Acta Academica 32(3): 73-84

Karel Peltzer

Exposure to violence and post-traumatic stress disorder in a rural adult population in South Africa

Summary

The purpose of the study is to identify exposure to violence and its consequences for health in an adult community in rural South African. The instruments used for the interviews included a 24-item Exposure-to-Violence checklist, a post-traumatic stress disorder (PTSD) interview schedule, and the Self-Reporting questionnaire (SRQ-20). The sample included 132 adults: 48 (35%) males and 84 (65%) females in the age range of 19-74 (mean age 33, SD=14,3). Fifty-seven (41%) reported that they had undergone a traumatic experience during their lifetime. Eleven (8%) adults were classified as having a PTSD. With increased exposure to violence, the PTSD score increased but the SRQ score (indicative of minor psychiatric morbidity) did not.

Blootstelling aan geweld en posttraumatiese stressindroom by 'n plattelandse volwasse populasie in Suid-Afrika

Die doel met hierdie navorsing is om die blootstelling en gevolge van geweld onder volwassenes van 'n plattelandse gemeenskap in Suid-Afrika te identifiseer. Die instrumente vir die navorsing sluit die volgende in: 'n 24-item Blootstelling-aan-Geweld vraelys, 'n Posttraumatiese stressindroom (PTSS)-onderhoudskedule en die Selfrapportering-vraelys (SRQ-20). Die steekproef sluit in: 132 volwassenes waarvan 48 (35%) mans en 84 (65%) vroue is tussen die ouderdomme van 19 en 74 jaar (gemiddelde: 33, standaardafwyking: 14,3). Vyf-en-sewentig (41%) rapporteer die belewenis van 'n traumatiese ervaring in hul lewens. Elf (8%) volwassenes is geklassifiseer met PTSS. Met die toename van blootstelling aan geweld het die telling vir PTSS toegeneem maar nie die telling vir selfrapportering nie ('n aanduiding van mindere psigiatriese morbiditeit).

Prof K Peltzer, Dept of Psychology, University of the North, Private Bag X1106, Sovenga 0727; E-mail: peltzerk@unin.unorth.ac.za

Violent crime is a predominant contributing factor to the development of mental health problems, most commonly post-traumatic stress disorder (PTSD) (Hansen *et al* 1995: 134).[1]

Most studies in South Africa have investigated exposure to violence and its consequences for health in an urban context (Gilbert 1995: 873). Data from surveys done by the Human Sciences Research Council (Glanz 1989: 45) show that 22% of urban black respondents reported in 1981 that they, or a family member living with them, had suffered the loss of money or goods to the value of more than R20 in the previous 18 months; 8% reported robbery with violence; 20% assault that caused pain and injury; and 4% rape. Straker *et al* (1996: 52) found in a study among the youth of Alexandra township in 1992 that exposure to violence was excessively high, *eg* 83% had been exposed to assault, 83% to killing, 49% to rape, 61% to arrest/detention, and 13% to eviction.

Several population studies of trauma and PTSD have now been done indicating that, on average, a quarter of all individuals exposed to extreme traumatic stressors that meet criterion A for the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) (American Psychiatric Association 1994: 424-9) go on to develop PTSD (Green 1994: 341). For example, Breslau *et al* (1991: 218) indicate that among urban American young adults a threat to one's life, seeing others killed or badly injured, and physical assault all produced life-long PTSD rates of around 25%, while accident victims rated 12% and rape victims 80%. On the other hand, other studies have found much lower rates of life-long PTSD in the general population, *eg* 1% (Helzer *et al* 1987: 1631). Straker *et al* (1996: 51), using the General Health questionnaire (GHQ-12) (but with a higher cut-off score of 6), found that more than 20% of the South African township youth studied showed psychopathology associated with PTSD.

Few or no studies on the effects of violence and trauma have been done in rural areas of South Africa. The purpose of the present study,

1 This research was supported by a grant from the University of the North. The anonymous reviewers are thanked for their valuable comments.

therefore, was to identify exposure to violence and its consequences for health in a rural South African adult community.

