children were, and continue to be, affected by violence (Bundy, 1992; NCRC, 1994). Violence has the negative effect of stunting the optimal development and psychological well-being of children (Simpson, 1993).

A number of South African studies indicate that symptoms ranging from extreme anger, fear and shock to debilitating helplessness and despondency are exhibited by children who have been traumatised by public violence (Dawes, 1992; Dawes and Tredoux, 1990; Gibson, 1989). In one particular study, Dawes and Tredoux (1990), stated that 9% of the children exhibited conditions ranging from Conduct Disorder to PTSD. This figure is however a conservative one in that many children present with symptoms a number of years after exposure to violence.

Magwaza et al (1993) stated that 84% of the children in their study appeared to be overtly preoccupied with violence. Voller (1990) attained similar findings in a population of township adolescents.

Allwood (1987) found that in a study of Sowetan children, exposure to high levels of violence led to many of them displaying symptoms such as emotional detachment, mental distress, depression, enuresis,
selective amnesia, psychosomatic problems and several developmental disorders. Robertson (1990) reported that a disproportionately large number of black children presented with a variety of debilitating psychological problems, most notably anger, constant anxiety, depression and behaviour disorders.

Stavrou (1990) indicated that 60 - 80% of the children exposed to violent situations, whether directly or indirectly, suffer from symptoms of PTSD.

In light of the above, psychologists practising in South Africa are confronted with enormous difficulties, different from those in other countries. An urgent need exists for mental health practitioners to develop practical models for treating and understanding the debilitating effects of violence. Third World psychologists have come under attack by various social scientists, (Dawes, 1994; Vogelman, 1992) for failing to analyse the underdeveloped milieu and to adapt Western models to this context.

There exists a chronic shortage of trained mental health workers available to the majority of the population in South Africa (Simpson, 1893). Thus this study aims at training volunteers, to apply a Cognitive Behavioural intervention (which is both cost effective and time effective) to children in a group setting.

2. HYPOTHESES

In each case the Null Hypothesis specifies that the variable under consideration does not change due to the interaction.

A psychoeducational cognitive-behavioural intervention will significantly decrease the symptomatology of PTSD* in an experimental group from pre- to posttest means, as compared to a control group.

* measured as depression, anxiety, total PTSD scores, re-experiencing scores, increased arousal, avoidance and numbing scores and significant distress scores.
In this chapter the selection of subjects; the selection and training of lay counsellors; the instruments for the study; the experimental procedure; research design; and statistical analysis will be discussed.

3. SELECTION OF SUBJECTS

This project utilised three different schools in its sample. All of these schools are based in Gauteng. The subjects in these schools resided in different townships in Gauteng and commuted daily to school. These schools were deemed appropriate because:

1. The subjects resided in high risk environments as violent incidents characterise township living.
2. All of the schools were in relatively safe areas providing the children with a secure therapeutic environment.

369 children were tested for Post traumatic stress disorder. The criteria for a positive diagnosis was determined by the stipulations laid down in the DSM IV (1994). Assessments were conducted with the Child’s Post Traumatic Stress Disorder Inventory, (Saigh, 1994) and were administered by psychology Masters students. The inclusion criteria include:

a. A diagnosis of PTSD according to the DSM IV criteria.
b. Adolescent males and females residing in the Gauteng townships.
c. Children who are attending standard 4, 5, 6, 7, 8 & 9 classes.
d. The subjects must be registered at either of the three schools in Johannesburg.
e. The subjects could experience any traumatic event including domestic, criminal, sexual and political which would be considered to be traumatic to anyone.

Based on the above criteria, 70 pupils were given a PTSD positive diagnosis. Of these 70 children, 48 children were randomly assigned into an experimental group and the remaining 22 children were assigned to a control group.
4. INSTRUMENTS

In this study the effect of the independent variable (the psycho-educational cognitive behavioural intervention) was implemented on the subjects. Thereafter a pre and posttest of the dependent variables was implemented. The dependent variables were: depression, anxiety, post traumatic stress disorder symptoms which have been divided into the following categories: a) re-experiencing, b) increased arousal, c) avoidance and numbing and significant distress.

These measures have been psychometrically assessed by the Children's Depression Inventory, the Children's Manifest Anxiety Scale-Revised, and The Children's Post-traumatic Stress Inventory.

4.1 Children's Post Traumatic Stress Disorder Inventory
(Saigh, 1987, 1994)

The Children’s PTSD Inventory (featured in Appendix D) was developed on the basis of the DSM III criteria for formulating an axis 1 PTSD diagnosis, and later the DSM IV. The inventory is administered by means of a structured one on one interview schedule, undertaken by Masters students of Psychology, who had undergone training in order to administer the interview schedule.

The instrument presents 4 subtests that are scored on a dichotomous basis. i.e. 1=presence and 0=absence of symptoms.

1. Subset 1: Assesses traumatization through experiential, vicarious or verbal mediation (e.g. “Have you had a very bad experience?”)
2. Subset 2: Assesses unwanted trauma-related ideation / unwanted anxiety - evoking recollection (e.g. “Do you sometimes feel as if this experience is about to happen again?”)
3. Assesses general affect (e.g. “Have you become less interested in seeing friends or doing things that you used to enjoy?”)
4. Subtest 4: Assesses for diverse/divergent symptoms that were apparent before the trauma (e.g. “Not being able to sleep well”)
Field trials revealed that the instrument correctly classified 84% (Kappa = .78 p<0.1) of the cases that had been previously diagnosed as PTSD positives through nonstructured interviews (Saigh, 1989). Although the results of the study of the validity of this test support the validity of classification, it should be noted that the sample was made up of only Lebanese children and that earlier data suggests that PTSD symptomatology may vary cross culturally (Escobar et al., 1983).

Examined psychometrically, English, French, and Arabic versions of the Children’s PTSD Inventory have been validated as based on the responses of Lebanese children.

Viewed in this context the test-retest reliability of the instrument in terms of kappa coefficients ranges from .77 to .88. The validity of the instruments as based on examiner-criterion agreements ranges from .78 to .81.

4.2 The Children’s Depression Inventory

The children’s depression inventory (featured in Appendix D) is a 27-item self rated symptom oriented scale suitable for school-aged youngsters and adolescents (Kovacs, 1981). Child psychiatric and paediatric medical outpatients samples and a cohort of school children were used to determine its psychometric properties. The inventory’s internal consistency and factorial structure vary in different juvenile cohorts. Nonetheless, it has acceptable test-retest reliability and concurrent validity. The scale discriminated youngsters with the psychiatric diagnosis of major depressive or dysthymic disorder as opposed to subjects with other psychiatric conditions or nonselected "normal" school children. It is sensitive to changes in depression over time and is an acceptable index of severity of the depressive disorder. Based on the scores of subjects with the diagnosis of major depressive disorder, three alternate empirically derived cut-off scores are examined. The criterion scores’ adequacies for screening purposes are evaluated by means of their "true negative" rates. In view of the available psychometric evidence, the inventory is suitable for research. Since it has already been translated into two languages,
it may also be a useful tool for cross-cultural research in childhood depression.

4.2.1 Characteristics of the CDI

The CDI quantifies a wide range of depressive symptoms including disturbances in mood and hedonic capacity, vegetative functions, self-evaluation and interpersonal behaviours. Several items specifically concern the functional consequences of depression in contexts that are relevant to children (e.g. school). The scale is suitable for youngsters aged 8 to 17 years.

