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Child development and family mental health in war and military violence: The Palestinian experience

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The article reviews developmental research among Palestinians living in Gaza. The aims are, first, to analyze how exposure to traumatic events associates with children's mental health and their cognitive, emotional and social development. Second, we aimed to model familial and symbolic processes that can either harm or protect the mental health of children. Third, we wanted to learn who the resilient children are in conditions of war and military violence. The reviewed research has been conducted in the context of a Palestinian non-governmental organization, the Gaza Community Mental Health Programme, during the political upheavals involving hopes for peace and intensive war and violence: the First Intifada (1987–1993), the Palestinian Authority rule (1994–) and the Second Al Aqsa Intifada (2001–). The results show that life threat, violence and losses form a risk for increased psychological distress. There are, however, a myriad of child, family and society related factors and psycho-socio-physiological processes that protect child development and mental health. They include, e.g. loving and wisely guiding parenting, children's flexible and high cognitive capacity, flexible and multiple coping strategies and narrative and symbolic nocturnal dreaming, as well as social support and good peer relations. Different models explain psychological distress and positive resources, including child resilience. Exposure to trauma is crucial in predicting distress, while familial and developmental issues are important in building resilience. Children's conscious and unconscious cognitive-emotional processes are crucial for underlying mental health and knowledge about them is important in tailoring evidence-based preventive interventions among war victims.

Keywords: childhood trauma; cognitive and social development; mental health; Palestinians; PTSD; trauma; war

The Israeli–Palestinian conflict about land and self-determination has lasted for more than three generations and it provides a sad example of accumulation of military violence, animosity and revenge. Palestinian territories, including Gaza, have been under Israeli military occupation since 1967. This has affected the people's lives from cradle to grave. In addition to material losses, economic disaster and lack of independence, the unsolved military conflict heavily burdens mental health and child development. Like in other contemporary military conflicts, Palestinian children and adolescents are witnessing atrocities and humiliation and have chosen actively to participate in the national resistance and military confrontations. For parents, it is painful and shameful to see their children suffering and to realize their own inability to protect them from insecurity, destruction and horrors. Establishing the Gaza Community Mental Health Programme (GCMHP) in 1990 was an attempt to transfer this pain into activity and empowerment. The philosophy is that paying attention to mental health is crucial in adverse and dangerous conditions, both in healing and preventing psychopathology and encouraging resilience. On political level, good mental health is considered preconditions for peace and human rights, which the GCMHP also actively promotes.

The main activities of the GCMHP are clinical and counseling work covering all the domains of life and the whole area of Gaza and providing training for professional mental health specialization. The activities are based on a community approach that entails active cooperation with schools, nurseries and survivor organizations and uncovering and encouraging family and community resources. The purpose of our research is to serve the interventions and preventive activities among traumatized families and children, and among victims of human right abuse. We wish to increase understanding of child development in general and in the life-endangering conditions in Gaza in particular. We are convinced that community mental health services can benefit from the methodological innovations, scientific findings, and evidence-based material. Many of our research questions originate from worried parents and teachers, who wanted to know, for instance, whether playing war and funerals are detrimental or healing, and how to prevent children's aggressive behavior. Accordingly we have studied the risk and protective factors in child development to enhance effective preventive interventions and improve counseling parents and teachers.

In this article we describe the main findings of our research that began during the First Intifada (1987–1993), continued through seven years of official peace and building of the nation after the Oslo agreement, a period that was called Palestinian Authority (PA) (1994–) and is currently challenged by the ongoing Al-Aqsa Intifada (2001–). We will analyze the impact

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of war trauma and military violence on children's mental health, cognitive, emotional and social development and family relations and mental health, and seek especially processes that can protect children's healthy development and encourage resilience. Table 1 presents the basic characteristics of studies that are discussed, and they are referred by corresponding Arabic numbers.

The nature of trauma

In prolonged military conflict children experience both dramatic traumatic events and chronic adversities and stressors. Terr (1991) has conceptualized them as *Type I* and *Type II trauma* exposures that demand specific responses, coping processes and adaptation skills. Type I trauma refers to a one-time, horrific and clear cut life-endangering experience that in the Palestinian context would most likely be witnessing killing, being wounded and experiencing destruction of the home. Type II trauma refers to chronic stress and adversities that are a part of children's daily life. In the Palestinian context these are poverty, social inequality and dangerous living conditions. Yehuda and McEwen (2004) in turn, classified traumatic events according to their content, physical and emotional proximity and frequency. In Palestinian case, physical proximity would refer e.g. to participating street fighting, and witnessing nightly air raids and destruction. Emotional proximity would involve e.g. death and injury of family members and friends and own degrading treatment.

During the First Intifada, the GCMHP conducted a survey of 1323 children to discover the amount of Type I traumatic experiences. The results revealed that 74% of the children had experienced assaults towards family members and 38% had lost a close person to prison. Of the children 88% reported night raids at home and 51% reported having been beaten by the soldiers (Abu Hein, Qouta, Thabet, & El Sarraj, 1993). The military violence was intensive also during the Al Aqsa Infifada. For instance, studies show that 52–77% of the children had witnessed killing, 88% experienced night raids at home, and 30% of them had had a family member injured (Qouta, Punamäki, & El Sarraj, 2005a).

Researchers have analyzed what characteristics make experiences especially traumatic and why. It seems that highly traumatic events are those that shatter our fundamental, "childish" beliefs that the world is a safe and fair place, that people are benevolent, and that one is worthy of protection (Janoff-Bulman, 1989). The unexpectedness of trauma deprives people of material and mental preparation and evokes feelings of helplessness. Loss of control and submission to superior malevolent forces thoroughly impacts the basic human illusion of invulnerability and security.

Because the family symbolizes security and protection, witnessing humiliation and violence towards parents and other family members is especially traumatic (Dybdahl, 2001; Macksoud & Aber, 1996). An earlier study confirmed that women appraised events that involved harming and humiliation of their family members as more traumatic than when the military violence was targeted towards themselves (Punamäki, 1986). Epidemiological data among Gaza Palestinians further evidenced that witnessing threats to the children and degrading acts towards the husband was associated with psychopathology among women, while military violence towards themselves made men vulnerable (Punamäki & Qouta, 2006) Study 8. Children who had experienced severe violence towards their families including detention and killing, showed a higher level of sleeping difficulties than did children who themselves had been the target of military violence (Punamäki, 1997) Study 7.

