

Trauma exposure in pre-school children in a war zone

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Background There has been little reported research into the effect of war on the behaviour and emotional well-being of pre-school children.

Aims To investigate the relationship between exposure to war trauma and behavioural and emotional problems among pre-school children.

Method A total of 309 children aged 3–6 years were selected from kindergartens in the Gaza Strip, and were assessed by parental reports in regard to their exposure to war trauma, using the Gaza Traumatic Checklist, and their behavioural and emotional problems, using the Behaviour Checklist (BCL) and the Strengths and Difficulties Questionnaire (SDQ).

Results Pre-school children were exposed to a wide range of traumatic events. The total number of traumatic events independently predicted total BCL and SDQ scores. Exposure to day raids and shelling of the children's houses by tanks were significantly associated with total behavioural and emotional problems scores.

Conclusions Direct and non-direct exposure to war trauma increases the risk of behavioural and emotional problems among pre-school children, which may present as non-specific psychopathology.

Declaration of interest None.

A range of human-induced traumatic experiences constitute a risk factor for child psychopathology (Yule & Williams, 1990; Yule, 1999). Most studies on the effect of political conflict involved older children and adolescents (Zivcik, 1993; Goldstein *et al*, 1997; Ahmad *et al*, 2000; Thabet *et al*, 2002). An earlier study of Palestinian children aged 6–11 years found significant post-traumatic stress reactions in 41% of them, and these reactions were predicted by exposure to trauma (Thabet & Vostanis, 1999). There has been limited research with pre-school children, with emerging evidence that young children are also affected by trauma, albeit expressing their distress differently (Pfefferbaum, 1997; Gurwitsch *et al*, 1998), particularly when exposed to political conflict (Laor *et al*, 1996; Zahr, 1996). Our aim was to investigate the relationship between exposure to traumatic events in a war zone and behavioural and emotional problems among pre-school children. The hypothesis was that high exposure to war trauma predicts increased behavioural and emotional symptoms.

METHOD

Sample

The Gaza Strip is a narrow area of land bordering the Mediterranean Sea between Israel and Egypt. It has a high population density. The population is approximately 1 million, with 51% under 15 years of age and only 3.4% above 64 years old. There is high unemployment, socio-economic deprivation, family overcrowding and a short life expectancy. Nearly two-thirds of the population are refugees, with approximately 55% of these living in eight crowded camps. The remainder live in villages and towns. An uprising, the al-Aqsa intifada, began in September 2000 and during this time

families have been exposed to various traumatic events.

Pre-school children were selected from ten kindergartens in a representative province (mid zone) of the Gaza Strip, which contained one city, two villages and three refugee camps. Of the kindergartens, six were from the camps, three from the villages and one from Deir el-Balah City. These were considered representative, as they have the same socio-economic characteristics as other areas in the Gaza Strip. A description of the study was sent to the parents and written consent was obtained prior to the study. The data were collected by four clinicians (one psychiatrist and three psychologists) between December 2002 and February 2003. Parents were asked to complete the instruments (the Parent form of the Gaza Trauma Checklist, the Behaviour Checklist and the Strengths and Difficulties Questionnaire; see below) and supply information on their own socio-demographic characteristics. A sample of 310 children aged 3–6 years was selected from the registration books of the ten kindergartens; the parents of 309 children agreed to participate.

Measures

Gaza Traumatic Checklist – Parent Form

The initial version of the Gaza Traumatic Checklist – Parent Form (Thabet & Vostanis, 1999) was developed by the research department of the Gaza Community Mental Health Programme and consisted of 17 items covering different types of traumatic events that the child might have been exposed to. Owing to the changing nature of the political conflict in the region, this checklist was subsequently revised to include new items such as witnessing bombardment of homes by helicopters, heavy artillery and tanks, and witnessing mutilated bodies on television. The main carer completed the checklist ('yes' or 'no' statements). Parents were asked about the events their children had experienced in the preceding 12 months. The checklist scores were analysed as a total score, as well as a categorical variable (low traumatic exposure for scores lower than 5, moderate exposure for scores 5–9 and high exposure for scores of 10 and above; Summerfield, 1993). We also considered the exposure to specific traumatic events, i.e. the presence or absence of each checklist item.