The CDI has 27 items each of which consists of three choices. The item choices are keyed from 0-2 in the direction of increasing symptom severity, thereby yielding a potential score range from 0-54. About 50% of the items start with the choice that reflects the greatest symptom severity; for the rest of the items the sequence of choices is reversed.

The child is instructed to select the one sentence for each item that best describes him or her best for the past two weeks. Next to each CDI item choice there is a space on the inventory for the child to mark his or her response.

An example of an item of this test is:

- Nobody really loves me
- I am not sure if anybody loves me
- I am sure that somebody loves me

The CDI may be used in a group situation (Kovacs, 1985).

Available data indicates that the reliability of the CDI is stable. Internal consistency has an alpha coefficient of 0.87 and a test-retest correlation coefficient of 0.82. (P<0.0001 ; n=27 ) (Kovacs, 1985).
4.2.2 The Psychometric Properties of the CDI

Results suggest that the CDI has acceptable internal consistency in clinically referred, psychiatrically distressed youngsters and in a large sample of normal youngsters, but that its internal structure in the paediatric-medical outpatient group is somewhat less consistent than one would hope.

The CDI has acceptable internal consistency and test-retest reliability; characteristics that enhance its utilitarian value. Children who score high on the CDI also tend to have high levels of anxiety and low self-esteem. Since the latter two phenomena are theoretically and clinically related to depression, the data support the inventory's validity. Additional concurrent validity data are reported by Weissman et al., (1980) who found that their subjects' CDI scores significantly correlated with self-ratings on another depression scale and on a social adjustment scale. The construct validity of the CDI is also supported by at least two studies. Vosk et al., (1982) found that unpopular children had significantly higher levels of self-related depression than their popular peers.

Kovacs (1985) showed that the CDI also has face validity when it measures anxiety and self-esteem as these constructs are relevant to depression. The CDI shows a meaningful correlation of $r=0.65$ ($p<0.0001$, $n=55$) and $r=0.59$ ($p<0.0001$; $n=51$).

The inventory differentiates diagnostic categories at a statistically significant level. Children with the psychiatric diagnosis of major depressive or dysthmic disorder score higher than youngsters with other non-depressive psychiatric conditions. The instrument is a useful index of the severity of a major depressive syndrome and it is also sensitive to clinical change. These attributes greatly enhance the CDI's instrumental value for treatment outcome studies of childhood depression. However it is important to note that the scale does not have diagnostic validity when it comes to the 'less severe' forms of depression (partially remitted major depression and the adjustment
disorder with depressed mood) as opposed to other psychiatric conditions that are not in the 'depressive' domain.

As a symptom severity scale, the CDI does quantify the extent of depressive complaints. And yet, its diagnostic precision vis-à-vis the more severe depressive conditions falls short of that of a "good" test. This is understandable since depressive symptoms per se are not unique to depressive disorders, and because the diagnostic process utilised both inclusionary and exclusionary criteria. Therefore the empirically derived CDI cut off scores should be used cautiously in subject selection. If the instrument is employed in lieu of a clinical interview, selection error may be minimised by choosing the cut-off score with the highest specificity even at the expense of decreased sensitivity. It can also be argued, however, that a child's response to a self-rated scale are valid reflections of their own 'reality'. Thus the CDI should be used to identify cases with high levels of self-perceived or self-endorsed symptoms in order to test relevant hypotheses.

4.3. The Children's Manifest Anxiety Scale-Revised

Since the development of the Children's Manifest Anxiety Scale (featured in Appendix D) by Castameda, McCandless and Palermo (1956), the scale has already been used in many studies. Reynolds and Richmond (1978) revised the scale, omitting certain item, adding items hence reorganising the structure of the Scale in order to enhance its psychometric properties.

The Scale is a pen and paper test consisting of 37 items and each item is answered with a yes/no response (Reynolds and Reynolds, 1978). In the scale one point is given for a yes response and zero points are given for a no response thus an individual may achieve a maximum score of 37 and a minimum score of 0. The more anxiety a child experiences the higher the score. Reynolds and Paget (1981) found that the scale has satisfactory construct validity.

The original scale was used in a South African study by Poggenpoel (1972) but it doesn't appear as if the Revised Scale has been used in South Africa to date.
4.4 DSM III criteria of Post-traumatic stress disorder

Saigh (1989) developed the Children’s Post-traumatic Stress Disorder Inventory on the basis of the DSM III PTSD diagnostic criteria. Saigh later revised the scale according to the 1994 DSM IV diagnostic criteria.

In a study conducted by Saigh(1989) three groups of children were tested.
Group 1: Presented with post-traumatic stress disorder (n=231)
Group 2: Presented with simple phobia i.e. test phobia (n=32)
Group 3: Comprised non-clinical controls (n=35)

The subjects marked the Revised Children’s Anxiety Scale (RCMAS), Children’s Depression Inventory (CDI) and their conduct was rated against the Conners Teachers Scale (CTRS) criteria. A MANOVA evinced significant group and gender differences. No significant interaction effects were noted. Univariate F tests and Bonferroni posttests revealed that the PTSD cases evinced markedly higher RCMAS, CDI, and CTRS scores than their phobic and nonphobic peers. Analogously, the RCMAS and CDI scores of the phobia cases were appreciably greater than the control groups. On the other hand, the CTRS scores of the test phobia and control groups were not significantly different.

In an attempt to test the validity of the PTSD classification as it applies to adolescents, Saigh (1987d) administered a battery of tests to three groups of children. The first group comprised chronic PTSD cases, the second group comprised test phobics and the third group consisted of non-clinical controls. It was subsequently indicated that the PTSD cases presented notably higher levels of morbidity on the Revised Children’s Manifest Anxiety Scale, Children’s Depression Inventory and Conners Teacher Rating Scale than did their counterparts.

This report examined the validity of the PTSD classification as it applies to children. In so doing, the affective and behavioural parameters of traumatised children were contrasted against the symptoms of an associated clinical sample and a non clinical control group. Considerable variations in anxiety, depression and misconduct
were noted. The PTSD cases consistently evinced higher levels of anxiety, depression and misconduct than did the phobic and nonclinical cases. Although the CTRS scores of the test phobia and control groups were not significantly different, the phobia group evinced appreciably higher levels of anxiety and depression than did their nonclinical peers. Examined conceptually, these variations generally support the validity of the classification as it applies to children between the ages of 9 and 13 years.

Viewed from a clinical perspective, the RCMAS, CDI and CTRS may be of value in gauging the efficacy of intervention programmes for traumatised children because these measures reflect the general PTSD symptomatology and because they distinguished PTSD cases from an associated clinical sample and a non clinical control group. It is interesting to note in this regard that single case intervention studies (Saigh, 1987b, 1987c) evinced lower RCMAS, CDI and CTRS scores after traumatised children received flooding regimens.

Although the results support the validity of the classification it should be noted that the entire sample was made up of Lebanese children and that earlier data suggests that PTSD symptomatology may vary cross culturally (Escobar et al., 1983). It should also be noted that the assessment package did not include physiological measures or overt behavioural ratings and that comparative information involving these parameters would be of value in corroborating the validity of the classification. Moreover, the RCMAS differences that were observed between the scores of the test phobia and control groups may have been artificially increased as a result of these groups being initially separated on the basis of their scores on the TAI (i.e. a more specific index of anxiety). Despite these concerns, extant result closely parallel the adolescent PTSD data (Saigh, 1987d) as well as the occidental adult conclusions (Fairbank et al., 1983; Penk et al., 1981; Roberts et al., 1982) and a preliminary level of support for the classification as it applies to children was established.