Degrading treatment and threats towards family members are common when the military forces detain political activists and destroy their houses (B'Tselem, 1998) We have observed that psychological violence such as *sham* executions, frightening and humiliating parents and siblings are very hard for children. Many of them remember their emotions and perceptions more vividly than the general material destruction. "Spitting in the face is worse than hitting", a mother succinctly informed us. This is in accord with general trauma research showing that a single occurrence or one characteristic of a trauma is usually not enough to cause psychopathology. Rather, it is the meaning attached to the trauma and subjective appraisal of its severity and consequences that are crucial (Ozer et al., 2004).

We lack systematic knowledge about whether different kinds of traumas initiate specific appraisals, coping processes and mental health problems. Accordingly, we compared the impact of military violence in adulthood and maltreatment in childhood on social support and mental health in an epidemiological data (Punamäki, Komproe, Qouta, El Masri, & de Jong, 2005) Study 8. The results showed that people who had experienced childhood maltreatment enjoyed lower levels of social support than those exposed to adulthood military violence, and even less support than those who had had both kinds of trauma. However, both adulthood military violence and childhood maltreatment were associated with high levels of psychiatric symptoms such as depression, anxiety and somatization The results agree with general trauma research that argues that social and collective meanings of trauma determine the attitudes towards the victims, e.g. rape victims receive negative attention and mourners positive attention (Foa et al., 1991). In the Palestinian context, military-related trauma initiated a social support and possible admiration, whereas family-related maltreatment resulted in social rejection and isolation.

Similar to children in other adverse conditions (Sameroff, 1999) there is some evidence that the Palestinian children are capable of enduring, coping and adjusting in low risk conditions. However, after accumulation of severe trauma, their vulnerability to mental health and developmental problems increases dramatically. Supporting the threshold *effect model*, a research showed that emotional and behavioural disorders were more probable when children had been exposed to more than five traumatic experiences, such as death and imprisonment of family members, destruction of the home and witnessing a shooting (Garbarino & Kostelny, 1996). However, we found that the association between military trauma and developmental and psychological problems is not linear, but rather can form a reversed U-shape. It was evident in a study where the quality of peer relations first deteriorated with the increase of military trauma, but improved again with more severe exposure (Qouta, Peltonen, Punamäki, & El Sarraj, 2006) Study 11. It is possible that exposure to trauma in the context of national struggle for independence brings about social support and admiration that genuinely strengthens children. There can also be a pressure to heroism, which explain the intactness. The results contradict *the dose-effect-model* substantiated among adult trauma victims showing that a higher dosage of traumatic exposure invariably leads to higher psychological distress (Breslau, 1998).

Table 1

Reviewed research by Gaza Community Mental Health Programme (GCMHP) on child development and family mental health in conditions of military violence

Research tasks	Sample	Measures	Main findings
THE FIRST INTIFADA (1986–1993)			
1. Association between traumatic events and children's mental health, cognitive and creative processes: the role of risk and protective factors	108 children (10–11 years); high and low quartiles of trauma exposure in a community sample	• Political activity • Cognitive capacity and IQ • Creativity • Self-esteem • Anxiety and neuroticism	• High level of traumatic events was associated with active participation in the Intifada, and with concentration, attention and memory problems. • Political activity could not protect child mental health. • Exposure to trauma was not associated with creativity and IQ.
2. The role of parenting in protecting children's mental health and encouraging resilience in conditions of military trauma	108 children (10–11 years) derived from a community sample: high and low level of traumatic events	• Perceived mothering and fathering: loving and caring, punitive and neglecting practices	• Loving and wisely disciplining parenting protected child mental health from trauma impact. • Exposure to trauma increased rejecting and neglecting parenting, which in turn decreased children's intellectual, creative, and cognitive resources. • Political activity was associated with psychological problems among children with poor parenting.
3. Child behavior and emotional disorders during curfew	220 children (8–14-years) and their mothers	• Externalizing and internalizing symptoms • Psychiatric disorders • Family relations	• Children showed more both aggressive and withdrawal symptoms when there were in prolonged curfews
4. Mother's and children's psychological distress when experiencing and witnessing home destruction	240 children (8–14 years) and mothers who had lost home or witnessed house destruction, and controls	• Externalizing and internalizing symptoms • Parent's psychological distress	• Home destruction was associated with high level of depressive, anxiety and paranoid symptoms among mothers. • Among children also witnessing destruction was associated with psychological disorders such as bedwetting and withdrawal.
THE PALESTINIAN AUTHORITY (1994–)			
5. Impact of peace (Oslo agreement) on child mental health, and the role of participation and attitudes towards peace	Follow-up of the First Intifada sample: 90 children (12–13 years)	• Exposure to trauma • Participating peace festivities • Attitudes towards peace • Self-esteem • Anxiety and neuroticism	• The prospects of peace were associated with a decrease of distress and increase of self-esteem. • The positive change was present among children who had favorable attitudes towards peace and participated in peace festivities.
6. Resilience factors predicting child mental health and family systems approach to distress and resilience in traumatized families	Follow-ups of the First Intifada sample: 86 adolescents (14–15 years) and 75 adolescents (17–18 years) with their parents and two siblings	• Determining factors: IQ, creativity, cognitive capacity • Outcome variables: PTSD, depression, self-esteem, quality of life, resilience	• A balance between IQ and creativity predicted good recovery from trauma. • Older siblings were more vulnerable to the trauma impacts than other siblings and parents, evidenced by high PTSD and depression. • Compensatory dynamics found between parents and children in expressing distress and resilience.