Strengths and Difficulties Questionnaire

The parents completed the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) version for pre-school children, a standardised and widely used measure of behavioural and emotional problems. Out of 25 items, 14 describe perceived difficulties, 10 perceived strengths and one is neutral ('gets on better with adults than other children'). Each perceived difficulties item is scored on a 0–2 scale (0, not true; 1, somewhat true; 2, certainly true). Each perceived strengths item is reversely scored, i.e. 2, not true; 1, somewhat true; 0, certainly true. The 25 SDQ items are grouped into five sub-scales: hyperactivity, conduct, emotional, peer problems and prosocial behaviour (five items per scale). A score is estimated for each scale (range 0–10) and a total difficulties score for the four scales (excluding prosocial behaviour, which was considered different from mental health difficulties), i.e. a range of 0–40. The SDQ has been used in Arab children (Thabet *et al*, 2000).

Behaviour Checklist

The Behaviour Checklist (BCL; Richman & McGuire, 1986) is a standardised measure of behavioural problems specifically designed for pre-school children. It is completed by the parent, who selects which behavioural description out of three or four choices best fits the child over the previous 4 weeks. A score of 0 indicates the behaviour is absent, a score of 1 indicates it is sometimes present or present to a mild degree, and a score of 2 that it occurs frequently or to a marked degree. A total BCL score is estimated. Unlike the SDQ, the BCL has been less frequently used in other cultures, but has previously been applied in Iranian pre-school children during war (Kalantari *et al*, 1990).

Statistical analysis

Descriptive statistics were used to present the characteristics of the sample. The non-parametric Mann–Whitney *U* test and Kruskal–Wallis test analysed the differences between groups for continuous variables that were not normally distributed. The nature of this association was tested out by a linear regression model, with trauma scores as the independent variable and SDQ or BCL total scores as the dependent variable. Data were analysed using the Statistical Package for the Social Sciences, SPSS version 11.0 for Windows.

RESULTS

Demographics

The sample consisted of 309 children (157 boys and 152 girls) with a mean age of 4.7 years (range 3–6); 160 (51.8%) came from the refugee camps, 92 (29.8%) from the villages and 57 (18.4%) from the city. Three-quarters ($n=233$) had a monthly family income of US\$300 or less, with 55 families (17.8%) earning \$300–700 and 21 families (6.8%) having an income above \$750. With regard to employment, 274 mothers (88.7%) described themselves as a housewife and 26 (8.4%) as a civil employee; 123 fathers (39.8%) described themselves as civil employees, with 97 (31.4%) unemployed. The rest of the fathers were farmers ($n=17$; 5.5%), skilled workers ($n=31$; 10.0%) or unskilled workers ($n=41$; 13.3%). One hundred and fifty-three (49.5%) children had fewer than five siblings, 91 (29.4%) had five to seven siblings and 65 (21.1%) had eight or more siblings.

Exposure to traumatic events

The pre-school children were exposed to the full range of traumatic events on the Gaza Traumatic Checklist (Table 1). Frequencies were based on 308 completed questionnaires. The average child experienced three traumatic events (range 0–15). According to the previous classification of the checklist, 237 children (valid frequency 78.5%, because of missing data) were reported to have had low exposure to trauma, 52 (16.8%) had medium exposure and 13 (4.3%) had high exposure to trauma. Because of the small number in the latter category, medium and high exposures were grouped together in a new category for subsequent analysis. Witnessing mutilated bodies and wounded people on television was the most common traumatic event ($n=282$; 91.6%). Witnessing the bombardment of other people's houses by aeroplanes and helicopters ($n=158$; 51.3%) and witnessing the firing by tanks and heavy artillery at neighbours' houses ($n=86$; 27.9%) were also common. The beating ($n=9$; 2.9%) or killing ($n=9$; 2.9%) of a close relative was the least common. There was no gender difference for the number of traumatic events ($z=-0.28$, $P=0.78$). The Gaza Traumatic Checklist scores were significantly higher among children from urban kindergartens (Kruskal–Wallis test, $\chi^2=14.5$, $P=0.001$). This possibly reflected the repeated incursions

by military forces into the city during the period of the study.

