Violence Exposure

Exposure of Children to War and Terrorism: A Review

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This article reviews the impact of direct and indirect exposure to war and terrorism on children's mental health. Although both direct and indirect exposure place children at risk of adjustment problems, the literature also provides evidence of children's remarkable resilience in the face of the life-threatening events. An examination of factors that influence children's responses to war and terrorism indicates an array of internal and external factors that protect or put children at risk of suffering from mental health problems. Such factors include the child's developmental stage, gender, the intensity and duration of exposure, the extent of life disruption, the availability of parental support, and the surrounding culture. An examination of interventions for children exposed to war and terrorism emphasizes the importance of providing children with safety and a sense of security, as well as addressing basic needs and establishing trust with the child. Once these aims have been achieved, mental health interventions can be implemented to address posttraumatic symptoms. A variety of interventions have been used to help children exposed to war and terrorism, including relaxation techniques, art therapy, cognitive-behavioral therapy, and supportive therapy. Although cognitive-behavioral therapy has received the most empirical support, other techniques are commonly used.

Keywords children, interventions, terrorism, trauma, war

Living in a state of war and persistent terrorist attacks is tragically characteristic of the world today. In contrast with natural disasters, war and terrorism are acts of violence initiated by humans (Shaw, 2003; see Overstreet, Salloum, Burch, & West, 2011, for research on childhood exposure to natural disasters) and are often of a malicious nature (Comer & Kendall, 2007). According to Williams (2007), the state of warfare has changed in the past years, shifting to episodic states of conflict involving guerrilla armies and more casualties for civilians. Similarly, terrorism has been described as “a form of undeclared war” (Pine, Costello, & Masten, 2005), which differs from a state of war in its unpredictability (Comer & Kendall, 2007) and focus on harming civilians (Comer & Kendall, 2007; Pine et al., 2005). For example, the 2006 war between Israel and the Lebanese terrorist organization Hizbollah, also known as the Second Lebanon war, began on July 12, 2006, and

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Exposure to War and Terrorism

ended a month later on August 14. During the war, Hezbollah fired over 4,000 missiles aimed at civilian centers in the north of Israel. As a result, 41 Israeli civilians were killed and thousands wounded, hundreds of buildings were damaged, and thousands had to leave their homes or stay in bomb shelters for long periods of time (Israel State Comptroller, 2007).

In addition to threatening their physical health and property, the missile attacks threatened citizens' mental health. A telephone survey that was conducted during the third week of the war revealed that the majority of respondents living in the bombarded areas experienced at least one symptom of acute stress and that younger age was related to higher stress intensity (Yahav & Cohen, 2007). This survey was conducted with an adult population, but one can assume that children experienced stress as well, as it is generally accepted that children represent a highly vulnerable population for whom levels of symptoms may often be higher than for adults (Chimienti, Nasr, & Khalifeh, 1989). In addition, children tend to share the reactions of adults around them, often resulting in a link between the mental health of parents and that of their children. Namely, children's psychological problems tend to increase when their parents' psychological problems increase (Moin, Sharlin, & Yahav, 2007).

Along with the threat of war from neighboring countries, Israel has had to deal with ongoing terrorism within the country. The second Intifada, which began in October 2000 and ended in 2006, claimed the lives of hundreds of men, women, and children, and there have been thousands of wounded civilians on both sides, caused by violent confrontations as well as suicide bombings in the streets of Israeli cities. As a result, children and adolescents in Israel have lived in the shadow of prolonged terror for most of their lives, although the majority of the population has not been directly involved in a terrorist attack.

However, exposure to war and terrorism is not unique to Israel and has plagued countries worldwide. Numerous wars have received the attention of researchers in an attempt to understand their influence and effective methods of intervention. To name a few examples, the ongoing war in Sri Lanka has resulted in the death and displacement of thousands of civilians (e.g., Elbert et al., 2009; see Ellis, Miller, Baldwin, & Abdi, 2011, for research on refugee youth). War in northern Uganda has been going on for 20 years, resulting in mass displacement and abduction of children (e.g., Betancourt, Speelman, Onyango, & Bolton, 2009). Palestinians living in Gaza and the West Bank have undergone traumatic experiences associated with the Israeli-Palestinian conflict (e.g., Espie et al., 2009). The war in former Yugoslavia between 1992 and 1995 led to the death of thousands and the displacement of over a million people, impacting the lives of children even years after the war had ended (Barath, 2002).