1. Methodology

1.1 Sample

The sample included 132 adults; 48 (35%) males and 84 (65%) females in the age range of 19-74 (mean age 33, SD=14,3). The ethnicity of the group was Northern Sotho.

The field site for the study was about 40 kilometres northeast of Pietersburg in the Northern Province of South Africa. Approval for the study was obtained from community leaders.

The site area consists of eight villages with a total population of 8 071. From the eight villages, one was chosen at random for the study. In the selected village all households including an adult were interviewed. In the case of more than one adult, a single adult was chosen for interview by using the birth date method (the adult whose birthday fell nearest to the interview date was selected).

The population of the area is adversely affected by conditions such as overcrowding, lack of electricity and clean water, poor sanitation, poor roads and transport facilities, a high unemployment rate and poorly equipped schools, all of which are impediments to the development of a healthy community. The rate of formal education in the adult population is relatively high: 76% of the population above 15 years of age have at least four years of formal schooling. A large percentage of men are migrant workers (in the age group 25-49 about 40%) (Alberts 1996: 13f).

A postgraduate research assistant was specifically trained to conduct the study.

1.2 Instruments

The following measurement instruments were used:

- A 24-item Exposure-to-Violence checklist developed on the basis of a literature review, which details various forms of violence commonly experienced in South Africa (Straker *et al* 1996: 46,

Turton & Chalmers 1990: 1191).

Participants were required to indicate whether they had experienced or witnessed violence during their lifetime. Responses were scored as 'yes' or 'no'. Participants furthermore were asked to indicate the type of violence they had experienced. The qualitative responses were recorded in Northern Sotho and subsequently translated into English.

The interview schedule was pilot-tested twice on a sample of 15 participants, and the test-retest reliability was 0.89. The translation from English into Northern Sotho was double-checked by two bilingual researchers by means of back-translation. The inter-rater reliability was found to be 0.8. The Cronbach alpha and the split-half reliability coefficients for the Self-Reporting questionnaire were both 0.75 for this sample.

- A PTSD interview schedule (Watson *et al* 1991).

The instrument is based on the DSM-III-R and has five parts, taking the form of a structured interview. The first part (A) relates to the existence and the type of the traumatic event. The next 17 questions constitute a standard psychological scale divided into three parts: trauma re-experiencing (B), avoidance (C), arousal (D). The assessment of the 17 symptoms is made on a scale from 1 ('no' or 'never') to 7 ('extremely' or 'always'). PTSD criteria are met by the following responses: Section A: 'yes' for history of trauma; Section B: at least one '4' or higher response to items B-1, B-2, B-3, and/or B-4; Section C: at least three '4' or higher responses to items C-1, C-2, C-3, C-4, C-5, C-6, and/or C-7; Section D: at least two '4' or higher responses to items D-1, D-2, D-3, D-4, D-5, and/or D-6.

This structured interview schedule was pilot-tested twice on a sample of 15 participants, and the test-retest reliability was 0.82. The translation from English into Northern Sotho was also double-checked by two bilingual researchers by means of back-translation. The inter-rater reliability was found to be 0.8. The Cronbach alpha and split-half reliability coefficients for the PTSD interview schedule were 0.78 and 0.75 respectively.

- The Self-Reporting questionnaire (SRQ-20) (Harding *et al* 1980: 239).

This instrument was included since comorbidity is frequently associated with PTSD, and some kind of screening for the presence of other psychiatric syndromes is therefore necessary (Litz & Roemer 1996: 156) along with an additional measure for minor psychiatric morbidity. It consists of ten depressive items (*eg* 'Do you feel unhappy?'), five anxiety items (*eg* 'Are you easily frightened?'), and five somatic items (*eg* 'Do you have uncomfortable feelings in your stomach?'). Participants were asked to answer 'yes' or 'no'. Each of the 20 questions was scored 1 or 0, a score of 1 indicating that the symptom had been present during the past month; a score of 0 indicating that it had been absent.