Pre-school children's psychopathology

The frequency of BCL items reported as occurring frequently in children living in the Gaza Strip can be compared with findings in children from a British sample (Richman *et al*, 1982) (Table 2). Although the study designs were not identical, there were interesting differences in the frequencies of certain problems. Children in the Gaza Strip demonstrated significantly increased frequencies of faddy eating, difficulty in going to bed, sleeping with their parents, poor concentration, attention-seeking, dependency, temper tantrums, worries and fears. The mean BCL score (12.6) was higher than the mean BCL score (8.9%) of Iranian pre-school children whose fathers had been killed during an earlier war (Kalantari *et al*, 1990). Although there have been several studies on the SDQ norms for older children, there has been limited research with pre-school children, for which reason it was not possible to provide a

Table 1 Children's exposure to traumatic events during the previous year ($n=308$)

Traumatic event	<i>n</i>	%
Watching mutilated bodies and wounded people on television	282	91.6
Witnessing bombardment of other people's houses by aeroplanes and helicopters	158	51.3
Witnessing firing at neighbour's house by tanks and heavy artillery	86	27.9
Hearing killing of a neighbour	62	20.1
Witnessing demolition of a friend's house	57	18.5
Hearing killing of a close relative	56	18.2
Day raids of their house	41	13.3
Night raids of their house	34	11.1
Witnessing firing at their house by tanks and heavy artillery	30	9.7
Witnessing arrest of close relative	27	8.8
Witnessing shooting of a neighbour	25	8.1
Witnessing beating of a friend	14	4.5
Witnessing killing of a neighbour	14	4.5
Witnessing shooting of a close relative	13	4.2
Witnessing demolition of their house	13	4.2
Witnessing beating of a close relative	9	2.9
Witnessing killing of a close relative	9	2.9

Table 2 Frequencies of Behaviour Checklist items reported as 'definitely present'

	Gaza pre-school children age 3–6 years (%)	British children age 3 years ¹ (%)	British children age 8 years ¹ (%)
Poor appetite	16.5	16.3	7.0
Faddy eater	36.6	11.8	11.0
Soiling	10.0	12.8	1.0
Difficulty settling at night	29.1	12.1	8.0
Waking at night	14.6	14.5	2.0
Sleeping with parents	30.4	11.2	2.0
Overactive	25.2	12.9	7.0
Poor concentration	17.5	5.7	6.0
Relationship problems with siblings	9.7	8.5	15.0
Relationship problems with peers	9.7	5.8	7.0
Attention-seeking	20.1	9.2	6.0
Dependency	24.6	5.4	7.0
Difficult to control	12.6	10.7	6.0
Temper tantrums	16.2	5.1	5.0
Unhappy mood	6.5	3.8	5.0
Worries	16.5	2.3	20.0
Fears	14.2	9.2	2.0