In light of the increased exposure of civilians to war and terrorism and the vulnerability of children to this exposure, an examination of its influence on children is critical. This article focuses on terrorism and states of war that impact the civilian population, reviewing the consequences of children's exposure, factors that influence children's resilience, and available treatments to reduce potential long-term damage.

Children's Responses Following Exposure to War and Terrorism

In wartime, children are often exposed to traumatic events that may have detrimental effects on their physical and mental health (Machel, 1996). Nonetheless, studies have demonstrated children's remarkable resilience following exposure to war and terrorism, including evidence of posttraumatic growth (Kimhi, Eshel, & Zysberg, 2010). Exposure to war and terrorism may include various traumatic events, such as exposure to bombings or
air raids, physical injury, witnessing violence, loss of loved ones, displacement, disruption of routine life, lack of educational structure, living in poor living conditions, and living with distressed adults (De Jong, 2002; Joshi & O’Donnell, 2003; Panter-Brick, Eggerman, Gonzalaz, & Safdar, 2009). Children may suffer from posttraumatic stress disorder (PTSD) as well as other types of psychopathology that are not specific to the experience of trauma, such as general anxiety and depression (Barenbaum, Ruchkin, & Schwab-Stone, 2004). Symptoms of posttrauma include re-experiencing the traumatic event, avoidance of reminders of the event, and arousal (Moin et al., 2007). Responses to violence and trauma may be categorized as either self-directed or directed toward others and can include nightmares and sleep disturbances, regression and clingingness to caregivers, loss of concentration and learning difficulties, fearfulness and anxiety, and aggressive behavior (Sagi-Schwartz, 2008).

Experience accumulated in Israel over the years has demonstrated that acts of warfare and terrorism have a radiant effect, causing three circles of vulnerability: the first or inner circle includes those people who have been harmed directly by the events, the second or middle circle includes the relatives and acquaintances of the harmed persons, and the third or outer circle represents unexposed members of society who fear they could become members of the first or second circle at anytime (Moin et al., 2007). Similarly, other researchers have differentiated between types of contact to terrorism. Proximal contact refers to being in the same city as the attack and/or losing a loved one in the attack (Comer & Kendall, 2007), having a strong negative effect on adjustment. Yet literature reviews on the influence of war and terrorism indicate that indirect exposure of children to armed conflict can also have a strong impact (Pine et al., 2005). For example, one review indicated that media exposure to terrorist attacks has a strong influence on adjustment, leading to negative effects such as posttraumatic stress, distress, and anxiety (Comer & Kendall, 2007). Furthermore, the population may be exposed to terrorism indirectly through the climate of threat that it induces in the public (Comer & Kendall, 2007).

Although war may have a strong impact on the entire population, children may be more vulnerable as they lack the physical and intellectual capacity that adults possess to protect themselves (Wexler, Branski, & Kerem, 2006). In addition, they may respond differently than adults as they are still developing emotionally, cognitively, and socially and handling issues of separation-individuation, self-identity, and the development of coping mechanisms (Shaw, 2003). Studies have emphasized the fear induced by exposure to states of war and terrorism on children (Alkhathib, Regan, & Barrett, 2007; Moin et al., 2007). For example, a study examining the responses of children (aged 7–18) to the September 11 terrorist attacks indicated that children’s levels of fear significantly increased following September 11 (Burnham, 2007). Another study examined the responses of young children (younger than 5) living in New York City following the September 11 attacks and found expressions of fear and the development of new fears that had not existed prior to the attacks (Klien, Devoe, Miranda-Julian, & Linas, 2009).

Following exposure to war and terrorism, children have been described as experiencing stress reactions, such as PTSD symptoms, depressive symptoms, and anxiety disorders and phobias (Betancourt et al., 2009; Cohen & Eid, 2007; Comer & Kendall, 2007; De Jong, 2002; Dubow, Huesmann, & Boxer, 2009; Elbert et al., 2009; Espié et al., 2009; Hoven et al., 2005; Joshi & O’Donnell, 2003; Shaw, 2003; Wexler et al., 2006; Williams, 2007). Such responses have been found following both direct exposure and exposure through the media to terrorism (Comer & Kendall, 2007).