5. PROCEDURE

Notices were affixed to several notice boards on the premises of RAU University, adverts were placed in several local newspapers and at
Lifeline, to recruit volunteers / lay counsellors. Eighty applicants applied to be trained in a Cognitive Behavioural Intervention to treat adolescents with PTSD.

Two workshops were run in order to train the respective applicants. Hetz, Rosin and Cowley (1994) found that a Psychoeducational cognitive behavioural intervention was successful in decreasing PTSD symptomatology and hence this licensed the author to train the lay counsellors in this intervention. In the intervention a variety of cognitive-behavioural strategies were employed that were deemed applicable to the South African context. The therapeutic approaches were derived from the numerous conceptualisations of PTSD.

5.1. The training of the Lay Counsellors

The formal training of the lay counsellors took place at the RAU Clinic and Centre for Behavioural Medicine. (The training format and timetable is featured in Appendix C).

Volunteers were introduced to the programme and to Post-traumatic Stress Disorder in an introductory lecture, which focused on:
1. PTSD in South Africa, including:
   i. the types of violence experienced by adolescents
   ii. the effects of traumatic events on adolescents
2. The causes of PTSD.
3. The symptoms of PTSD including;
   i. re-experiencing phenomena
   ii. avoidance and numbing phenomena
   iii. symptoms of increased arousal
4. The Etiology of PTSD.
5. The Treatment of PTSD.

Within the treatment of PTSD, the volunteers were divided into a number of different groups, (with 5 to 6 volunteers in each group) and assigned a doctoral student to facilitate the group. The volunteers were then taken through the treatment programme as though they themselves were the children with PTSD.
Upon completion of the treatment programme, doctoral students, assessed which volunteers would be selected to facilitate the intervention programme.

5.2. The Intervention programme

Selected lay counsellors were committed to the intervention programme which entailed a six week bi-weekly intervention. Each session was 60 minutes in duration. The format and contents of the programme are discussed in detail in the appendix.

A variety of cognitive-behavioural techniques were used in the intervention programme. The techniques used and the specific symptoms which each technique aimed to target are discussed below.

1) Relaxation training

Relaxation has specific applicability to the following symptoms of PTSD
a) Sleep disturbance/nightmares (Figley and Southerly, 1977). The patient is encouraged to use relaxation as an aid to sleep onset at both the beginning of the evening and following awakenings.

b) Intrusive thoughts (Zimmering, Caddell, Fairbank and Keane, 1984). Following an intrusive thought, the individual may experience high levels of anxiety. This may disrupt their functioning in major life areas such as vocational performance and interpersonal relationships.

c) Increased irritability and anger (McDermott, 1981). Victims with PTSD often experience difficulty in control of aggression which may be due in part to chronic levels of high anxiety. Relaxation is used here to help the patient maintain lower levels of anxiety, thereby reducing the probability of an anger episode.

2) Cognitive Restructuring

Here an emphasis is placed on identifying irrational beliefs and negative self-statements that appear to have originated following the patient’s traumatic experience. Negative self-statements and irrational
beliefs held by the patient are replaced with realistic, rational positive self-statements e.g. guided self dialogue.

3) The following 4 steps are used in the problem solving procedure;
* Identifying the problem
* Generating alternatives
* Evaluating alternatives
* Choosing the alternative action
The focus of problem identification is to target the specific situation or environmental antecedents that may trigger the PTSD symptoms.

In treating the following symptoms, problem solving techniques are highly effective;
* re-experiencing of the trauma through intrusive thoughts, nightmares and flashbacks
* interpersonal difficulties
* exaggerated startle response

When the disorder involves excessive avoidance and treatments are intended to activate and modify the fear structure exposure techniques are utilised. On the other hand when anxiety pervades daily functioning AMT is utilised. In PTSD, both specific fears and general chronic arousal are among the defining characteristics.

4) Group Treatment
Group therapy provides for social support and permits therapeutic work on the most painful wounds and residues. Within the group framework patients have the opportunity to work on intrapsychic and social problems. Groups permit patients to break with the pattern of rage, guilt, grief, shame, hiding and a sense of dehumanisation, abandonment and betrayal. Patients have the opportunity to develop and identify within a peer group.

6. RESEARCH DESIGN

A pre-post, experimental and control group design was used. The subjects were randomly assigned to groups and were then pretested on the dependent variable. The independent variable was
administered to the experimental group and the control group were posttested on the dependent variable. The differences between the pre and post scores of the experimental and control groups were then tested statistically to assess the effects of the independent variable.

7. STATISTICAL ANALYSIS

Paired sample t-statistics were applied to the measured dependent variable in the control group and paired sample t-statistics were also applied to the measured dependent variable in the experimental group.
CHAPTER THREE: RESULTS

1. INTRODUCTION

The continuously escalating levels of violence which dominate the South African socio-political landscape are primarily a function of past and present political, social and economic policies. Few spheres of our society remain unscathed, hence South Africa being rated as one of the most violent countries in the world (CPA, 1993; Bundy, 1992). The impact and containment of the effects of traumatic experiences on the youth and children of South Africa is indeed an urgent priority (Goldstone Commission, 1994; Hayes, 1987; Vogelman, 1992).

A dire need exists to train lay counsellors in order to meet the mental health needs of South Africa. Dawes (1992) stresses the need for professionals to train and supervise lay counsellors. Simpson (1993) states that there is a shortage of skilled mental health workers in South Africa, who are adequately trained to assist the ever mounting number of South African children affected by violence.

Mental health practitioners have neglected to apply salient treatment strategies to the South African context (Straker, 1992). Therefore this study aimed at training lay counsellors to facilitate a short term cognitive behavioural intervention (Cowley et al, 1994).

In the townships of South Africa, there are few environments in which a clinician can guarantee the safety of children. The intervention in this study thus entailed placing trained lay counsellors into various school environments, in order to reduce the effects of symptoms of PTSD across the symptom clusters.

This chapter will provide a statistical analysis of the effectiveness of lay counsellors on PTSD in adolescents by means of a cognitive-behavioural intervention.
2. HYPOTHESES

In each case the Null Hypothesis specifies that the variable under consideration does not change due to the intervention.

A psychoeducational cognitive-behavioural intervention will decrease the symptomatology of PTSD* in an experimental group from pre- to post test means.

3. SUMMARY OF THE METHODOLOGY

Volunteers/lay counsellors were recruited and trained in a cognitive behavioural intervention. Selected lay counsellors were then placed in the various schools. The project utilised a community sample derived from three different schools in Johannesburg. The subjects resided in different Gauteng townships and commuted daily to school. 369 pupils were assessed for PTSD. The Children's Post Traumatic Stress Disorder Inventory (Saigh, 1994) was used to ascertain the prevalence of this disorder.

In the project design lay counsellors were randomly assigned to groups of children with PTSD. The intervention was then administered to the experimental groups while the control groups received no treatment. Both groups were subsequently post- tested. The differences between the pre and post test scores of the experimental and control groups were tested statistically to assess the effects of the independent variables. Two levels of the independent variable exist depending on whether the intervention was administered or not.

Subjects could not be randomly assigned to the experimental and control groups for the following reason: subjects who did not want to be involved in the intervention were not included and hence formed part of the control group.

*measured as depression, anxiety, total PTSD scores, re-experiencing scores, increased arousal, avoidance and numbing scores and significant distress scores
Hence, on this basis one cannot regard the assignment of the adolescents to each group as being randomly assigned. For this reason it is not appropriate to compare the results between the experimental and control groups but only within each group.