Table 1

Continued

Research tasks	Sample	Measures	Main findings
7. Mental health role of nocturnal dreaming in traumatic conditions	268 Gaza children (6–15 years) formed the trauma group; 144 children from Galilee are the non-trauma group	• Dream reports from seven-night diary • Child- and family-related traumatic events • Psychological distress: anxiety, depression, PTSD, aggression • Coping strategies	• Dreams that could moderate between trauma and psychological distress were bizarre, vivid and active, and involved joyful feelings and happy endings. • Traumatic events were associated with mundane persecution and unpleasant repetitive dreams, which in turn, associated with psychological distress. • Compensatory dream function was shown in that daytime repressive coping (denial and numbing) was associated with high nocturnal dream recall.
8. Epidemiological study on prevalence of psychiatric distress and disorder among Gaza population and psychosocial protective factors	585 women and men (16–65 years), a random sample	• Nature of trauma: military and private, adult- and childhood • ICD-diagnoses • Psychological distress: anxiety, depression, PTSD, hostility and paranoid ideation, somatization	• Nature of trauma was decisive for social support, but not for psychological distress. • Childhood maltreatment was associated with low social support, and adulthood military trauma with high support. • Both kinds of trauma were associated with elevated levels of psychological distress, and psychiatric disorders.
9. Prevalence of behavioral and emotional disorders, and trauma and family related determinants of child mental health	660 children (6–16-years), their parents and teachers, a random sample	• Externalizing and internalizing symptoms • Parenting practice • Children's somatic health	• Exposure to severe military violence was associated with externalizing symptoms, especially among boys, and with internalizing symptoms especially among girls. • Supportive and non-punitive parenting could buffer against military violence increasing antisocial and aggressive behavior. • A third of children were classified as resilient (high exposure and low distress). • Characteristic to resilient children were that their parents had good mental health, and themselves a good somatic health history.
THE AL AQSA INTIFADA (2001–)			
10. Psychological distress among mothers and children during the Al Aqsa Intifada	121 children (6–16 years) and mothers	• Psychological distress of PTSD, anxiety, depression and hostility	• Specific determinants of PTSD dimensions: Vulnerable to intrusive symptoms were younger girls whose mothers were high in PTSD, and vulnerable to avoidance symptoms were children exposed to severe military violence.
11. Effectiveness of preventive school intervention: socio-emotional processes and mental health	240 children (11 and 13 years) living in areas of low and high violence	• Mental health: PTSD, anxiety, depression and resources • Peer and sibling relations • Aggressiveness • Self-efficacy • School atmosphere	• Traumatic events were associated with both direct and indirect aggression. • Pilot results show that traumatic events can complicate social relations: peer relations are better and sibling relations conflicting among children with severe trauma. • No results are available on the effectiveness of prevention.

Military trauma and developmental domains

Traumatic events have comprehensive affects on human life, involving mental and somatic health, family relations, world view, attributions and emotions (Brewin & Holmes, 2003; Herman, 1992). Similarly, we argue that war and military violence profoundly impact children's cognitive development, including memory, problem solving and moral reasoning, emotional expression and recognition and social development, including parent–child interaction and peer and sibling relations. Trauma further shapes symbolic development, meanings, narratives and metaphors of life (for reviews, see (Pfefferbaum, 1997; Punamäki, 2002). Moreover, there is some evidence that childhood trauma affects hormonal and psychophysiological regulation (Carlson et al., 1995; Victoreff & Qouta, 2005) and brain anatomy and functioning (Bremner & Narayan, 1998), which in turn decisively alters the developmental paths. Our studies have focused on cognitive capacity, the emotional and symbolic processes of dreaming and play, parent–child-interactions, and sibling and peer relations, as well as attachment style in infancy and adulthood. We have sought the answer to the question of what kind of cognitive, social-emotional and symbolic responses serve as protectors in children's lives.

Mental health and psychopathology

There is growing evidence of increasing mental health problems among children living in conditions of war and military violence. These include posttraumatic stress disorder (PTSD), depression, sleeping difficulties and anxiety (Aldwin & Sutton, 1996; Laor, Wolmer, & Cohen, 2001; Thabet, Abed, & Vostanis, 2002; Thabet & Vostanis, 1998). PTSD is an important concept revealing the basic mechanisms of how trauma interferes with effective cognitive-emotional processing of painful experience, and human capacity to integrate experience is overwhelmed. The failure of this integrative process is evident, first, in the intrusive symptoms of PTSD, such as intrusive, vivid and uncontrollable memories of the trauma scenes, as in flashbacks and nightmares. Second, in contradiction to the memory intrusion, trauma victims show a tendency of trying to avoid the painful and shameful memories, to numb their trauma-related feelings and to deny the importance of trauma. These are known as the avoidance symptoms of PTSD. Third, trauma victims typically "see monsters everywhere" indicating vigilance for threats and a generalized state of hyperarousal resulting in concentration problems and irritability. These are the hyperarousal symptoms of PTSD.

Research based on large samples and sophisticate methods gives evidence about high prevalence of PTSD and other psychopathology among Palestinian children during the Al Aqsa Intifada (Thabet et al., 2002; Thabet & Vostanis, 1998). Similarly we found an unusually high level of PTSD among children who experienced violence and atrocities during the Al Aqsa Intifada, ranging between 58–65% (Qouta, Punamäki, & El Sarraj, 2003) [Study 10]. As a comparison, earlier results showed that about 20–25% of children suffered from PTSD during Palestinian Authority (Miller, El Masri, & Qouta, 2000a) [Study 9], which corresponds with the level of PTSD found earlier among Israeli (Laor et al., 1997) and Lebanese (Saigh, 1991) children. Similarly high levels of PTSD have been found among Iraqi children during the First Gulf War (85%), and in a 10-year follow-up (Dyregrov, Gjestad, & Raundalen, 2002)

As a part of interventions, we have focused on mental health consequences of certain traumatic events that are specific to the Gaza military situation and may be unique in their severity, intensity and length. These are curfews, destruction of homes and sonic booms.

During the First Intifada, citizens of the Gaza Strip were confined to their homes during curfew every night from 7 p.m. to 4 a.m. Curfews were also randomly imposed at daytime for various lengths of time. During the Gulf War, for example, a continuous curfew was imposed for 42 days (B'Tselem, 1998). Although the Palestinians told dozens of jokes about the occupation, the soldiers and of themselves under curfews, the restriction of movement placed a hard burden on family relations. Under curfew, all aspects of daily life were brought to a halt, which resulted in a breakdown of normal patterns of social, intimate and economic interactions. Parents expressed strong worry about the impact of constant curfews on the wellbeing and behaviour of children, and our results converge with their concern. They showed that 66% of the children fought with each other more during the curfew than before, 54% were afraid of new things, 38% developed aggressive behavior, 19% suffered from bed-wetting and 2.3% developed speech difficulties (Qouta & El Sarraj, 1992) [Study 3].