Several studies have highlighted the influence of exposure to war and terrorism on children’s physical health and daily functioning, as well as their mental health. Elbert et al.
Exposure to War and Terrorism

(2009) found a high number of somatic complaints and memory problems among children (aged 10–14) exposed to war in Sri Lanka. Llabre and Hadi (2009) reported an association between exposure to war-related trauma and poor subjective ratings of health and sleep quality among children aged 9 to 12 living in Kuwait. Klien et al. (2009) found that young children (younger than 5 years old) living in New York City responded with chronic sleep disturbances, accompanied by sadness, fear, and anxiety following September 11. Indeed, children's psychosomatic complaints and sleep disturbances following exposure to war and terrorism have been emphasized in a number of literature reviews (Joshi & O'Donnell, 2003; Shaw, 2003, Williams, 2007). Such health and functioning issues, accompanied by emotional difficulties including social and emotional withdrawal (Elbert et al., 2009; Williams, 2007), anger, and aggression (Dubow et al., 2009; Williams, 2007), may lead to the negative outcomes reported such as poor academic performance (Elbert et al., 2009), behavioral problems (Comer & Kendall, 2007; Joshi & O'Donnell, 2003; Shaw, 2003), and risk-taking behaviors (Pat-Horenczyk et al., 2007) such as substance abuse (Joshi & O'Donnell, 2003).

The issue of the duration of such symptoms is quite controversial (Barenbaum, Ruchkin, & Schwab-Stone, 2004). Once a war is over, a natural decline in posttraumatic stress symptoms may occur (e.g., Puamamki, Quta, & El-Sarraj, 2001). However, studies suggest that childhood trauma can also have a lasting effect on cognitive, moral, and personality development, as well as on interpersonal relationships and coping abilities (Terr, 1983; see Arvidson et al., 2011, for research on the treatment of trauma in children). For example, Barath (2002) found that even four years after the war in Sarajevo, children had various difficulties including feeling unsafe, school problems, and health problems. Furthermore, various conflicts have an ongoing nature, resulting in children's continuous exposure to violence and traumatic events over prolonged periods of time. Such is the case, for example, in the city of Sderot in Israel, which has been plagued by rocket attacks since 2001. An examination of the mental health of residents of this city revealed increased diagnoses of depression and use of pharmacological treatment to reduce depression (Farhi, Louden, Ifergan, & Fariger, 2008).

Nonetheless, some children and youth seem to be resilient to the adversaries of war and terrorism (Dubow et al., 2009). A recent review of the literature (Sagi-Schwartz, 2008) revealed that despite the long list of studies reporting negative effects of exposure to war, terrorism, and other traumas on children's well-being, the exposure does not always harm their well-being or other functioning outcomes. In particular, the review suggests that most Israeli, as well as Palestinian, children show impressive resilience. In times of crisis, they react with few severe PTSD symptoms or psychological or behavioral problems, and even those that are present are most often transient (Moin et al., 2007; Sagi-Schwartz, 2008). For example, in a comprehensive study, data were collected from children immediately following terrorist attacks in Israel and one month later (Moin et al., 2007). Findings indicated that by one month after the attack, a reduction had already occurred in children's symptoms of anxiety, fear, and avoidance (Moin et al., 2007). Similarly, a review indicated that the majority of children recover quickly from indirect exposure to war and terrorism (Pine et al., 2005). Under certain circumstances, such exposure can even lead to growth (Kimhi et al., 2010; Williams, 2007). Children's resilience in the face of terrorism and war leads to the query of what the internal or external factors are that help children cope with such traumatic events. The following section reviews central risk and protective factors that determine whether children will adjust quickly and resiliently or retain symptoms over time.
Factors Influencing Children's Responses Following Exposure to War and Terrorism

The effect of any particular traumatic event on children's mental health may differ in its intensity for any particular individual (e.g., Perrin, Smith, & Yule, 2000). The effect is determined by psychological and social factors, including personality factors; resilience; coping skills; altered relationships due to death, separation, and other losses; family and community breakdown; damage to social values and customary practices; and the destruction of social facilities and services. These factors mutually interact and affect the child's perception and understanding, as well as leading to the expression of specific symptoms (Barenbaum et al., 2004).