4. DESCRIPTIVE STATISTICS

The following table is an explanation of the abbreviations used for the tables listing the individual raw scores in both the experimental and control groups.

<table>
<thead>
<tr>
<th>KEY:</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age=</td>
<td>age of the individual</td>
</tr>
<tr>
<td>Sex=</td>
<td>sex</td>
</tr>
<tr>
<td>CAT=</td>
<td>category i.e. s= sexual trauma o= other trauma</td>
</tr>
<tr>
<td>DEP 1=</td>
<td>depression pre-test</td>
</tr>
<tr>
<td>DEP 2=</td>
<td>depression post-test</td>
</tr>
<tr>
<td>ANX 1=</td>
<td>anxiety pre-test</td>
</tr>
<tr>
<td>ANX 2=</td>
<td>anxiety post-test</td>
</tr>
<tr>
<td>PTSD 1=</td>
<td>ptsd pre-test</td>
</tr>
<tr>
<td>PTSD 2=</td>
<td>ptsd post-test</td>
</tr>
<tr>
<td>TOT 1=</td>
<td>total ptsd pre-test</td>
</tr>
<tr>
<td>TOT 2=</td>
<td>total ptsd post-test</td>
</tr>
<tr>
<td>RE 1=</td>
<td>re-experiencing pre-test</td>
</tr>
<tr>
<td>RE 2=</td>
<td>re-experiencing post-test</td>
</tr>
<tr>
<td>A&amp;N 1=</td>
<td>avoidance and numbing pre-test</td>
</tr>
<tr>
<td>A&amp;N 2=</td>
<td>avoidance and numbing post-test</td>
</tr>
<tr>
<td>IA 1=</td>
<td>increased arousal pre-test</td>
</tr>
<tr>
<td>IA 2=</td>
<td>increased arousal post-test</td>
</tr>
<tr>
<td>SD 1=</td>
<td>significant distress pre-test</td>
</tr>
<tr>
<td>SD 2=</td>
<td>significant distress post-test</td>
</tr>
<tr>
<td>DATE=</td>
<td>date of the event</td>
</tr>
</tbody>
</table>
70 pupils were found to have PTSD ranging in age from 11 to 17. The educational levels of children included standards 4 to standards 9.

Five categories of traumatic events that led to the development of PTSD can be described; sexually related trauma (exposure to rape, sexual assault and sexual abuse), crime related trauma (exposure to robbery, assault and murder), domestically related trauma (exposure to violence in the family), politically related trauma (exposure to violent events resulting from politically motivated activities), and accident related trauma (being involved in or witnessing a road accident).

**TABLE 4: Control group raw scores at pre-test**

<table>
<thead>
<tr>
<th>Measure</th>
<th>PTSD Total</th>
<th>RE</th>
<th>IA</th>
<th>A&amp;N</th>
<th>SD</th>
<th>Anxiety</th>
<th>Depression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>11-29</td>
<td>3-11</td>
<td>2-6</td>
<td>4-13</td>
<td>1-4</td>
<td>4-33</td>
<td>7-28</td>
</tr>
<tr>
<td>Mean</td>
<td>20.27</td>
<td>6.45</td>
<td>4.09</td>
<td>8.00</td>
<td>1.73</td>
<td>17.00</td>
<td>17.05</td>
</tr>
</tbody>
</table>

**TABLE 5: Control group raw scores at post-test**

<table>
<thead>
<tr>
<th>Measure</th>
<th>PTSD Total</th>
<th>RE</th>
<th>IA</th>
<th>A&amp;N</th>
<th>SD</th>
<th>Anxiety</th>
<th>Depression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>6-29</td>
<td>1-9</td>
<td>1-7</td>
<td>3-12</td>
<td>1-4</td>
<td>5-27</td>
<td>3-41</td>
</tr>
<tr>
<td>Mean</td>
<td>19.41</td>
<td>5.82</td>
<td>4.23</td>
<td>7.82</td>
<td>1.59</td>
<td>17.45</td>
<td>16.96</td>
</tr>
</tbody>
</table>

**TABLE 6: Experimental group pre-test raw scores**

<table>
<thead>
<tr>
<th>Measure</th>
<th>PTSD Total</th>
<th>RE</th>
<th>IA</th>
<th>A&amp;N</th>
<th>SD</th>
<th>Anxiety</th>
<th>Depression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>13-32</td>
<td>3-10</td>
<td>3-7</td>
<td>4-15</td>
<td>1-4</td>
<td>9-29</td>
<td>3-32</td>
</tr>
<tr>
<td>Mean</td>
<td>22.00</td>
<td>6.69</td>
<td>4.48</td>
<td>9.38</td>
<td>1.58</td>
<td>20.15</td>
<td>17.27</td>
</tr>
</tbody>
</table>
TABLE 7: Experimental group post-test raw scores

<table>
<thead>
<tr>
<th>Measure</th>
<th>PTSD Total</th>
<th>RE</th>
<th>IA</th>
<th>A&amp;N</th>
<th>SD</th>
<th>Anxiety</th>
<th>Depression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>5-29</td>
<td>1-9</td>
<td>1-6</td>
<td>1-13</td>
<td>0-4</td>
<td>6-28</td>
<td>1-29</td>
</tr>
<tr>
<td>Mean</td>
<td>15.17</td>
<td>4.5</td>
<td>2.54</td>
<td>7.70</td>
<td>0.52</td>
<td>17.46</td>
<td>13.94</td>
</tr>
</tbody>
</table>

FIGURE 3:

Pre and Post test comparison of symptoms− control group

The above figure indicates that there is no significant difference between the pre and post test measures across all indices.
Pre and Post-test comparison of symptoms- experimental group

The above figure illustrates a significant decrease in symptoms across all dependent variables.
5. INFERENTIAL STATISTICAL ANALYSIS

In the project design the subjects were randomly assigned to two groups; the experimental group and the control group, and were then pretested on the dependent variables. The intervention was then implemented to the experimental group while the control group received no treatment. Both groups were subsequently posttested on the dependent variables.

5.1. Differences from pre- to posttest measures in the control group

The significance of differences in pre-to posttest scores of the control group was assessed by means of a t-test.

TABLE 8

The significance of differences in pre- to posttest scores of the control group as assessed by means of a t-test.

<table>
<thead>
<tr>
<th>Variable</th>
<th>t-stat</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>0.0725</td>
<td>21</td>
<td>p&gt;0.05</td>
</tr>
<tr>
<td>Anxiety</td>
<td>-0.7098</td>
<td>21</td>
<td>p&gt;0.05</td>
</tr>
<tr>
<td>Total PTSD</td>
<td>1.2120</td>
<td>21</td>
<td>p&gt;0.05</td>
</tr>
<tr>
<td>Re-exp</td>
<td>2.1767</td>
<td>21</td>
<td>p&lt;0.05</td>
</tr>
<tr>
<td>Increased arousal</td>
<td>-0.7673</td>
<td>21</td>
<td>p&gt;0.05</td>
</tr>
<tr>
<td>Avoidance &amp; numbing</td>
<td>0.4913</td>
<td>21</td>
<td>p&gt;0.05</td>
</tr>
<tr>
<td>Significant distress</td>
<td>0.7673</td>
<td>21</td>
<td>p&gt;0.05</td>
</tr>
</tbody>
</table>

A t-test conducted in order to determine the significance of differences between pre and post test measures of the anxiety scores in the control group indicated no significant difference.
A t-test conducted in order to determine the significance of differences between pre and post test measures of the depression scores in the control group indicated no significant difference. (p >0.05), (see Table 10).