Destruction of the home is very painful for children and families. Home is not only a shelter, but also the heart of family life filled with memories and attachment to familiar objects and feelings of security and consolation. The Israeli army frequently uses destruction of houses as collective punishment for the resistance. United Nations (UN, 2006) calculated that the Israeli army demolished or damaged nearly 12,000 Palestinian houses in the West Bank and 4,000 of them were completely destroyed in the years 2000–2004. In Gaza, whole residential areas have been bulldozed and destroyed (B'Tselem, 1999). During the First Intifada we compared the psychological distress of parents and children who had lost their homes or witnessed house destruction of other people's houses and families that remained intact. The parents, especially mothers, who lost their homes showed a higher level of anxiety, depression and paranoid symptoms than those who had just witnessed the events or those who had had neither experiences. Sixty percent of the children who had lost their homes suffered from intrusive re-experiencing and withdrawal symptoms and night terrors, whereas in the witness group, the symptoms varied between 28–41% and in the control group between 4–12%. The results thus indicate that witnessing violence targeted at others can also form a risk for child mental health. (Qouta et al., 1996) [Study 4].

Restriction of movement and sonic booms formed the core collective punishment of Gaza population, causing severe stress during the Al Aqsa Intifada. The Gaza Strip was cut in three zones, and checkpoints between them were arbitrarily opened and closed. The everyday stress was substantial, for instance medical personnel could not reach their patients and parents were unable to return home from work. Preventing mourners from saying goodbye to dying relatives evoked strong feelings of guilt and helplessness. Sonic booms are a new kind of harassment that is caused by Israeli jets intentionally breaking the sound barrier to create supersonic booms over Gaza. They produce an enormously high and strong sound many times during each night, on arbitrarily chosen nights of the week. They severely deteriorate children's sleep and cause uncontrollable fears among babies and children, causing anxiety, panic attacks, poor concentration and constant

alertness, as well as withdrawal, stuttering, ticks, regressive behavior and new somatic problems (Court evidence, http://www.gcmhp.net).

Concerning long-term impact of traumatic stress on children's mental health, our results involve both good and bad news. The prospects of peace, provided by the Oslo agreement, were associated with a decrease of distress and increase of self-esteem, especially among children who participated in peace festivities (Qouta, Punamäki, & El Sarraj, 1995b) Study 5. Although psychological distress generally decreased from the First Intifada, the children who were exposed to severe military trauma continued to suffer from psychological distress in their adolescence even in relatively peaceful times. In more detail, military trauma in middle childhood and stressful life-events in early adolescence formed a risk for PTSD and depressive symptoms and decreased satisfaction with the quality of life in adolescence (Qouta, Punamäki, Montgomery, & El Sarraj, 2007) Study 6.

Cognitive capacity, creativity and intelligence

Societies struggling for survival and recognition have great hopes for the next generation. Palestinian families expect their children to do well in school so that they could lead more decent and respected lives than their refugee grandparents and persecuted parents. Children themselves also advocate being the saviors of their parents' defeated pride, compensating for their suffering, and fulfilling the promises for a better future. We know that exposure to trauma can severely burden mental capacity and information processing, and deteriorates concentration and memory functioning (Cicchetti, 2002; Yehuda & McEwen, 2004). It is easy to imagine the strain that the Palestinian children experience when they want to excel at school and bring good marks home to their parents, but traumatization interferes with their aspirations.

We examined how traumatic experiences of violence and loss are associated with the children's cognitive capacity, intelligence, creativity and school performance. The results revealed that children exposed to severe trauma had concentration problems and low cognitive capacity and thus had difficulties processing new information and retaining old knowledge (Qouta, Punamäki, & El Sarraj, 1995a) Study 1. Information processing was typically less flexible and more rigid among severely traumatized children than among less traumatized ones (Qouta, Punamäki, & El Sarraj, 2001) Study 1 & 6. An community study revealed that school performance was weaker among children who had lost their family members through imprisonment and death, and faced military confrontations themselves (Miller et al., 2000a) Study 9. It is noteworthy that traumatic experiences were not associated with the children's intelligence and creativity. The results are in line with scarce earlier research that indicates that information processing such as attention, recall and concentration is vulnerable to trauma, while stable structural characteristics such as IQ and personality remain more intact (Olff, Langelanda, & Gersons, 2006).

We further examined whether intelligence, creativity, cognitive capacity and mental flexibility can protect the children's mental health in life-endangering conditions. The rationale is that the function of IQ is to help humans to adapt by providing flexible and novel ways of dealing with dangers and integrating earlier successful experiences into new sophisticated problem solutions (Sternberg, 1990). Creativity, in turn, involves taking new perspectives, cherishing rich imaginary, integration of conscious and unconscious processes and large repertoire of expressing emotions (Pope, 2005). Earlier research has suggested that high intelligence, originality of imagery capacity, and high self-efficacy contribute to children's resiliency in adverse conditions (Luthar, Cicchetti, & Becker, 2000; Masten & Coatsworth, 1998). We found one study showing that also in war conditions high intellectual and sophisticated problem solving capacity could prevent psychopathology among Lebanese children (Saigh, 1991).

Our results confirmed that flexible information processing and high cognitive capacity were associated with good psychological adjustment and could even protect children's mental health from the negative impacts of military violence (Qouta et al., 1995a) Studies 1 & 6. A follow-up study showed that good cognitive capacity in middle childhood, characterized by accurate and speedy responses to stimuli, predicted good mental health in adolescence, indicated by lack of PTSD (Qouta, Punamäki, & El Sarraj, 2005b) Study 6. Children with high mental flexibility and cognitive capacity were accurately attentive and adequately responsive to stimuli and appropriately stored and retrieved matching information. These cognitive capacities are also crucial for optimal awareness and interpretation of the threatening and life-endangering stimuli in military violence. These processes are rehearsed and trained in cognitive-behavioral therapy with traumatized children (Yule, 2002) and adults (Foa, Zoellner, Feeny, Meadows, & Jaycox, 2000). It is important to realize that effective therapies are based on natural cognitive-emotional healing processes that children naturally use in struggling for balance in the life threat.