Exposure

In general, it has been demonstrated that higher levels of exposure to traumatic events intensify reactions (Comer & Kendall, 2007; Hoven et al., 2005; Panter-Brick et al., 2009; Pat-Horenczyk et al., 2007; Pine et al., 2005; Shaw, 2003; Wexler et al., 2006). Indeed, a review of studies on the effects of war and terrorism indicates that the more direct children's exposure is, the more severe posttraumatic symptoms are (Pine et al., 2005). For example, among youth (aged 9–21) from schools in New York City, direct exposure to the September 11 terrorist attack was associated with anxious and depressive symptoms (Hoven et al., 2005). In addition, in a study examining the responses of adolescents (aged 12–16) to ongoing terrorist attacks in Israel, the most severe traumatic dissociation, grief, and PTSD symptoms were found among those who had directly witnessed an attack (Laor et al., 2006). Furthermore, in a study on the experiences of Palestinian children (aged 1–15) residing in the West Bank, witnessing traumatic events such as murder, physical abuse, destruction of property, and threats was associated with PTSD symptoms (Espié et al., 2009).

Even among those who have not experienced a terrorist attack directly, the proximity of the event has an impact on the child's adjustment. A review of literature on terrorism indicated that the loss of a loved one in terrorist attacks leads to bereavement and often to PTSD among children (Comer & Kendall, 2007). Similarly, knowing a person who was present during the attack results in greater stress for children (Cohen & Eid, 2007; Sufer et al., 2005), especially those who had a family member who had been exposed to the attack (Hoven et al., 2005).

Nonetheless, it is important to recognize that indirect exposure through the media and through the climate of threat that war and terror induce also put children at risk of mental health problems (Comer & Kendall, 2007). For example, a study was conducted to examine the responses of children (aged 14–17) following a terrorist attack in Beslan, Russia, during which a school with 1,300 adults and children was taken hostage and resulted in the death of 329 people and the injury of hundreds (Moscardino, Scrimin, Capello, Altoè, & Axia, 2008). Findings indicated that there were no significant differences in psychological, emotional, and behavioral responses between those directly and indirectly exposed to the attack, indicating that both direct and indirect exposure to combat put children at risk.

Another factor that influences mental health outcomes is the duration of exposure to war and terrorism (Shaw, 2003). Although exposure to a single traumatic event produces PTSD, cumulative exposure produces dysfunctional coping mechanisms, conduct disorders, attention-deficit hyperactivity disorder, depression, and dissociative disorders (Joshi...
 Exposure to War and Terrorism

Similarly, in a review article Williams (2007) argued that although traumatic events and traumatic processes both produce posttraumatic symptoms, processes of trauma produce an array of developmental, emotional, and behavioral problems. The influence of cumulative trauma was demonstrated in a study on youth (11–16 years old) in Afghanistan, a country that has been exposed to an ongoing state of war, indicating that exposure to multiple traumatic events (five or more) was a risk factor for mental health problems, including emotional, conduct, and hyperkinetic disorders (Punter-Brick et al., 2009).

Age and Developmental Stage

A child’s age is highly predictive of long-term psychological outcomes (Kuterovac-Jagodic, 2003). Children of all ages attempt to understand the experiences of war and terrorism, but the strategies they use differ according to their developmental level. In line with this, a number of reviews have emphasized a developmental approach to understanding children’s exposure to war and terrorism.

Early childhood: Infancy, toddlerhood, and preschool age. Children’s perception of war at an early age tends to be primarily based on their perception of the attitudes of adults in their social environment, as well as on messages communicated through mass media (Jensen & Shaw, 1993). In general, young children are assumed to be more vulnerable than adolescents due to their less developed cognitive capacities (Alkhatib et al., 2007). The limited cognitive, social, and emotional capabilities of young children make them particularly vulnerable to experiencing confusion (Joshi & O’Donnell, 2003) and disorganization (Williams, 2007) following exposure to war and terrorism. For example, lack of perspective taking ability may lead young children to misinterpret the event, perceiving it as being their own fault (Joshi & O’Donnell, 2003). On the other hand, some scholars believe that young children are somewhat protected from the trauma because they do not understand the full extent of its negative consequences (Punamaki, 2002).

Frequent responses of infants to states of war and terrorism may include irritability, sleeping problems, diarrhea, and frequent illnesses (Alkhatib et al., 2007). Exposure to trauma at this age may result in difficulty developing trust, the main task characterizing this life stage according to Erikson’s psychosocial developmental theory (Alkhatib et al., 2007; Sagi-Schwartz, 2008). For example, toddlers exposed to war and terrorism may respond through regression manifested in toileting and speech difficulties (Alkhatib et al., 2007). Children at the preschool age often respond in worry and anxiety, clingy behavior, bedwetting, sleep problems, crying, and temper tantrums (Alkhatib et al., 2007; De Jong, 2002). Generally speaking, various fears and anxieties may characterize young children’s responses to war and terrorism, including separation anxiety, fear of going to sleep, or fear of leaving the house (Joshi & O’Donnell, 2003).