The interview schedule was pilot-tested twice on a sample of 15 participants, and the test-retest reliability was 0.86. The translation from English into Northern Sotho was double-checked by two bilingual researchers by means of back-translation. The inter-rater reliability was found to be 0.9. The Cronbach alpha and split-half reliability coefficients for the Self-Reporting questionnaire were 0.88 for this sample.

The statistical technique used in this study was correlation.

2. Results

2.1 Exposure to violence

The frequencies and percentages of respondents reporting exposure to various forms of violence, in rank order of frequency, are given in Table 1.

The ten most frequently experienced forms of violent and other crimes are theft, physical assault, vehicle theft, harassment, the disappearance of a family member, the murder of relative/friend, the murder of stranger(s), gender violence, crime involving firearms, and racial violence. Males experienced more theft, physical assault, vehicle theft and crime involving firearms than did females, whereas women experienced more gender violence, harassment, disappearance of family members, murders, child abuse and witchcraft-related violence. The most commonly witnessed forms of violence were physical assault, raids (mostly involving liquor), harassment, murder,

Table 1: Frequency of forms of violence experienced and witnessed, by gender in percentages (N = 132)

Form of violence	Violence experienced			Violence witnessed		
	Total	Men	Women	Total	Men	Women
Theft	37	30	7	16	12	4
Physical assault	28	22	5	43	22	21
Vehicle theft	19	15	4	3	0	3
Harassment	12	5	7	19	10	9
Disappearance of family member	13	5	8	10	10	0
Murder of relative/friend	12	3	9	24	16	8
Murder of stranger(s)	11	4	7	23	18	5
Gender violence	10	0	9	20	15	5
Crime involving firearms	14	12	2	16	10	6
Racial violence	11	6	5	17	9	8
Loss of property, job (1)	10	5	5	11	6	5
Sexual abuse and rape	10	0	10	11	8	3
Raids (mainly liquor-related)	9	4	5	26	10	15
History of child abuse	8	2	6	18	10	8
Witchcraft violence	8	3	5	10	3	7
Inter-group violence (2)	6	3	3	19	16	0
Torture	5	3	2	8	3	5
Forced evacuation	5	5	0	8	0	8
Other (3)	3	0	3	11	10	3

(1) Social and family environment as a consequence of political repression
(2) Political, taxi violence, land disputes

gender violence, racial violence and child abuse. Women had witnessed in particular physical assault, raids and harassment, whereas men had witnessed mostly physical assault, murder, inter-group violence and gender violence.

On the 24-item Exposure-to-Violence scale most participants indicated that they had experienced and/or witnessed various forms of violence and other crimes.

2.2 Post traumatic stress disorder (PTSD) and minor psychiatric morbidity (SRQ)

Fifty-seven subjects (41%) reported that they had had a traumatic experience. Eleven (8%) of the total sample could be classified as having a PTSD in terms of the scale. On the PTSD subscales B, C and D the following number of subjects had a PTSD score: B, trauma re-experiencing (n=26; C, avoidance (n=28); D, arousal (n=26). For men the total mean for PTSD was 29.56 (SD=14) and for women 33.03 (SD=22.71). The total item mean score for PTSD (B,C and D) was 1.9 (SD =1.2).

The item mean scores for the PTSD subscales were: PTSD-B = 1.7 (SD =1.2); PTSD-C = 2.0 (SD =1.3); PTSD-D = 1.8 (SD =1.5). Thus subscale C (avoidance) had the highest means, followed by subscale D (arousal) and subscale B (re-experiencing).

For men the total mean for the SRQ was 12.22 (SD =7.33) and for women 7.98 (SD =5.23), indicating a higher minor psychiatric morbidity in men than in women.

Table 2 indicates the correlations between exposure to violence, PTSD cases, gender and outcome measures.