Our results further revealed that although high IQ was directly associated with resourcefulness indicated by high self-esteem, it was not enough to buffer the negative trauma impact on children's mental health (Qouta et al., 1995b) Study 1. It was evident that not IQ alone but rather a balance between intelligence and creativity could protect children's mental health from the long-term negative impact of military trauma (Punamäki, Qouta, & El Sarraj, 2001) Study 6. In other words, protective processes involve both the intellectual ability to adequately interpret, frame and analyze traumatic events and creative ways of emotional recognition, reconstructing and integration painful experiences. That enables creating new metaphoric and meaningful narratives of the trauma history, which strengthens children to face new stressors and challenges.

Symbolic processes

When you walk the streets of Gaza after bloody confrontations, bombings and curfews, you see children playing "war, fighting and Arabs and Jews". When a family's father or brother has been beaten and detained, all children in the neighbourhood play "prison games", and when a loved one is killed, repetitious funerals are going on in children's rooms and doll houses. A great part of the UN sponsored interventions in war areas involve the children drawing their painful memories and rehearsing them in symbolic play, metaphoric stories and fairytales and replaying their nightmares in safe and therapeutic conditions.

Thus, there seems to be an intuitive belief that children's symbolic processes function as a kind of self-healing practice. Our observations confirm the intensification of play after acute traumatization, and research shows that highly traumatized

children remember more of their dreams than less traumatized ones Study 7. Both phenomena can be interpreted as the urgent need of humans to work through, rehearse and repeat painful and bewildering experiences until their emotional load is neutralized. Current views emphasize, however, the pathological elements of play and dreaming in traumatic conditions. Nightmares and anxiety dreams are a part of the posttraumatic stress disorder (PTSD), and posttraumatic play is defined by characteristics such as repetition, thematic narrowness and ritualistic play scheme. However, our question was whether nocturnal dreaming, understood as a multilevel, conscious and unconscious cognitive-emotional processing of experiences, can serve for improving mental health. In other words, what kind of dream content and structure are associated with good mental health, Or what kind of dream content might even protect children's mental health from the negative impacts of trauma. Further, we wanted to know whether it is beneficial for children to remember or to forget their dreams, and also how the nature of sleeping difficulties, e.g., difficulty falling asleep and/or waking at night or too early in the morning, differentially predicts the children's morning mood and mental health.

The results among Palestinian children suggest that dream content and structure are vital for their morning mood and mental health, and there was evidence of the protective mental health function of dreaming. Protective dreams were those that incorporated bizarre, vivid and symbolic scenes and themes, joyful feelings and happy endings. Further protective characteristics were the dreamer's active participation in the dream plot and complete narrative structure of the dream. Narrative dreams incorporated vivid memories of the dream scene and actors and the story including a beginning, an intensification or turning point of events, an ending and the "message" of the dream. On the contrary, mundane, passive and emotionless dream content was associated with poor mental health (Punamäki, 1998b) Study 7. Further, the intensive contextualization of emotions into dream images, combined with positive emotional valence could protect the children from developing PTSD and aggressive symptoms as a response to severe trauma (Helminen & Punamäki, 2008) Study 7. These results of the mental health function of children's dreaming were partly replicated among Kurdish children, whose nation is deprived from independence and has been a target of intensive persecution (Punamäki, Jelal Ali, Ismahil, & Nuutinen, 2005).

Unfortunately, the dreams of children exposed to severe trauma did not incorporate the protective characteristics. On the contrary, their dreams often precisely mirrored the original traumatic scene, repeated anxiety, persecution and fears without providing solution. They lacked the dreamlike quality of bizarreness, shifts of scenes and characteristics and metaphoric, symbolic and fantastic themes (Punamäki, 1998a) Study 7. The dream themes of highly traumatized children were military attacks in vivid, realistic and paralyzing form and scenes of being haunted by enemy soldiers, being wounded, witnessing the death of a friend, inability to escape, and erupted ends. Typically fear and horrors broke the dream thus preventing achievement of complete narrative, as two examples show:

"I dreamt that we were having curfew. I went out to visit my sister in the camp. A soldier followed me, I was afraid and I run away from him. I took a taxi, and when I enter the seat I saw the soldier was sitting in the taxi. So I run away from the taxi and from him. But he caught me and held my sister and me. I cried and I woke of this terrible dream". (Girl, 13 years)

I dreamt that my little brother got very sick and my mother took him to the doctor and slept with him in Hospital. I visited my brother but I found that the soldiers were near the hospital shooting gas bombs on the boys on the streets, When I entered to my brother, I saw that he is going to die from the gas and other children were suffocating. I was shouting but I felt that my sound was not coming out from my mouth, and I woke terrified. (Boy, 13 years)

We further found compensatory dynamics between nocturnal dreaming and daytime coping in general and among highly traumatized children in particular. Children who employed passive, withdrawing and emotion-focused coping strategies during the daytime dangers, showed active, heroic and problem-focused coping in their dreams. Vice versa, children whose daytime coping was active and heroic, expressed fear, helplessness and dependence in their dreams during the night (Punamäki, 1998a) Study 7. We understood that children who live in life-endangering conditions need 24-hours a day for processing and balancing their experiences. Compensatory dreaming provides them with an extended possibility to ventilate and express their troubled feelings and frightening experiences, to be both strong and weak and to reverse the roles of hero and coward (Punamäki, 2007). Dreaming as an altered nighttime state of consciousness permits a regulatory function so that the dreamer makes connections between new experiences and old schemas in an auto-associative manner (Hartmann, 1996). This enables children to emotionally re-experience painful, devastating and shameful events in the safety of a dream, cognitively to frame their overwhelming emotions and arousals, and to seek a wider range of associations.