A t-test conducted in order to determine the significance of differences between pre and post test measures of the re-experiencing scores in the control group indicated a significant reduction. (p <0.05), (see Table 10).

A t-test conducted in order to determine the significance of differences between pre and post test measures of the increased arousal scores in the control group indicated no significant difference. (p >0.05), (see Table 10).

A t-test conducted in order to determine the significance of differences between pre and post test measures of the avoidance and numbing scores in the control group indicated no significant difference. (p >0.05), (see Table 10).

A t-test conducted in order to determine the significance of differences between pre and post test measures of the significant distress scores in the control group indicated no significant difference. (p >0.05), (see Table 10).

5.2. Differences from pre-to posttest measures in the experimental group.

The significance of differences in pre- to posttest scores of the experimental group was assessed by means of a t-test.
TABLE 9: The significance of differences in pre-to posttest scores of the experimental group as assessed by means of a t-test.

<table>
<thead>
<tr>
<th>Variable</th>
<th>t-stat</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>3.1743</td>
<td>47</td>
<td>p&lt;0.05</td>
</tr>
<tr>
<td>Anxiety</td>
<td>3.8175</td>
<td>47</td>
<td>p&lt;0.05</td>
</tr>
<tr>
<td>Total PTSD</td>
<td>7.8107</td>
<td>47</td>
<td>p&lt;0.05</td>
</tr>
<tr>
<td>Re-exposure</td>
<td>5.4510</td>
<td>47</td>
<td>p&lt;0.05</td>
</tr>
<tr>
<td>Increased arousal</td>
<td>7.0413</td>
<td>47</td>
<td>p&lt;0.05</td>
</tr>
<tr>
<td>Avoidance &amp; numbing</td>
<td>4.4485</td>
<td>47</td>
<td>p&lt;0.05</td>
</tr>
<tr>
<td>Significant distress</td>
<td>7.8995</td>
<td>47</td>
<td>p&lt;0.05</td>
</tr>
</tbody>
</table>

A t-test conducted in order to determine the significance of differences between pre and post test measures of depression in the experimental group indicated a significant decrease in the experimental group. (p <0.05), (see Table 11).

A t-test conducted in order to determine the significance of differences between pre and post test measures of anxiety in the experimental group indicated a significant decrease in the experimental group. (p <0.05), (see Table 11).

A t-test conducted in order to determine the significance of differences between pre and post test measures of the total PTSD scores in the experimental group indicated a significant decrease in the experimental group. (p <0.05), (see Table 11).
A t-test conducted in order to determine the significance of differences between pre and post test measures of the re-experiencing scores in the experimental group indicated a significant decrease in the experimental group. (p < 0.05), (see Table 11).

A t-test conducted in order to determine the significance of differences between pre and post test measures of the increased arousal scores in the experimental group indicated a significant decrease in the experimental group. (p < 0.05), (see Table 11).

A t-test conducted in order to determine the significance of differences between pre and post test measures of the avoidance and numbing scores in the experimental group indicated a significant decrease in the experimental group. (p < 0.05), (see Table 11).

A t-test conducted in order to determine the significance of differences between pre and post test measures of the significant distress scores in the experimental group indicated a significant decrease in the experimental group. (p < 0.05), (see Table 11).
TABLE 10: ONE WAY SAMPLE OF ANALYSIS OF VARIANCE - EXPERIMENTAL GROUP.

<table>
<thead>
<tr>
<th>t stat</th>
<th>3.1743</th>
<th>3.8175</th>
<th>7.8107</th>
<th>5.4510</th>
<th>7.0413</th>
<th>4.4485</th>
<th>7.8995</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ho</td>
<td>reject</td>
<td>reject</td>
<td>reject</td>
<td>reject</td>
<td>reject</td>
<td>reject</td>
<td>reject</td>
</tr>
</tbody>
</table>

The above table indicates that the alternative hypothesis is accepted in all cases.

TABLE 11: ONE WAY SAMPLE OF ANALYSIS OF VARIANCE - CONTROL GROUP

<table>
<thead>
<tr>
<th>DEP</th>
<th>ANX</th>
<th>Total PTSD</th>
<th>RE</th>
<th>IA</th>
<th>A&amp;N</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>t stat</td>
<td>0.0725</td>
<td>-</td>
<td>1.2120</td>
<td>2.1767</td>
<td>-</td>
<td>0.4913</td>
</tr>
<tr>
<td>Ho</td>
<td>accept</td>
<td>accept</td>
<td>accept</td>
<td>accept</td>
<td>accept</td>
<td>accept</td>
</tr>
</tbody>
</table>

The children were tested on pre-test scales (R-CMAS, CDI, and Child’s PTSD inventory) and then retested after a six week interval with no treatment factor within that period.
CHAPTER FOUR: DISCUSSION

1. INRODUCTION

Apartheid influenced all aspects of South Africans children's lives, its effects being uniformly and profoundly destructive. At present it is almost impossible to determine how many hundreds and thousands of South African children are affected by exposure to violence. However, it is a truism that children are affected by exposure to violence (Bundy, 1992; NCRC, 1994).

Straker (1987) states that individuals living in the black townships are subjected to continuous stress. According to the DSM III classification the majority of these stresses in isolation would be termed catastrophic e.g. being raped, beaten etc.

Due to the acute shortage of adequately trained lay counsellors to assist the ever escalating number of South African children affected by violence several writers stress the need for professionals to train and supervise lay counsellors, rather than attempting to offer interventions of their own (Magwaza et al., 1993; Simpson, 1992; Dawes, 1992).

Goals of the study
* To validate the intervention strategy formulated by Cowley et al., (1994)
* To evaluate the effectiveness and value of trained lay counsellors, who will utilise the intervention strategy in the treatment of PTSD in children
* To assess the practicalities of and viability of implementing the treatment strategy in a number of different schools.

Three hundred and sixty nine children were assessed for PTSD. Seventy pupils were given a PTSD positive diagnosis. Lay counsellors were selected and trained in the intervention programme and were then placed in a particular group of children with PTSD at a particular school.
The intervention programme was a six week bi-weekly intervention. The programme was specifically designed in the form of psychoeducational workshops according to a cognitive behavioural framework (Cowley et al., 1994). Each session was 60 minutes in duration. The treatment package selected and developed a variety of cognitive behavioural strategies that were deemed applicable to the South African context (Cowley et al., 1994).

The therapeutic approaches are derived from the numerous etiological conceptualisations of this disorder. In order to reduce the prevalence of intrusive memories, flashbacks and nightmares which are related to the individual's original traumatic experience, exposure techniques are utilised. Cognitive restructuring or trauma processing strategies are designed to deal with meaning attributed to traumatic experiences or related association and assumptions that are maladaptive. Stress inoculation training strategies aim to teach coping skills that either reduce personal distress or provide additional means of meeting interpersonal demands.

2. DEFINITION AND VALIDATION OF ISSUES

The nature and effects of urban violence on black American urban youths (Breslau et al., 1991) has been found to be similar to the effects of war on children in the South American study (Arroyo and Eth, 1985). It would also seem that the Johnson et al (1993) study supported the position that Post traumatic stress occurs with similar symptomatology across cultures.