1. Data from Richman et al (1982).

similar comparison for the SDQ. There was only one significant difference in respect to gender, with boys scoring higher on the SDQ hyperactivity sub-scale (Mann–Whitney test: $z = -2.01$, $P = 0.04$). There was no significant difference between boys and girls on total SDQ scores ($z = -0.83$; $P = 0.40$) or BCL scores ($Z = -1.65$; $P = 0.09$). Children from inner-city areas were rated statistically higher on SDQ emotional problems (Kruskal–Wallis test, $\chi^2 = 15.2$, $P < 0.001$), prosocial behaviour ($\chi^2 = 6.12$, $P = 0.04$), peer problems ($\chi^2 = 24.3$, $P < 0.001$) and total SDQ scores ($\chi^2 = 24.0$, $P < 0.001$). There was no significant difference according to area of residence on SDQ hyperactivity problem ($\chi^2 = 4.24$, $P = 0.12$) and SDQ conduct problem scores ($\chi^2 = 0.94$, $P = 0.63$), or on the BCL total scores ($\chi^2 = 2.35$, $P = 0.31$). The association between BCL and SDQ scores was low, although it did reach statistical significance (Spearman rank correlation $R = 0.14$, $P = 0.02$).

Relationship between traumatic events and SDQ and BCL scores

The number of traumatic events was entered as the independent variable in a univariate linear regression, with total SDQ score as the dependent variable, and was found to have a significant predictive value ($P = 0.006$, Table 3). The regression analyses were repeated, with the dependent

variable being each of the SDQ sub-scale scores, or the BCL score. Exposure to trauma was found to predict SDQ hyperactivity problem scores ($P = 0.032$), SDQ peer problem scores ($P = 0.013$), and BCL scores ($P = 0.003$). When age and gender were entered as covariates, these were not found to have a moderating effect on total SDQ or BCL scores, which continued to be predicted by the total trauma scores: for total SDQ scores, $B = 0.29$ (95% CI 0.07–0.51), $P = 0.011$; for total BCL scores, $B = 0.36$ (95% CI 0.13–0.58), $P = 0.002$.

When exposure to traumatic events was dichotomised as low or high, and entered as the independent variable in linear regression models, high exposure was associated with total SDQ and BCL scores: for total SDQ

scores; $B = 2.16$ (95% CI 0.69–3.63), $P = 0.004$; for total BCL scores, $B = 1.82$ (95% CI 0.34–3.29), $P = 0.016$.

Impact of specific traumatic events

The relationship between individual events and behavioural scores was found to differ according to the scales used, which might have reflected differences between the two scales (SDQ and BCL), hence the low correlation ($R = 0.14$) between them.

When children were compared on BCL scores according to exposure to each traumatic event, they significantly differed on two items of the Gaza Traumatic Checklist (both had higher BCL scores if exposed to that event, according to Mann–Whitney *U* test): exposure to day raids ($z = -3.36$, $P = 0.001$) and witnessing a neighbour's house being shelled by tanks ($z = -2.33$, $P = 0.020$). The same analysis was repeated with total SDQ scores, i.e. according to exposure to each traumatic event. Exposure to night raids ($z = -3.77$, $P < 0.001$), day raids ($z = 3.36$, $P = 0.001$), witnessing the shelling of their house by tanks ($z = -2.88$, $P = 0.004$), witnessing the arrest of a close relative ($z = -3.16$, $P = 0.002$) and witnessing the beating of a family friend ($z = -2.04$, $P = 0.041$) were all associated with significant increase in total SDQ scores.

DISCUSSION

Impact of trauma on children

The adverse impact of war trauma on children is well established, although the mechanisms and nature of the resulting disorders vary, depending on the traumatic events (acute or chronic, direct or indirect exposure, severity) and the presence of confounding factors (family breakdown, loss of support networks, impact on parents,

Table 3 Linear regression between number of traumatic events (independent variable) and children's behavioural or emotional problems (dependent variable)

Dependent variable	B	s.e.	95% CI	P	R ²
BCL score	0.35	0.11	0.12 to 0.57	0.003	0.030
SDQ					
Total score	0.32	0.11	0.09 to 0.54	0.006	0.026
Conduct score	0.05	0.05	-0.04 to 0.17	0.21	0.005
Emotional score	0.07	0.05	-0.02 to 0.19	0.11	0.009
Hyperactivity score	0.06	0.03	0.006 to 0.14	0.03	0.016
Peer problems score	0.10	0.03	0.019 to 0.16	0.013	0.021
Prosocial score	-0.07	0.05	-0.13 to 0.05	0.39	0.002