Although enhancing children's play is a crucial part of intervention programmes with traumatized children both in Gaza and in general, we lack empirical evidence of the healing function of play and exact knowledge of which play elements are adaptive and healing in traumatic conditions. Based on our observations and video-taped data, we suggest that beneficial play involves high-quality imagery and symbolism, metacognitive and flexible elements, a wide repertoires of feelings, multiple expression of emotions and possibility of role reversals between the victims and the persecutors and between the strong and the weak (Punamäki, 2002). On the contrary, the play is non-healing if it incorporates trauma scenes, such as funerals, in a highly concrete, ritualistic and repetitious manner and exactly replicates the experiences without variation in emotions, roles and plots. Especially the lack of emotions, both positive and negative, in the children's play and dreams can be considered a risk factor.

Family and social relations

Family symbolizes a safe haven, a place of consolation and belonging. Therefore family issues are vital in the life-endangering conditions of military violence. Palestinian families in the Gaza strip are large (5–13 children on average, www.PCBS.org 2006), and people show strong affiliation to the family. "El Hamula" (the extended family) plays an important role both in protecting and obligating its members. In Arab tradition, children submit to the authority of their

parents, and the older members of the family are shown special respect. The long lasting military conflict and the collective trauma of exile have both increased social cohesion and caused disruption in the Palestinian society. The First Intifada strongly shook the traditional parent–child relations and family hierarchy, first, because political parties increased their power and decreased the social role of the extended family. Second, children and youth played a very important role in the national struggle, sometimes taking a more active role than their parents and even doing so against the wishes of their parents. The tragedy of war and military violence seems to be that parents feel unable to protect their children from danger and human maliciousness, and children are cannot escape from witnessing their parents' powerlessness and humiliation.

We studied the impact of the trauma on perceived parenting among Palestinian boys and girls. The results showed that in families with severe military trauma children perceived both of their parents as more strictly disciplining, rejecting and hostile and especially their mothers as using highly punitive rearing practices. It is noteworthy, however, that traumatic experiences left supportive and affectionate parenting, such as intimacy and love, intact (Punamäki et al., 2001; Qouta et al., 1995a) Studies 2 & 6. The gender of the child was decisive in how military trauma, the child's own political activity and the quality of perceived parenting were associated. In highly traumatized families, girls perceived their parents as highly attentive and restrictive, while boys perceived their parents as rejecting and indifferent. Among boys, political activity was associated with supportive and affectionate fathering, while among girls, political activity was associated with punitive and restrictive mothering and fathering. The results revealed parents' universal tendency to protect and restrict girls and encourage boys in active participation. We suggest that in dangerous military conditions these gender-specific parental tasks intensify and gain a particular meaning.

Good and loving parent–child relations and supporting rearing practices can protect a child's mental health even in extreme war conditions and maybe especially so in life-endangering conditions. Our results confirmed that if mothers and fathers showed love, caring and wise guidance and restrained from punitive rearing practices, children showed better psychological adjustment in spite of exposure to military trauma (Punamäki, Qouta, & El Sarraj, 1997) Study 2 and did not develop PTSD symptoms (Qouta et al., 2006) Study 6. Supportive and non-punitive parenting practices protected children from developing aggressive and antisocial behavior when exposed to severe physical military violence (Qouta et al., submitted) Study 9. In sum, loving and wise parenting can work miracles in war conditions by shielding children's healthy development. Similarly, Barber (2001) showed that a nurturing parenting style protected development and emotional well-being of Palestinian children from the negative impact of military violence. Garbarino and Kostelny (1996) showed that Palestinian children from dysfunctional families were more vulnerable to the negative consequences of chronic military violence in comparison to children whose parents used positive styles.

Our results further revealed that Palestinian children who had loving and non-rejecting parents were more creative and efficient in problem solving than those from hostile and neglecting families. The creativity and efficiency could in turn protect children's mental health from negative impact of military violence (Punamäki et al., 2001) Study 6. These results

give an idea about the mechanisms through which good parent–child relations can protect children and enhance their optimal development.

Research on war trauma in families has predominantly focused on the role of maternal mental health and parenting styles ignoring more dynamic factors, such as dyadic or triadic processing of traumatic experiences, "share of work" in emotional expression and role reversals between family members in showing strength and weakness. As an exception, an Israeli study showed that not only good maternal mental health but also the mother's adequate responses to trauma, such as image control, predicted good psychological adjustment of the children (Laor et al., 2001). We strongly feel that the family systems approach would reveal important dynamics among traumatized families and contribute to individual, family and group interventions.

People's narratives of their painful experiences such as loss of home or family members reveal the phenomenon accounted by family systems models. For instance, a young woman said: "I never could imagine to find such strength in me, as I did when my husband was wounded." In Rafah, where almost the whole community was shelled and bulldozed (B'Tselem, 2002), a woman said "My sister was like a professional nurse, she was calm and helping everybody." Accordingly, we applied a family systems approach and asked whether there is such a phenomenon as a "symptom carrier" in traumatized families, i.e., one child who expresses psychopathology while others remain intact or even blossom, and whether there are "role reversals" between parents and children in endurance, suffering and caring for each other.

Our results were in accordance with the family systems theory (Cox & Paley, 1997), suggesting that in order to function well and balance each other's responses, members of a family tend to express their pain in different ways and at different times. The quota of psychological distress may be stable, but there is a division of labor among family members in expressing it. When traumatic events entered the family life, family members were differentially vulnerable to the events' negative impacts: some members suffered from increased PTSD and depressive symptoms and decreased life satisfaction, while others were not affected. Analyses also revealed complementary dynamics, especially between parents and their children, indicating that when one member was suffering, others showed no symptoms and when one was resilient and satisfied, the others could afford to show weakness (Punamäki, Qouta, Montgomery, & El Sarraj, 2006) Study 6.

Who are the resilient children?

Despite the great burden that military violence and personal trauma place on children, not all are similarly vulnerable. There is some evidence that "children of war" show impressive signs of endurance and resilience, i.e. they do not suffer from psychological and social problems but blossom, despite severe adversities and trauma (Luthar et al., 2000; Rutter, 2000). Humans are defined as resilient when they successfully adapt despite adversity, overcome hardships and trauma, achieve developmental competences, become strong in harsh conditions and create themselves a life in adversity through dynamic developmental processes (Luthar et al., 2000; Masten & Coatsworth, 1998; Werner, 1993). War with its heroic images and humiliating atrocities forces children to constantly try to find balance between resiliency and vulnerability and

between fear and courage. We have called this state of mind a conflict between horror and heroism (Punamäki & Suleiman, 1990).