School age. Although school-aged children understand more about war and terrorist events than young children, they are limited in terms of their ability to think abstractly, making traumatic events difficult to comprehend and resulting in fear, confusion, and anxiety (Joshi & O’Donnell, 2003). Researchers tend to agree that children between the ages of 5 and 9 experience the highest vulnerability because, although their ability to process the traumatic events is developing, they still lack consolidated identities and higher order defense mechanisms (e.g., Kuterovac-Jagodic, 2003).
Moreover, school-aged children exposed to war and terrorism frequently undergo a disruption in schooling, interfering with their engagement in social and academic learning (Alkhadib et al., 2007). This may be expressed in children's responses, including difficulty concentrating and learning, refusing to attend school, and behavior problems such as aggression (Alkhadib et al., 2007; De Jong, 2002; Joshi & O'Donnell; Sagi-Schwartz, 2008). Furthermore, children's responses often take the form of regression (Alkhadib et al., 2007; De Jong, 2002; Sagi-Schwartz, 2008), including bed-wetting, thumb-sucking, baby talk, and needing a transitional object (Joshi & O'Donnell, 2003). In addition, children of this age may experience posttraumatic symptoms including sleep disturbances, preoccupation with traumatic events, re-experiencing the event, hyperactivity, withdrawal, and aggression (Alkhadib et al., 2007). Additional problems may include somatic complaints, fear of being alone, and safety concerns (Alkhadib et al., 2007). Lastly, children at this age are sensitive to parents' reactions and may act similarly (Alkhadib et al., 2007; Joshi & O'Donnell, 2003).

Adolescence. Adolescents, who have the capacity for abstract thought, generally have a greater understanding of states of war and terrorism (Joshi & O'Donnell, 2003) and a more open fear of death (Williams, 2007). Nonetheless, like adults they may keep their emotions and thoughts bottled up inside (Williams, 2007), resulting in depressed affect (Joshi & O'Donnell, 2003). Additional responses include increased activity as a form of coping, irritability, and defiance (Joshi & O'Donnell, 2003). If not treated, anxiety, school problems, and behavior problems may grow into more serious problems, such as aggression, acting out, emotional withdrawal, affiliation with violent groups, (Sagi-Schwartz, 2008), and substance abuse (De Jong, 2002).

Comparison of different age groups. A study comparing different age groups (ages ranging from 7–18) in their level of fear following exposure to the September 11 attacks indicated that fear was negatively associated with younger age, with the youngest group (aged 7–10) reporting the highest level of fear, followed by those aged 11–14, and then those aged 15–18 (Burnham, 2007). However, although some studies have reported younger children to have more severe symptoms following exposure to terrorism (Comer & Kendall, 2007), others have found symptomatology to be associated with older age (Laor et al., 2006; Pantzer-Brick et al., 2009; Shaw, 2003). This may be due to the fact that the majority of such studies did not include children younger than 10 years and thus did not include young children in the equation. Further research is needed to understand the association between age and mental health outcomes following exposure to armed conflict, taking into account that this association may not be linear. Furthermore, an examination of the different studies indicates the use of different outcome variables to assess mental health (e.g., PTSD, anxiety, grief, depression). This may account for the variable results because as demonstrated previously the manifestation of children's responses following exposure to war and terrorism is age-related. Moreover, studies that did examine the same variables often used different measures of assessment. For example, PTSD symptoms were assessed by the Child Posttraumatic Stress Disorder Reaction Scale (Laor et al., 2006), Diagnostic Interview Schedule for Children (Cohen & Eid, 2007), the University of California at Los Angeles PTSD Index (Pat-Horenczyk et al., 2007), and the UCLA PTSD Index for Trauma Psychiatry Service (Elbert et al., 2009), to name a few. Differences in assessment may also explain variable results.
Gender

A number of studies have found girls to report higher levels of fear (Burnham, 2007), distress (Moscadino et al., 2008), stress (Cohen & Eid, 2007), grief, dissociation, posttrauma (Laor et al., 2006), depression (Moscadino, Scribner, Capello, & Altoé, 2010), anxiety, and mood symptoms (Shaw, 2003) than boys following exposure to war and terrorism (e.g., Panter-Brick et al., 2009). However, although girls may suffer more from internalizing symptoms, findings indicate that boys experience behavioral and conduct disorders more often (Comer & Kendall, 2007; Shaw, 2003).