Although previous literature has indicated that PTSD is similar across different cultures, subtle differences exist in the South African context. In order to assess the aftermath of victimisation in South Africa it is important to note that the nature of traumatic events are influenced by the particular cultural aspects. It is imperative to take into account how cultural differences effect an individuals perceptions, interpretations and assimilation's of such experiences. e.g Straker (1992) has described the continuous posttraumatic stress disorder syndrome. A single traumatic reaction is experienced differently by children who are continuously exposed to unrelenting traumatic stress. Here, Bundy (1992) suggests that posttraumatic stress disorder is often habituated
by children in black communities in South Africa. This is also supported by Dawes et al (1989, 1992, 1994).

If the conditions under study in this investigation were not PTSD but rather a new pathologic entity for example the continuous PTSD, it would follow that changes brought about by a hypothesised effective treatment would not follow the effective outcome based on the theoretical rationale of PTSD (Fairbank et al., 1981).

Thus upon a cursory overview the hypotheses in this study were supported by the data. Significant decreases were evident in the Posttraumatic Stress Disorder Symptoms, as well as in the corresponding psychopathological signs such as depression and anxiety.

3. THE EFFECTS OF LAY COUNSELLING ON PTSD IN BLACK ADOLESCENTS

The intervention utilised in this dissertation was that devised by Cowley et al., (1994) the difference being that here a number of lay counsellors were trained to administer the intervention. The aim of the methodology employed was to indicate that the effectiveness of the intervention used by Cowley et al (1994) would remain unaltered in view of the training of the lay counsellors. The administration of the intervention by the trained lay counsellors did not alter the effectiveness of the devised intervention.

The hypotheses in this study were supported by the data. With regard to the one-way sample of analysis in the experimental group the following results were observed:

1. The results indicated that a significant decrease in the depression levels of the children occurred. In a comparison of the depression pre and post test scores of the Child's Depression Inventory, depression levels decreased significantly after the intervention.

2. The results indicated that a significant decrease in the anxiety levels of the children occurred. In a comparison of the anxiety pre and post
test scores of the R-CMAS, anxiety levels decreased significantly after the intervention.

3. The results indicated that a significant decrease in the total PTSD symptom levels of the children. In a comparison of the total PTSD pre and post test scores of the Children’s Post Traumatic Stress Inventory, symptom levels decreased significantly after the intervention.

4. The results indicated that a significant decrease in the increased arousal PTSD symptom levels of the children. In a comparison of the increased arousal PTSD pre and post test scores of the Child’s Post Traumatic Stress Inventory, symptom levels decreased significantly after the intervention.

5. The results indicated that a significant decrease in the avoidance and numbing PTSD symptom level of the children occurred. In a comparison of the Avoidance and numbing PTSD pre and post test scores of the Child’s Post Traumatic Stress Inventory, symptom levels decreased significantly after the intervention.

6. The results indicated that a significant decrease in the Re-experiencing PTSD symptom levels of the children. In a comparison of the Re-experiencing PTSD pre and post test scores of the Child’s Post Traumatic Stress Inventory, symptom levels decreased significantly after the intervention.

7. The results indicated that a significant decrease in the Significant distress PTSD symptom levels of the children. In a comparison of the Significant distress PTSD pre and post test scores of the Child’s Post Traumatic Stress Inventory, symptom levels decreased significantly after the intervention.

Thus the results of the one way sample of analysis (t scores) indicated that the intervention succeeded in decreasing depression, anxiety, and the Post traumatic stress disorder symptoms.
With regard to the one-way sample of analysis in the control group the following results were observed:

1. The results indicated that no significant decrease occurred in the depression levels of the children. In a comparison of the depression pre and post test scores of the CDI, no significant decrease was evident after the six week interval.

2. The results indicated that no significant decrease occurred in the anxiety levels of the children. In a comparison of the anxiety pre and post test scores of the R-CMAS, no significant decrease was evident after the six week interval.

3. The results indicated that no significant decrease occurred in the total PTSD symptom levels of the children. In a comparison of the total PTSD pre and post test scores of the Child’s Post Traumatic Stress Inventory, no significant decrease was evident after the six week interval.

4. The results indicated that no significant decrease occurred in the Increased arousal PTSD symptom levels of the children. In a comparison of the Increased arousal PTSD pre and post test scores of the Child’s Post Traumatic Stress Inventory, no significant decrease was evident after the six week interval.

5. The results indicated that no significant decrease occurred in the Avoidance and numbing PTSD symptom levels of the children. In a comparison of the Avoidance and numbing PTSD pre and post test scores of the Child’s Post Traumatic Stress Inventory, no significant decrease was evident after the six week interval.

6. The results indicated that no significant decrease occurred in the Re-experiencing PTSD symptom levels of the children. In a comparison of the Re-experiencing PTSD pre and post test scores of the Child’s Post Traumatic Stress Inventory, no significant decrease was evident after the six week interval.
7. The results indicated that no significant decrease occurred in the Significant distress PTSD symptom levels of the children. In a comparison of the Significant distress PTSD pre and post test scores of the Child's Post Traumatic Stress Inventory, no significant decrease was evident after the six week interval.

Thus the overall results of the one way sample of analysis (t scores) indicate that the control group's results did not decrease significantly in depression, anxiety and Post traumatic stress disorder symptoms after a six week no treatment interval.

Although cross-cultural differences do exist (Breslau et al, 1991) it would appear that the cognitive behavioural formulation would be valid and applicable across cultures.

Blanchard et al (1982) noted that avoidance and numbing and increased arousal are of a biochemical and psychophysiological nature and therefore are to be addressed by only direct psychophysiological methods. Results indicate that significant decreases occurred in avoidance and numbing and increased arousal in the experimental group of this study. This would then postulate whether a cognitive behavioural intervention would be able to address biochemical and psychophysiological substrata of a condition such as PTSD. Research conducted by Fairbank et al (1981); Deblinger (1990) and Cooper et al (1989) state that more direct and individual procedures might produce such an effect.

In this study flooding by proxy was utilised to address the arousal phenomena. In a study conducted by Cooper et al (1989) it was suggested that flooding of traumatic stress related imagery might be an effective method of altering physiological arousal.

Keane et al (1985) stated that a social support network is of significant importance in the development and treatment of PTSD. Thus it would appear that the group format utilised in this intervention has provided the best vehicle wherein an information processing approach to cognitive behavioural alteration of schemata could occur.
The fact that significant decreases occurred due to the cognitive behavioural intervention served not only to provide construct validation in the cognitive behavioural formulation of PTSD in black youths but also served to support the effectiveness of the group based intervention and hence the effectiveness of the trained lay counsellors.

4. CONCLUSION

South Africa needs to come to terms with the iniquities of the past and present, if it aspires to future peace and prosperity. Addressing the plight and needs of our children constitutes a crucial step in this direction. The specific nature of the violence to which South African children have been exposed on a continuous basis can be understood in terms of a cognitive behavioural formulation. The most viable, reliable and valid formulation of PTSD is in this context, an information processing based cognitive behavioural approach. This has been supported by the data with significant decreases in depression, anxiety and the symptoms of PTSD due to the effectiveness of the intervention and consequently the effectiveness of the trained lay counsellors.

The treatment programme entailed the training of lay counsellors and then the placing of these volunteers into the respective schools. The subsequent intervention occurred over a six week period, shorter than most individual and other treatments as reported in the literature. Thus utilising trained lay counsellors rather than professionals and the fact that the treatment is highly time effective and cost effective, are indeed imperative considerations within the South African context.