Our research questions concerned, first, the amount of resilience among Gaza Palestinian children and whether the proportion depended on the military situation, i.e. the severity and intensity of air raids, killing, restriction of movement and house destruction (B'Tselem, 1998, 2002). Second, we asked who those resilient children are, and analyzed child-, family- and society-related factors explaining resilience vs. vulnerability. Third, we wanted to know whether resilience could in fact protect children's mental health in the long run.

We applied three ways of conceptualizing and measuring children's resilience, and the results support each other. First, we applied the classic definition of resilience (Werner & Smith, 1982) and classified the data according to the children's exposure to severe traumatic events (median split: low and high military trauma) and the amount of psychological distress (no or little vs. high and very high externalizing and internalizing symptoms). The analysis resulted in four groups: I) the resilient children who are exposed to a high level of military trauma but show none or low levels of psychological distress; II) the traumatized children who are exposed to a high level of military trauma and show high or very high levels of psychological distress; III) the vulnerable children who are exposed to a low level of military violence but show high or very high levels of psychological distress; and IV) the spared children who are exposed to a low level of military trauma and show none or low levels of psychological distress (Study 9, Table 1).

We applied the classification of resilient, traumatized, vulnerable and saved children into two communal samples of 8–15-year-old children. The first sample was collected in a relatively peaceful time after the Oslo Agreement and during the Palestinian Authority (PA) in 1995 (Miller, El Masri, & Qouta, 2000) Study 9 and the second during the Al Aqsa Intifada, an intensively violent time in 2002 (Thabet et al., 2002). The results revealed that during the PA, a third (33.5%) of the children could be classified as resilient, while their proportion was only 13% in the second sample. The percentage of traumatized children was 35% during the Al Aqsa Intifada and 25% during the PA. The amount of vulnerable children was especially high during the Al Aqsa Intifada (43%), while during the First Intifada it was 14% (Punamäki, Qouta, & El Sarraj, manuscript) Study 9. The differences in the amounts of resilient children suggest that external danger and societal insecurity is important for child resilience.

We found one study that applied a similar classification of resilience, focusing on family adversity (Zucker, Wong, Puttler, & Fitzgerald, 2003). Yet, no comparable data is available on children living in conditions of war and military violence. Therefore it is difficult to estimate whether one third is a relatively high portion of resilient children in post-war conditions as it was in Gaza during the PA. Yet, the decrease of resilient Gaza children and especially the increase of vulnerable children in the new waves of violence are very worrying.

Similar to earlier research (Beardslee & Podorefsky, 1988; Masten & Coatsworth, 1998), the resilient children in this study differed from the traumatized ones in that their both parents had good mental health and their mothers rarely used punitive child rearing practices. Children's constitutional and health characteristics were important: the resilient children were born with normal weight and had good current physical health and cognitive-behavioral functioning. Boys and non-refugees were more resilient. Family SES and parental education did not differ between the four groups (Punamäki et al., manuscript) Study 9. Our results thus emphasize the role of constitutional characteristics, family relations and early childhood interactions as important determinants of child resilience in life-endangering conditions.

Second, we considered mental health as a balance between impairing symptoms and resources of endurance. Contemporary conceptualization and assessment of children's psychiatric distress (Achenbach, 1997; Rutter, 1967) and the WHO's conceptualization of health (UNICEFF, 2004) concur with the idea of mental and somatic health as not only as an absence of symptoms but also the existence of positive experiences, resources, support and good quality of life. Our approach of the balance between vulnerability and resilience involved psychological distress, measured by PTSD, anxiety and depression and resources including quality of life, self-esteem, creativity and resilient attitudes. The resiliency attitudes questionnaire by Biscoe and Harris (1994) depicts resilience as a multidimensional phenomenon involving individual integrative processing capacities, mental flexibility and humor and social sharing and affiliation.

Our results suggest that military trauma is associated with psychological distress, but not with resilience, whereas family and other intimate relations are salient for resilience and resources. For instance, we found that severe military trauma did not negatively impact children's creativity and self-esteem, whereas good family relations enhanced these resiliency features (Qouta et al., 1995a) Studies 1–3. The severity of military trauma did not associate with or predict resilience indicated by children's integrative and flexible capacities and social affiliation. It was punitive and neglecting mothering that predicted low levels of these capacities in adolescence (Punamäki et al., 2001; Qouta et al., 2006) Study 6. We further found that post-traumatic growth, characterized by increased appreciation of social affiliation, psychological insight and spiritual enlightenment (Tedeschi & Calhoun, 1996), did not depend on the severity of traumatic experience, but on the security versus insecurity of the adult attachment style. Posttraumatic growth was possible only among survivors with secure attachment, while for avoidant and preoccupied persons trauma was a comprehensively negative experience (Salo, Punamäki, & Qouta, 2005). Resilience should thus be conceptualized as a dynamic interaction between individual, familial and social resources and environmental demands. Preventive interventions should take into account the possible different underlying mechanism of vulnerability and resilience.

Children's active participation in violence

There are two emotionally loaded topics both in our family consultations in Gaza and in the western trauma discourse: children's participation in the national struggle and the question whether war and military violence makes children aggressive. Although parents may understand their children's willingness to join political activities, they are deeply concerned about the negative impact of violence on children's development. They are aware that violence may increase aggression and narrow future perspectives, thus hindering prospects for peace on national level and marriage on the family level.

The First Intifada signified a heightened morale and

collective determination to end military occupation. This fundamentally changed the Palestinians' self-image from victims to equal partners with Israelis, meaning a turning point in the struggle for independence. The First Intifada started as a popular uprising from the Jabalia refugee camp in Gaza and spread across the occupied Palestinian areas. Children and youth were very active, and there was a feeling that anyone could have an impact on the destiny and future of the nation. Some research confirmed that active participation had a self-healing function. Baker (1990) showed that Palestinian boys (in the West Bank) who participated in the national struggle were better adjusted than passive boys. This concurs with general coping research that argues that active and problem-solving responses are beneficial and passive withdrawal is detrimental to a child's mental health (Compas, Malcarne, & Fondacoro, 1988). Our results in Gaza showed, however, that the positive impact of political activity was possible only when the military violence and life-threat was over (Punamäki et al., 2001) [Study 6]. Yet, active participation in the Intifada in middle childhood was not a salient predictor of either symptoms (PTSD and depressive) or resources (resilience and satisfaction with life) in adolescence (Qouta et al., 2006) [Study 6].