Table 2: Correlations between exposure to violence, PTSD cases, gender and outcome measures

Independent variable	Dependent variable	F	P
Exposure to violence	PTSD score	10.73	<0.02
	SRQ score	10.71	<0.07
PTSD cases	SRQ depressive score	12.03	=0.0008
	SRQ anxiety score	3.67	=0.058
Gender	Exposure to violence	10.71	<0.1
	PTSD score	0.002	<0.9
	SRQ score	14.182	<0.001

There is a significant correlation between exposure to violence and PTSD score. The sample was split into PTSD cases and non-cases and separately correlated with SRQ subscales. The SRQ depressive score was significantly associated with subjects identified as suffering from PTSD. The SRQ anxiety score was not. Finally, there was a significant positive correlation between female gender and SRQ score.

3. Discussion

The frequency of respondents reporting exposure to various types of violence is less in this rural sample than in urban South African contexts, especially before the political transition in 1994 (Glanz 1989: 46, Straker *et al* 1996: 52). The major forms of violence found in this study could be classified as familial and criminal. Barbarin *et al* (1998: 283) note that in South Africa violence has shifted in form from state-sponsored attacks on opponents of apartheid to politically motivated inter-ethnic conflict and finally to community violence which can be classified as familial and criminal. Smit (1992: 212) points out thar violence in South Africa can be explained in terms of a competition between possessor and dispossessed for a commodity. In this sample 41% of people reported that they had had a traumatic experience, a finding which may be similar to other studies. Litz & Roemer (1996: 157) found that between 25% and 69% of the general population experienced at least one traumatic event during their

lifetime. (The percentage varied widely due to differing definitions of a traumatic event!)

The type of violence experienced in this sample is similar to that found in other studies, *eg* in relation to physical attack or seeing someone being hurt or dying (Helzer *et al* 1987: 1634), or to what Ullman & Siegel (1996: 706) or Norris (1990: 1707) found in adult American samples. The traumatic events experienced, as reported in the latter studies, included combat or war-related experiences (13%), serious accident (11%), seeing people hurt or killed (15%), natural disasters (11%), a threat or close call (8%), sexual assault (11%), physical assault (5%), or some other event that was distressing to the respondent (26%). In line with results from other studies (Hansen *et al* 1995: 135), this study also found that men (22%) run a higher risk of being assaulted than women (5%).

This study established that there is a positive relationship between exposure to violence and symptoms of post-traumatic stress, which concurs with other studies (Ullman & Siegel 1994: 328). Minor psychiatric morbidity did not increase with exposure to violence but depression did, indicating comorbidity between depression and PTSD. Kilpatrick *et al* (1987: 481) also found a high comorbidity of depression (82%) among victims of crime suffering from PTSD. This was the case among especially assault victims and victims who had experienced the homicide of a family member or friend (Hansen *et al* 1995: 134). A finding inconsistent with past research was that being female was not significantly correlated with post-traumatic stress symptoms. Breslau *et al* (1991: 219) found among an urban population of American young adults that female gender, neuroticism, and early separation (a childhood history of having had caretakers other than parents for at least a period of months) were associated with increased risk of PTSD after exposure to violence.

In conclusion, post-traumatic stress disorder is one of the most common psychological disorders associated with exposure to violence. Exposure to violence increases the risk of a myriad of mental health and adjustment problems such as depression, substance abuse, sexual dysfunction, life-style changes and social adjustments that need further investigation (Hansen *et al* 1995:

144). Green (1994: 344) found in a community survey that PTSD was significantly associated with the diagnoses of somatisation disorder, schizophrenia, panic disorder, social phobia, drug use, major depression, agoraphobia, simple phobia, and generalised anxiety.