Social Support

Social support preceding acts of warfare and terrorism has been found to function as a protective factor against their negative effects. For example, preliminary social support was found to protect children facing continuous rocket attacks in the Israeli city of Sderot from depression (Henrich & Shahar, 2008). In addition, the amount of support provided following the event or during times of war may be an important factor in understanding children’s resilience in the face of such trauma. Reviews of the literature have indicated that support from family members and the community at large following a terrorist event or a state of war contributes to children’s positive adjustment (Pine et al., 2005; Sagi-Schwartz, 2008; Shaw, 2003; Williams, 2007; Wexler et al., 2006). For example, social support from friends, family, and the community following exposure to the 2004 Beslan terrorist attack in a school in Russia was associated with less depressive symptomatology among youth (aged 14–17; Moscardino et al., 2010).

Parenting.

The crucial role that parenting has in children’s development in general is magnified during times of crisis, when children rely even more strongly on their parents. An important element of parent’s ability to provide the support that children need when confronting war and terrorism is the stress that parents are themselves under. Parents’ own distress following exposure to terror has been found to contribute to children’s distress in the aftermath of war or terrorism (Comer & Kendall, 2007; Hendricks & Bornstein, 2007; Joshi & O’Donnell, 2003; Panter-Brick et al., 2009). For example, parental PTSD or depression four months after the September 11 terrorist attack and seeing a parent cry six months after the attack was associated with behavioral problems in children (Stuber et al., 2005). In addition, among children living in Afghanistan, mental health problems of the caregiver were found to be a risk factor for children’s emotional, conduct, and hyperkinetic disorders and depression (Panter-Brick et al., 2009). Thus, the parents’ exposure to traumatic events during times of war or acts of terror puts both parents and children at risk for mental health problems.

Parental stress may also be expressed in the form of parental control, in the hope of protecting children from danger. Ironically, such attempts may exacerbate children’s stress, putting them at risk of mental health problems. In a number of studies, parental control over children’s whereabouts and forbidding children to go out has been associated with greater fear, stress, PTSD, depression, antisocial behavior, and aggression following war and terrorism (Cohen & Eid, 2007; Dubow et al., 2009; Shalitin, Moin, & Yahav, 2006). For example, in a study on a sample of early adolescents living in Washington, DC, in the aftermath of September 11, adolescents’ perception of their parents as controlling was found to be associated with stress symptoms, including avoidance, intrusive thoughts, and hyperarousal (Hendricks & Bornstein, 2007). The association between parental control and
children's stress symptoms may also be associated with children's attachment to parents. Parental posttrauma and stress related to war and terrorism may compromise parents' ability to provide the sense of a secure base for their children and to grant them the autonomy to explore their environment.

Despite the negative implications of overcontrolling parenting, the involvement of parents during such unstable times is crucial. Supporting the importance of parental concern and support, a lack of parental knowledge about child's adjustment has been associated with behavioral problems four months after the September 11 terrorist attack (Stuber et al., 2005). In contrast, parenting characterized by warmth and support has been associated with better mental health outcomes among children exposed to war and terrorism (Dubow et al., 2009; Joshi & O'Donnell, 2003; Sagi-Schwartz, 2008).

Social Disruption

A number of literature reviews have emphasized that the extent to which the surrounding social and educational structures are disrupted is a determinant of children's mental health following exposure to war and terrorism (Pine et al., 2005; Shaw, 2003; Williams, 2007; Wexler et al., 2006). Thus, there is importance in trying to preserve children's routines as much as possible, which provides them with a sense of security and normalcy. In addition, frameworks such as schools provide children with a socially supportive network that promotes resilience.

Children's Internal Resources

The resources that children have prior to experiencing acts of war or terrorism influence their ability to cope and adjust resiliently. Although personal characteristics such as shyness and overdependence are associated with poorer adjustment following exposure to war or terrorism in children, positive social skills are associated with greater adjustment (Joshi & O'Donnell, 2003), perhaps because of their influence on the ability to seek help in times of distress. Similarly, lacking personal resilience has been associated with more severe posttraumatic symptomatology among Israeli youth exposed to continuous terrorism (Laor et al., 2006). Such resilience may be associated with children's personal histories, including past traumatic experiences. For example, Hoven et al. (2005) found that the experience of trauma prior to September 11 was associated with greater anxiety and depressive disorders (Hoven et al., 2005) among youth aged 9 to 21 living in New York City following the attacks.