There is an important question, often presented to us, of what makes children join the life-endangering and developmentally inappropriate activity of fighting against a foreign military power. Currently, the question is also about explaining the adolescent's support of paramilitary activity and suicide attacks against Israeli civilians. Our findings showed that children's personal exposure to losses, humiliation and destruction was the strongest single predictor of political participation, while harsh socio-economic conditions and stressful life-events were not (Qouta et al., 1995a; 2005) [Studies 1, 6]. The acceptance of suicide bombings was significantly correlated with having had a family member wounded or killed by the enemy, and especially children's appraisal of the experience. For instance, 77% of adolescents who felt that enemy has treated them unjustly expressed sympathy for the suicide attacks (Victoreff & Qouta, 2005) [Study 12].

There is an argument that "children of war" take over adult tasks and responsibilities before their proper maturation because their parents lack resources to care and protect them. We could identify four family types according to the parental and children's psychological distress and resilience, and share of work between them (Punamäki et al., 2006) [Study 6]. On of them, the "children's strength families" concur with the phenomenon of role reversal: the children showed high levels of positive resources and strengths and low levels of psychological distress, while parents were highly distressed and lacked resources and resilience. Our results confirmed that "children's strength families" had more often suffered from both military and personal traumas, than the normative parental strength families. The two other family types were the resilient and ordeal families in which there were no division of labor between children and parents.

Empirical evidence is scarce about the development of aggression in conditions of war and military violence. This seems strange, when considering the frequent concern about violence begetting violence, and equating war conditions with "lost and violent" childhood. We examined the associations between military violence and children's aggressive and anti-social behavior in two different politico-historical situations: during the relative calm of the PA (Palestinian Authority Rule after the Oslo agreement) and during the intensive violence of the Al Aqsa Intifada. Our results confirm the worry to be legitimate: there was a consistent association between exposure to military violence and children's aggressive responses. Aggressive and antisocial behavior were especially likely if children were targets of physical and direct violence, including fighting, losses of loved ones, and being wounded, beaten and detained (Qouta, Punamäki, & El Sarraj, submitted) [Study 9]. Keresteš (2006) revealed a long-term impact of war horrors and atrocities on child development: the trauma in preschool years predicted aggression in adolescence among Croatian children. In clinical settings we can see military violence to be especially harmful for children who struggle with their developmental transitions and the belligerent scenes interfere with their age-graded learning to suppress aggressive impulses. A follow-up study would be necessary to see if the age-specific peaks and their attenuations in physical aggression in the preschool age and early adolescence (Loeber & Stouthamer-Loeber, 1998; Tremblay, 2000) would also be found in war conditions where the external aggression is high.

Theoretical, practical and critical views

War and military violence are not healthy for human beings and children are especially vulnerable. In Gaza, the entire community has experienced violence and destruction year after year that makes the negative effects on the individual and the families exponentially harmful. Psychological and psychiatric work in these conditions involves initiation of counter forces, encouraging natural psychological healing processes and investing in effective therapies. The Gaza Community Mental Health Programme (GCMHP) has undertaken the responsibility to provide treatments to individuals and families, educate the community workers, encourage endurance and support mental health. Our research has contributed to this effort by disseminating information, increasing understanding and advocating for healthy child development. The main focus being child-, family- and society-related factors explaining psychological distress and resources among children in Gaza.

The review reveals obvious limitations of our research. First, only well-planned, theoretically sound and genuinely multidisciplinary research could contribute to understanding determinants of mental health and underlying developmental processes in extremely dangerous environment. Our samples during the First Intifada were small, drop-outs and security caused problems, and our research was done as part of clinical work without research structure. Second, understanding child development in extremely dangerous and demanding conditions should be based on sophisticated theories and multidisciplinary models. Contemporary cognitive-emotional trauma theories and treatments focusing on integrative processes (Brewin et al., 1996; Dunmore et al., 2001; Foa et al., 1989) are promising for modelling interactions between trauma and child development. We have followed general studies about personality and social issues determining adaptive and dysfunctional developmental trajectories (Sameroff, 2000), which can be criticized for ignoring specific cultural determinants. Third, we have had failed to bring research as an integral part of preventive interventions among war-traumatized children. There are examples of successful communication between researchers and clinicians in reducing psychological distress such as PTSD and enhancing psychosocial resiliency and resources among war-traumatized children (Yule, 2002).

Trauma-related mental health problems such as PTSD and depression are the results of multidimensional risk factors and underlying processes that combine biological, personality, family and society-related determinants. Children are at risk when they process their traumatic experiences in discrepant, narrowed and dysfunctional ways that are characterized by negative emotionality, ambivalent feelings and guilt, shattered memories and fragmented interpretations. When this knowledge is translated into healing elements in preventive interventions, we can see how children are capable of changing these dysfunctional ways. This in turn gives children a feeling of control over their painful experiences. On the other hand, our research models and statistics are incapable to capture the complexity, and conflicting and dynamic nature of human psychological survival struggle in traumatic conditions. For instance, the result that good parenting can protect children from external violence has also its black side: parents are themselves overwhelmingly burdened, and when they are in need for help themselves, the task of protecting children sounds impossible. Similarly, war and military violence seem to constitute a vicious circle or a trap for child development, which explains their vulnerability for mental health problems. The more the children are in need for protecting factors and self-healing cognitive-emotional processes, the more the very trauma strips them from these kinds of assets and resources. It was shown in severe trauma preventing the very healing dreams characterized by symbols, intensive emotions and complete narratives. Or, trauma deteriorated effective cognitive processes, which were necessary for adequately interpreting and reframing traumatic events.

Although the resilience of the war victims may be impressive, achieving a balance between resources and distress is highly burdening for children. This forces responsible adults to work actively for both abolishing the source of trauma and alleviating the suffering of the children.

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