(Mental) health professionals should routinely screen for PTSD among clients who have experienced crimes or other potentially traumatic events (Hansen *et al* 1995: 151). Gilbert (1996: 884) emphasises that primary health care centres in South Africa will need to treat basic trauma efficiently if they are to have any relevance to the needs of the communities in which they serve. Biehl & Miller (1998: 21) describe a programme addressing domestic violence by training township women as community workers. Peeke *et al* (1998: 12) describe the difficulties of working with emotional trauma in a South African community as follows: unreliable community resources, the amount of trauma workers are exposed to, and the personal impact of

Bibliography

ALBERTS M
1996. Dikgale demographic study: phase 2. Unpubl research report Sovenga, University of the North.

AMERICAN PSYCHIATRIC ASSOCIATION
1994. *Diagnostic and statistical manual of mental disorders.* 4th ed. Washington, DC: American Psychiatric Association.

BIEHL P & R MILLER
1998. The new math of grassroots community work. *Reflections* 2: 21-39.

BRESLAU N, DAVIS G C, ANDRESKI P & E PETERSON
1991. Traumatic events and post-traumatic stress disorder in an urban population of young adults. *Archives of General Psychiatry* 48: 216-2.

FREEDY J R & S F HOBFOLL (eds)
1995. *Traumatic stress: from theory to practice.* New York: Plenum.

GILBERT L
1995. Urban violence and health: South Africa 1995. *Social Science & Medicine* 43: 873-86.

GLANZ L E
1989. Coping with crime: the South African public's perceptions of and reactions to crime. Pretoria: HSRC (Report ASS/BBS-7).

GREEN B L
1994. Psychosocial research in traumatic stress: an update. *Journal of Traumatic Stress* 7: 341-62.

HANSEN R F, KILPATRICK D G, FALSETTI S A & H S RESNICK
1995. Violent crime and mental health. Freedy & Hobfoll (eds) 1995: 129-61.

HARDING T W, DE ARANGO M V *et al*
1980. Mental disorders in primary health care: a study of their frequency and diagnosis in four developing countries. *Psychological Medicine* 10: 231-41.

HELZER J E, ROBINS L N & L MCEVOV
1987. Post-traumatic stress disorder in the general population. *New England Journal of Medicine* 317: 1630-34.

KILPATRICK D G, SAUNDERS B E *et al*
1987. Criminal victimization: lifetime prevalence, reporting to police and psychological impact. *Crime and Delinquency* 33: 479-89.

LITZ B T & L ROEMER
1996. Post-traumatic stress disorder: an overview. *Clinical Psychology and Psychotherapy* 3: 153-68.

MKHIZE H
1994. Violent oppression: implications for mental health priorities in South Africa. *Medicine and Law* 13: 193-203.

MUSHANGA T *et al* (eds)
1991. *Criminology in Africa*. Rome: United Nations Interregional Crime and Justice Research Institute.

NORRIS F H
1990. Screening for traumatic stress: a scale for use in the general population. *Journal of Applied Social Psychology* 20: 1704-18, 479-89.

PEEKE S, MOLETSANE T, TSHICHULA C & U KEEL
1998. Working with emotional trauma in a South African community: a group perspective. *Psychoanalytic Psychotherapy in South Africa* 6: 12-28.

SMIT B F
1992. Violence as a weapon of the dispossessed. Mushanga *et al* (eds) 1997: 211-31.

STRAKER G, MENDELSOHN M, MOOSA F & P TUDIN
1996. Violent political contexts and the emotional concerns of township youth. *Child Development* 1996: 46-54.

TURTON R W & B E CHALMERS
1990. Apartheid, stress and illness: the demographic context of distress reported by South African Africans. *Social Science & Medicine* 31: 1191-200.

ULLMAN S E & J M SIEGEL
1994. Predictors of exposure to traumatic events and posttraumatic stress sequelae. *Journal of Community Psychology* 22: 328-38.

1996 Traumatic events and physical health in a community sample. *Journal of Traumatic Stress* 9: 703-20.

WATSON C G, JUBA M P, MANIFOLD V & P A D ANDERSON
1991. The PTSD interview: rationale, description, reliability, and concurrent validity of a DSM-III-based technique. *Journal of Clinical Psychology* 47: 179-86.