Culture and Cultural Identity

The cultural environment within which terrorism and war occur may have a profound effect on children's responses. Although this topic has not been examined extensively, a few studies have provided preliminary evidence supporting the impact of culture and cultural identity. For example, Yahav and Cohen (2007) compared the responses to the Second Lebanon War of Jewish and Arab adults living in Northern Israel, which was under direct missile attack at the time. Although both groups were similarly exposed to the missile attacks, findings indicated that Arab participants reported higher rates of acute stress symptoms and acute stress disorder than Jewish participants. Possible explanations provided by the authors include (a) the resilience of Jews from past exposure in comparison with Arabs in Northern Israel, who have been exposed less to terrorism and war; (b) Arab

Terrorism

Pre- and Posttraumatic Stress Disorder

The relationship between terrorism and PTSD has been extensively studied (Baumeister et al., 2005). Children involved in traumatic events may also be at risk for PTSD, especially those who have experienced extended exposure to terrorism (Hoven et al., 2005). First, the role of parents and social workers in the prevention and treatment of PTSD and other trauma-related disorders among children exposed to terrorism is critical (Resnick, 2000). Second, the lack of exposure to terrorism and war may not be sufficient to protect against PTSD. Finally, the role of resilience in the prevention and treatment of PTSD among children exposed to terrorism is important (Sagi-Schwartz, 2008).
participants' sympathy with Palestinians; and (c) the vulnerability of Arabs to stress resulting from lower socioeconomic status and resources than Jews (Yahav & Cohen, 2007). The influence of ethnic identity was also discussed in relation to children in a review by Dubow et al. (2009) explaining that ethnic identity, which is formed through historical and political events, influences the way that acts of war and terrorism are interpreted and processed. However, it is unclear whether ideological commitment puts people at risk of stress symptoms through perceived discrimination or, in turn, can function as a protective factor through a sense of ethnic self-identification (Dubow et al., 2009). Beyond the stress that ethnic and cultural identification may produce, sympathy with the aggressor may produce aggression and stereotyping responses among children, through the legitimization of aggressive behavior (Dubow et al., 2009). Furthermore, culture influences the manifestation of symptoms following exposure to war or terrorism. In a qualitative study of the mental health issues of children displaced by war in Northern Uganda, Betancourt et al. (2009) described culturally distinct distress symptoms. On the one hand, these symptoms were similar to descriptions of depression, anxiety, and conduct disorders, but on the other hand they included behaviors that were unique to the culture, such as the significance of not greeting others (Betancourt et al., 2009).

As can be seen, children's symptoms are influenced by a multitude of factors that interact with each other. In light of the complex and negative influence of war and terrorism on children's mental health, it is important to consider the treatment possibilities to reduce the potential long-term problems from which children may suffer. The next section reviews available treatments for children exposed to war and terrorism.

**Treatment of Children Exposed to War and Terrorism**

**Preliminary Steps**

In order to begin the healing process, war or terrorism-related stressors must first be eliminated. Elimination of the stressors for children usually involves one of three possibilities, the first being a cessation of the existing conflict and establishment of a safe atmosphere. Although this is the ideal possibility, it is often difficult or impossible to achieve. The second and third possibilities involve relocating children to safer areas (Gammonley & Dziegielewski, 2006), either within their country of origin or in foreign countries (Barenbaum et al., 2004). Displacement tends to be more favorably perceived by older children (generally 12 years or older). Younger children often react to separation from parents and the familiar surroundings with separation anxiety and other internalizing and externalizing symptoms (Barenbaum et al., 2004).

Once traumatic events have ceased or eliminated, the process of restoration may begin. First, basic needs (food, shelter, clothes, and sanitation) must be restored (Barenbaum et al., 2004; Brown & Bubrow, 2004; Ehnholt & Yule, 2006; Williams, 2007). Beyond these basic needs, restoration should involve a reconnection to tradition, culture, nature, and spiritual practices that gave life meaning and value before war began (Lowry, 2000). Restoration should also include the reestablishment of trust, self-esteem, attachment, and social networks and the regeneration of hope and belief in the future (Ehntholt & Yule, 2006; Jareg, 1995 in Barenbaum et al., 2004).