It appears from the above that before any psychological intervention programmes can be of maximum benefit to the children of South Africa we need to take heed of the following points:

i. Interventions should be implemented in such a manner so as to avoid pathologising children's reactions to public violence. Netshiombo (1993) states that this may lead to a further disempowerment of child victims of violence.
ii. It is important that interventions are sensitive to the individuals' everyday reality.

iii. Indigenous practices and values need to be considered (Mkhize, 1993; O'Brien, 1993).

In view of the fact that it is with teachers that children spend a large portion of their time, it would appear beneficial to train the latter in at least the identification of the problems children can experience as a result of exposure to violence.

A follow up study should be done in 6 months to ensure that there has been no relapse of symptoms.
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trauma: Proposed behavioral conceptualization and review of the literature.

Aronson.


Appendix A

The Survivor Psalm

I have been victimised
I was in a fight that was not a fair fight
I did not ask for the fight. I lost
There is no shame in losing such fights only in winning
I have reached the stage of survivor
And am no longer a slave of victim status

I look back with sadness rather than hate
I look forward with hope rather than despair
I may never forget, but I need not constantly remember

I was a victim
I am a survivor
Raw scores of experimental group at pre and post-test.
Appendix C

TRAINING MANUAL FOR LAY COUNSELLORS
1995

TABLE OF CONTENTS

1. TRAINING TIMETABLE
2. PTSD IN SOUTH AFRICA
3. CAUSES OF PTSD
4. SYMPTOMS OF PTSD
5. ETIOLOGY OF PTSD
6. THE TREATMENT OF PTSD
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   6.2. SESSION 2: Relaxation training
   6.3. SESSION 3: Flooding by proxy
   6.4. SESSION 5&6: Cognitive restructuring
   6.5. SESSION 7&8: Role playing
   6.6. Thought stopping
   6.7. Debriefing
1. TRAINING TIMETABLE

19 APRIL 1995

9h00 - 9h30  Registration

9h30 - 11h00  Introduction to PTSD

11h00 - 11h30  Tea

11h30 - 13h00  Session 1: Setting of boundaries, presentation of the educational component, the survivor psalm.

                     Session 2: Relaxation Training

13h00 - 13h15  Tea

13h15 - 14h00  Debriefing and feedback

20 APRIL 1995

8h30 - 10h30  The technique of cognitive restructuring: Role plays

10h30 - 11h00  Tea

11h00 - 13h00  Coping techniques and thought stopping

13h00 - 13h15  Tea

13h15 - 14h00  Debriefing and feedback
2. PTSD IN SOUTH AFRICA

One of the most perturbing facets of South Africa's post apartheid communal existence is the high incidence of Post Traumatic Stress Disorder (PTSD) amongst the disadvantaged communities. It is noteworthy that the incidence of PTSD amongst urbanised youth is so high, that it can be described as an epidemic. Since therapeutic resources are limited or absent in many environments, it is essential to develop a project to cater for the needs of traumatised communities. Such programmes should be cost effective and must relate to education within the psychological context.

Adolescents living in South African townships are no strangers to stress. The National Children's Rights Commission describes the life experiences of the youth:

"To most children in this country there has never been a day without violence, without the police casspirs, funerals, stayaways and more recently, the intracommunity killings and destruction." (p.47)

2.1 The types of violence experienced by adolescents

Teenagers in South Africa are exposed to many differing types of violence. Hickson and Kriegler (1988) state that:

"abuse is always embedded in a series of interlinked contexts ranging from the family and the community to larger social economical contexts" (p.170).

It is therefore not surprising that the Goldstone Commission (1994) research shows a spectrum of violent contexts that impact on adolescents.

2.2 The effects of traumatic events on adolescents

The fact that South African children have been exposed to inordinately high levels of violence cannot be disputed. However the specific impact it has had on the individual's psychological functioning is a contentious issue.
The effect of the traumatic experience is dependent on the following factors: the nature of the traumatic event, pre-existing mental health, social support and the development stage of the child.

Magwaza et al (1993) found that 84% of the children in their study appeared to be overtly preoccupied with violence. Voller (1990) attained similar findings in a population of township adolescents. The adolescents reported that crime and political conflict were the worst aspects of being a young person residing in South Africa. Dawes (1992, 1994) found that while most children exhibit immediate reactions such as fear, anxiety and shock following incidents of violence, only 10% develop disabling longer term emotional reactions.

Many other researchers, however, maintain that the effects are much more severe (INR, 1993; Schmidt, 1993; Smith and Holford, 1993; Beukes and Heyns, 1994). In a study of Sowetan children (Allwood, 1987) found that being exposed to high levels of violence led to many of them displaying symptoms such as emotional detachment, mental distress, depression, enuresis, selective amnesia, psychosomatic problems and several developmental disorders. Robertson (1990) reports that a disproportionately large number of black children presented with a variety of debilitating psychological problems, most notably anger, constant anxiety, depression and behaviour disorders.

Stavrou (1990) found that 60-80% of the children exposed to violent situations, whether directly or indirectly suffer from symptoms of PTSD. He notes that children are more at risk than adults because their potential for long term recovery, without the support of a significant adult and/or treatment, is markedly less than that of an adult.

Stavrou (1990) conducted research in Alexandra and found the most common reactions to a traumatic stressor were fear, emotional changes, difficulties in sleeping, cognitive impairments, social inadequacies, somatic complaints and re-experiencing symptoms. The most frequent fears are of the Security Forces and of future attacks, especially on the child's home. The children also experienced responses similar to the symptom clusters of PTSD as described in
the DSM IV (1994). Emotional numbing, powerlessness, a perception of extreme vulnerability, nightmares and flashbacks are all congruent with the DSM IV diagnosis of PTSD.

3. CAUSES OF PTSD

PTSD may be induced by three types of stress:

1. Direct exposure to puissant stress that is characterised by threats to one's life or physical integrity.

2. Trauma which involves observational experiences such as seeing another person who is being, or who has been, seriously injured or killed as a result of an accident or physical violence.

3. Verbal mediation that entails learning about a serious threat or harm to a close friend or family member.

PTSD always requires an initiating event which is assumed to be catastrophic. The event should evoke significant distress in the individual. The types of event that produce PTSD are very different in multiple ways, including duration, complexity, content qualities and the amounts of associated losses.

Research studies indicate that the dimensions of the threat to life, severe physical harm or injury, exposure to grotesque death and loss or injury to another are correlated to the likelihood of developing PTSD.

4. SYMPTOMS OF PTSD

PTSD symptomatology primarily consists of three symptom clusters: re-experiencing, increased arousal and numbing and avoidance.

4.1 Re-experiencing phenomena

Events are re-experienced in one of the following ways:
• Recurrent and inclusive distressing recollections of the event.
• Recurrent dreams of the event.
• Sudden acting of feeling as if the traumatic event were recurring, including a sense of reliving the experience, illusions, hallucinations and dissociate flashbacks, even those that occur upon awakening - often when intoxicated (Kiser, 1981).
• Intense psychological distress at exposure to events that symbolise or resemble an aspect of the traumatic event (Green, 1991)

Intrusive imagery occupies a broad spectrum, from dim expressions to vivid detailed memories that enter consciousness and are difficult to dispel, to pseudo-hallucinations or hypnagogic phenomena (imagery that comes on the border of sleep and wakefulness).

The portion of people reported as experiencing intrusive imagery and bad dreams tends to vary. The frequency of illusions and pseudo-hallucinations tends to be lower (Malcolm, 1989).