BCL, Behaviour Checklist; SDQ, Strengths and Difficulties Questionnaire.

migration or displacement, cultural differences in coping with trauma). Impact also depends on the children's developmental capacity (predominantly cognitive and emotional) to process the meaning of trauma, and their communication of their distress (Yule, 1999). Most previous research has concentrated on older children and adolescents, who have been found to be at high risk of post-traumatic stress, anxiety and depressive disorders, for example in Croatia (Zivcick, 1993), Bosnia (Goldstein *et al*, 1997), Iraqi Kurdistan (Ahmad *et al*, 2000) and Palestine (Baker, 1990; Thabet *et al*, 2002).

Exposure to trauma and psychopathology in pre-school children

Inevitably, there has been less attention on younger pre-school children, possibly for a variety of reasons. Psychiatric disorders in this age-group have a relatively non-specific behavioural or emotional presentation, because of children's different articulation of distress or conceptualisation of traumatic events, which are reflected by measures largely relying on parents' reports. The findings of this study indicate that military violence affects children irrespective of their age, albeit in different ways. Pre-school children in the Gaza Strip were exposed to a wide range of traumatic events. The majority had seen events on television, with just over half witnessing the bombardment of homes from the air. A smaller but significant number had witnessed the beating, shooting or killing of a neighbour or member of the family. In this study, the total number of experienced traumatic events was associated with raised scores on both the BCL and the SDQ. There was also support for a 'dose effect' (Allwood *et al*, 2002), with high levels of exposure to trauma related to more severe behavioural and emotional symptoms.

Overall, the findings are consistent with those of previous studies in this age-group in areas of war. For example, Zahr (1996), in a study on the effect of war on the behaviour of Lebanese pre-school children, found significantly more problems in children aged 3–6 years exposed to heavy shelling over a 2-year period than in a control group living without this threat. Both the exposed and the control groups had behavioural problems scores significantly higher than American norms that could be explained by cultural differences on child-rearing. After Scud missile attacks, displaced

Israeli pre-school children demonstrated increased externalising symptoms, including aggression, hyperactivity and oppositional behaviour, together with stress symptoms, compared with non-displaced children. These were strongly correlated to material symptoms (Laor *et al*, 1996).

Presentation of psychopathology in pre-school children

In contrast with older children, who often present with post-traumatic stress and depressive disorders, pre-school children may respond through increased non-specific behavioural problems and symptoms of underlying anxiety, such as those reported by parents in this study. The high prevalence rates of certain symptoms, for example the increased frequency of temper tantrums, fears, overactivity, attention-seeking and poor concentration might be associated with the exposure to trauma, although such relationships require more in-depth study. Owing to the lack of standardisation of the BCL in this culture, children's high rates of sleeping with their parents or their dependency on them could have a cultural basis, although both these behaviours have also been reported in a study of Lebanese pre-school children (Zahr, 1996). The symptoms for hyperactivity were raised in both the BCL and SDQ measures and significantly increased for boys, which is consistent with Western population studies.

Cultural issues in the interpretation of the findings

Although the impact of trauma on children's mental health has been replicated across cultures, there are also differences in the perceptions of traumatic events and how these are processed (Seedat *et al*, 2004). These may be particularly important in the younger age-group, as they can be mediated by cultural norms of parenting. In a previous study (Thabet *et al*, 2000) we found substantially different perceptions of concepts such as emotional overprotection and separation anxiety among Palestinian mothers, compared with mothers from Western countries. In this study, hyperactivity scores were significantly predicted by exposure to trauma. These symptoms, as well as conduct problems, require further validation in this population. This obviously raises issues on the cross-cultural standardisation of instruments for pre-school children and their reliance on adult reports, which are discussed in the next section.