Traumatic nightmares in people suffering from PTSD tend to occur early in the sleep cycle and are accompanied by a number of body movements. It is possible that there is a relationship between flashbacks and nightmares as nightmares often precede flashbacks (Saigh, 1987b).

4.2 Avoidance and numbing phenomena

These include the persistent avoidance of things associated with the trauma or numbing of general responsiveness. They include:

• Efforts or thoughts or feelings associated with the trauma.
• Efforts to avoid activities or situations that arouse recollections of the trauma.
• Inability to recall an important aspect of the trauma.
• Markedly diminished interest in significant activities.
• Feelings of detachment or estranged from others.
• Restricted range of affect.
• Sense of foreshortened future (Malcolm, 1989).
Survivors use many different techniques to ward off thoughts about the trauma including attitude switching, narrowing of attention, inflexible and constricted thought, altered meanings, disavowal and the warding off of reality by the use of fantasy, and memory failure (Foy et al., 1993).

4.3 Symptoms of Increased arousal

These include persistent symptoms as indicated by at least two of the following:

- Difficulty in falling or staying asleep
- Irritability or outbursts of anger
- Difficulty in concentrating
- Hyper vigilance
- Exaggerated startle response

Physical reaction on exposure to events that symbolise or resemble an aspect of the traumatic event.

5. THE ETIOLOGY OF PTSD

Over the past few years, information processing models of PTSD have been proposed that have important implications for the treatment of this disorder. Information processing speaks of the process by which information is encoded, stored in memory and recalled.

A theoretical model to understand PTSD was proposed by Foa and Kozak (1986). Their starting point was Lang's (1977, 1979) analysis of fear structures as a network in memory. The network includes three different types of information.

a. Information about a dangerous situation

b. Information about verbal, physical and behavioural responses to the danger

c. A way to interpret the information and reactions to the threat
The information network is therefore viewed as a program for escape and avoidance behaviour. When a stimulus acquires a meaning of a threat it becomes represented in memory as a fear structure. Most of us would associate walking down a dark ally as a possible danger. Many of us associate darkness with a threat and is represented as such in our fear structure. When a person is exposed to a traumatic event, other stimuli become associated with danger. These include smells, sounds, objects and particular types of people.

In general, few of us would perceive the closing of a car door as dangerous, but if one is hijacked, this behaviour may be associated with danger. The action of closing a car door is then included in our fear structure.

Humans are equipped with many responses that assist them to cope with a threat. The body responds by the release of adrenaline which enhances the ability to flee or fight. Individuals become more alert and more aware of their surroundings. When a person is exposed to a stimulus represented in his/ her fear structure, they respond in the above mentioned ways. Therefore if the closing of a car door is perceived as dangerous the person will activate these fear responses. Included in the fear structure of an individual suffering from PTSD, are a number of cues that remind the person of the traumatic event. When the person is exposed to such a cue they tend to relive the experience in the form of flashbacks and nightmares.

6. TREATMENT OF PTSD

The intervention programme is a six bi-weekly intervention. The programme was specifically designed in the form of psychoeducational workshops, according to the information processing framework. Each session is sixty minutes in duration.

SESSION 1

Aims:
1. To introduce the programme to the group
2. To introduce the group members to each other
3. To introduce the group to the group facilitators
4. To educate the group as to the aims and purposes of the group sessions

Procedure
i. Establishment of trust within the group and with the group leader: Facilitator introduces him/herself to the group. Use ice-breaker for the group members to introduce themselves.

ii. The development of boundaries: It is important to gain the participation of the group members in the establishment of the rules. A group contract should be drawn up and signed. The contract should include: confidentiality, respect of the opinion of others (no laughing at others), being punctual, completion of homework assignments.

iii. Explanation of the group process and course contents: The group members are informed that they have all experienced a scary event, which has led to difficulties in their lives. The term Post Traumatic Stress Disorder must be avoided at all times. The Survivor Psalm is utilised to explain the therapeutic process. The terms of victim and survivor must be clearly explained. The group is informed that the aim of the groups is to help each other progress from being victims to the attainment of survival status.

iv. Discussion of PTSD symptoms.

v. Reading of the survivor psalm to complete the session.

SESSION 2

Aims:
1. To teach control of generalised anxiety.
2. To create an awareness of the distinction between relaxed and tense states.
3. To empower the group.

Procedure:
1. Deep muscle relaxation.
ii. Breathing relaxation.

Homework:
Practise relaxation at least twice daily.

Write about a fictitious scary event.

SESSION 3

Aims:
1. To reorganise and develop new cognitive schema.
2. To acknowledge and facilitate the expression of feelings and emotions.
3. To develop suitable and effective coping strategies.

Procedure:
i. Relaxation techniques.

ii. Each individual reads their story.

iii. Each story is examined with reference to the following questions:
  a) What does the person feel like after the event?
  b) Who is to blame for the event?
  c) What problems may the victim experience after the event?
  d) How should the person cope after the event?

iv. Breathing relaxation.

Homework:

Write out your own scary event.
Role play the discussion in the group

SESSION 4

Aims:
The same as in Session 3 above.

Procedure:
The same procedure was followed as in Session 3.

**Homework:**

Practise relaxation.

**SESSION 5:**

**Aims:**
1. To encourage the integration of the traumatic events into cognitive schemas.
2. To accustom individuals to the discussing their scary event
3. To initiate a step-by-step analysis of the facts pertaining to the traumatic event.
4. To develop and practically implement practical coping skills.

**Procedure:**

1. Each subject’s traumatic event is anonymously presented to the group. No individual reads out their own scary event. Each story is examined with reference to the following:
   
   a) What does the person feel like after the event?
   b) Who is to blame for the event?
   c) What problems may the person experience after the event?
   d) How should the person cope after the event?

   The above questions facilitate the development of coping skills and how they can be practically applied.

iii. **Relaxation.**

**Role play the discussion, and suggest possible coping mechanisms.**

**Homework:**
Practise relaxation.

**SESSION 6**
The aims and procedures of Session 5 are repeated in Session 6.

SESSION 7

Aims:
1. To encourage cognitions regarding the trauma.
2. To help subjects obtain a more objective view of their traumatic experiences.

Procedure:
i. Role plays were used in which each subject was requested to participate.

ii. Subjects were divided into pairs within each group, and each subject was then given the opportunity to play the role of both the ‘therapist’ and the ‘patient.’

iii. The ‘therapist’ has to discuss his/her own traumatic event.

iv. Relaxation.

SESSION 8

The aims and procedures of Session 7 are repeated.

SESSION 9

Aims:
1. To identify cues related to the individual’s trauma
2. To teach the pupils the technique of thought stopping

Procedure:
Thought stopping is taught by having the person deliberately concentrate on his/her troublesome thoughts. After doing so for about 35 seconds the therapist says stop in a loud commanding voice while hitting the desk. Following this the therapist asks the victim what happened. Typically the victim reports that the thought stopped. This process is repeated several times. The next step involves having the patient stop the thinking with silent verbalisations of the word stop.
If necessary the individual may wear a rubber band around his/her wrist, snap it and say stop, when intrusive thoughts occur.

SESSION 10

Aims:
1. To conclude the intervention programme.
2. To determine the benefits and drawbacks of the intervention.
3. To obtain feedback from the group.

Procedure:
I. Debriefing.
   ii. The children discuss the benefits and drawbacks of the intervention.
   iii. The possibility of follow-ups is discussed.
   iv. The group leader encourages the subjects to provide feedback.
   v. The survivor psalm is repeated.