Limitations

The low agreement between the two instruments (SDQ and BCL) may be explained as reflecting different construction, the relatively limited overlap of items or differential application across cultures. The SDQ has been validated in this culture and age-group, but there were some questions as to the validity of emotional items (Thabet *et al*, 2000). The BCL has been standardised as a screening instrument, with some cross-validation in non-Western cultures (Richman & McGuire, 1986; Pavuluri *et al*, 1995). As there has been no previous study comparing these two widely used measures in different cultural groups of pre-school children, the cross-cultural validity of these instruments should be investigated further. However, despite these potential limitations, the total scores on both scales were significantly predicted by exposure to trauma.

We also need to acknowledge a limitation common to epidemiological research with pre-school children, i.e. the over-reliance on adult reports. Children of this age are less cognitively able to provide direct information, but the completion of measures by their parents poses some methodological difficulties. Parents can never be completely accurate about their child's exposure to the various traumas, and their own experiences and perception of the conflict may influence their responses (Green *et al*, 1991). The more severely affected parents could have thus reported a higher number of traumas. Reports from kindergarten teachers or direct assessment methods designed for pre-school children would have added to the value of the findings.

This study did not investigate the moderating and mediating effect of other factors, which may have been associated with children recruited from different backgrounds. Qouta *et al* (2003) recently demonstrated that maternal symptoms of post-traumatic stress disorder (PTSD) were important determinants of their child's PTSD. This factor, together with family functioning and parenting style, was not accounted for in this study. Earlier studies have noted that levels of social support, family cohesiveness and communication could mediate the consequences of war (Cohen & Dotan, 1976; Laor *et al*, 1996; Zahr, 1996). Post-traumatic symptoms in displaced children have been correlated with their mothers' avoidant symptoms,

with the authors suggesting that maternal capacity to cope with stress is an important protective mechanism (Laor *et al*, 1997). Future research should involve the psychiatric assessment of primary carers in parallel with that of the children, which would enable a better understanding of the impact of political conflict on parents and children, and the interaction between these three variables. In addition, studies on the underlying protective and risk mechanisms should include potentially confounding variables such as extended family and social support networks, coping strategies, and other secondary losses and life events. Finally, more in-depth research should measure the impact of the number and severity of exposure to different types of trauma, rather than exposure to the count of traumatic events.

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REFERENCES

Ahmad, A., Sofi, M. A., Sundelin-Wahlsten, V., et al (2000) Post traumatic stress disorder in children after the military operation 'Anfal' in Iraqi Kurdistan. *European Child and Adolescent Psychiatry*, **9**, 235–243.

Allwood, M. A., Bell-Dolan, D. & Husain, S. A. (2002) Children's trauma and adjustment reactions to violence and non-violent war experiences. *Journal of the American Academy of Child and Adolescent Psychiatry*, **41**, 450–457.

Baker, A. (1990) The psychological impact of the Intifada on Palestinian children in the occupied West Bank and Gaza: an exploratory study. *American Journal of Orthopsychiatry*, **60**, 496–505.

Cohen, A. A. & Dotan, J. (1976) Communication in the family as a function of stress during war and peace. *Journal of Marriage and the Family*, **38**, 141–148.

Goodman, R. (1997) The Strengths and Difficulties Questionnaire. *Journal of Child Psychology and Psychiatry*, **38**, 581–586.

Goldstein, R. D., Wampler, N. S. & Wise, P. H. (1997) War experiences and distress symptoms of Bosnian children. *Pediatrics*, **100**, 873–878.

Green, B. L., Korol, M. & Grace, M. C. (1991) Age, gender, and parental effects on PTSD symptoms. *Journal of the American Academy of Child and Adolescent Psychiatry*, **30**, 945–951.

Gurwitsch, R. H., Sullivan, M. A. & Long, P. J. (1998) The impact of trauma and disaster in young children. *Child and Adolescent Psychiatric Clinics of North America*, **7**, 19–32.

Kalantari, M., Yule, W. & Gardner, E. (1990) Behavioural characteristics of Iranian martyrs' pre-school children. *Bereavement Care*, **9**, 5–7.

Laor, N., Wolmer, L., Mayes, C., et al (1996) Israeli preschoolers under Scud missile attacks: a

CLINICAL IMPLICATIONS

■ Exposure to war trauma increases the risk of behavioural and emotional problems among pre-school children, as previously established in older age-groups.

■ The impact of trauma on pre-school children possibly presents with non-specific symptoms and disorders, and this needs to be taken into consideration in children's clinical assessment.

■ High-risk traumatic events may include direct and non-direct exposure to acts of violence.

LIMITATIONS

■ Studies with pre-school children may be subject to the effect of parental recall and parental mental health on their reporting of children's problems; reports from other informants (predominantly teachers) and observational assessments could have corroborated information obtained from parents.

■ Measures of pre-school behavioural and emotional problems require further validation in different cultural groups.

■ Potentially moderating and mediating factors such as family and social support networks were not assessed in this study.

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developmental perspective on risk-modifying factors. *Archives of General Psychiatry*, **53**, 416–423.

Laor, N., Wolmer, L., Mayes, L. C., et al (1997) Israeli preschool children under Scuds: a 30-month follow-up. *Journal of the American Academy of Child and Adolescent Psychiatry*, **36**, 349–365.

Pavuluri, M. N., Luk, S. L., Clarkson, J., et al (1995) A community study of preschool behaviour disorder in New Zealand. *Australian and New Zealand Journal of Psychiatry*, **29**, 454–462.

Pfefferbaum, B. (1997) Posttraumatic stress disorder in children: a review of the past 10 years. *Journal of the American Academy of Child and Adolescent Psychiatry*, **36**, 1503–1511.

Qouta, S., Punamaki, R. L. & El Sarraj, E. (2003) Prevalence and determinants of PTSD among Palestinian children exposed to military violence. *European Child and Adolescent Psychiatry*, **12**, 265–272.

Richman, N. & McGuire, J. (1986) Screening for behavioural problems in nurseries: the reliability and validity of the Preschool Behaviour Checklist. *Journal of Child Psychology and Psychiatry*, **27**, 7–32.

Richman, N., Stevenson, J. & Graham, P. J. (1982) *Pre-school to School: A Behavioural Study*. London: Academic Press.

Seedat, S., Nyamai, C., Njenga, B., et al (2004) Trauma exposure and post-traumatic stress symptoms in

urban African schools: survey in Cape Town and Nairobi. *British Journal of Psychiatry*, **184**, 169–175.

Summerfield, D. (1993) Health and human rights in Gaza. *BMJ*, **306**, 1416.

Thabet, A. A. & Vostanis, P. (1999) Post traumatic stress reactions in children of war. *Journal of Child Psychology and Psychiatry*, **40**, 385–391.

Thabet, A. A., Stretch, D. & Vostanis, P. (2000) Child mental health problems in Arab children: application of the Strengths and Difficulties Questionnaire. *International Journal of Social Psychiatry*, **46**, 266–280.

Thabet, A. A., Abed, Y. & Vostanis, P. (2002) Emotional problems in Palestinian children living in a war zone: a cross-sectional study. *Lancet*, **359**, 1801–1804.

Yule, W. (1999) Post-traumatic stress disorder. *Archives of Disease in Childhood*, **80**, 107–109.

Yule, W. & Williams, R. (1990) Post-traumatic stress reactions in children. *Journal of Traumatic Stress*, **3**, 279–295.

Zahr, L. K. (1996) Effects of war on the behaviour of Lebanese pre-school children: the influence of home environment and family functioning. *American Journal of Orthopsychiatry*, **66**, 401–408.

Zivcik, I. (1993) Emotional reactions of children to war stress in Croatia. *Journal of the American Academy of Child and Adolescent Psychiatry*, **32**, 709–713.