Once these first steps have been taken to provide for basic needs and regenerate a sense of safety and trust, it is possible to implement mental health interventions. Intervention programs for children exposed to war generally aim to enhance effective coping skills, promote resilience, and provide social support (Punamaki, 2002). Psycho-education is
also emphasized in many intervention programs, aimed at increasing children's knowledge about normative responses to trauma, and thus providing a sense of normalization and legitimization (Brown & Bubrow, 2004). Additional guidelines emphasize a holistic approach (e.g., Elnholt & Yule, 2006), as well as the value of dealing with the "here and now," the current difficulties the child is facing resulting from exposure to war or terrorism rather than experiences from the past (Betancourt & Williams, 2008; Elnholt & Yule, 2006; Gammonley & Dziegielewski, 2006; La Greca & Silverman, 2009). In all cases, interventions should be tailored to the particular circumstances and to the individual weaknesses and strengths of the children in mind (Barenbaum et al., 2004).

Interventions can be applied in various settings, targeting the community, school, family, or the individual child. In addition, restoration initiatives can utilize both population-based and individual-based approaches. Although universal interventions can promote the mental health of all children who may have been exposed to war-related armed conflict, individualized treatments can be offered to particularly vulnerable children or to those who are highly disturbed (Rahe, Looney, Ward, Tung, & Liu, 1978). Multilevel intervention programs addressing individual, family, and community issues are most effective in promoting recovery (Garmezy, Maston, & Tellegen, 1984). Below is a description of different types of interventions for children, which is followed by a discussion of different settings in which such interventions can be implemented.

**Types of Mental Health Interventions**

One of the primary goals of any postwar therapy is to help children master their distress through regaining a sense of control over the situation and their feelings (Barenbaum et al., 2004). There is currently no consensus regarding the optimal therapeutic approach for achieving these goals. Interventions that have been found to reduce children's stress symptoms following exposure to war and terrorism include brief trauma/grief-focused psychotherapy (La Greca & Silverman, 2009), narrative exposure therapy (Betancourt & Williams, 2008; Catani et al., 2009; Elnholt & Yule, 2006), testimonial psychotherapy (Elnholt & Yule, 2006), meditation-relaxation techniques (Catani et al., 2009), eye movement desensitization and reprocessing (EMDR; Elnholt & Yule, 2006), and cognitive-behavioral therapy (CBT, e.g., Elnholt & Yule, 2006; La Greca & Silverman, 2009). Although various intervention strategies have utilized a variety of methods including play therapy, expressive arts, music, drama, meditation, and prayer (Lowry, 2000), the approach that has received the most attention is CBT (Brown & Bubrow, 2004). A recent empirical review of psychological treatments for children and adolescents who have been exposed to traumatic events suggests that trauma-focused CBT is the most efficacious treatment for reducing trauma reactions for some children in various situations (Silverman et al., 2008). Similarly, empirical studies have indicated that trauma-focused CBT is more efficient than other methods in treating victims of shock and anxiety disorders (e.g., Kendall, 1994). In addition, this method is preferred among researchers because it includes a defined protocol and a convenient evaluation methodology.

Nonetheless, an examination of the validity of these studies has indicated that the CBT treatment methodology is not necessarily optimal (Bryant, 2000). Furthermore, an examination of methods defined as being cognitive-behavioral indicates that most of them actually combine dynamic and narrative methods in the treatment. For example, when the use of fantastic reality is encouraged during therapy, in addition to the acquisition of control strategies, a Winnicottian approach calling for dynamic emotional therapy is adopted (Lahad, 2006). Additional protocols include a narrative approach based on restructuring
of the client’s personal story, alongside the cognitive method of treatment. Although therapists begin treatment with CBT, they are often forced to rely on other approaches, such as dynamic and expressive approaches, because many children have difficulty relating directly to anxiety. Thus, additional intervention strategies are used to treat children who have experienced anxiety and trauma, including conversation and therapy through the arts, play, drama, music, and drawing. These methods have been found to be efficient and enable emotional expression in relation to the traumatic events and difficult experiences (Lowry, 2000; Pynoos & Eth, 1986). Nonetheless, they cannot stand alone. For example, drawing in trauma therapy has been found to be insufficient to lead to recovery and can even lead to re-experiences of trauma (Machell, 2001). Thus, in emotional therapy, drawing should be seen as a means that is a part of a more extensive complex process.

**Creative arts in therapy.** Utilization of the creative arts, such as drawing, film, writing, music, and play, has been underscored as an important technique in the treatment of traumatized children (Aronson, 2005; Berger, Pat-Horenczyk, & Gelkopf, 2007). The primary reason for this is that for physiological reasons, namely traumatic memories being stored in the right hemisphere of the brain, children may be unable to verbally express the terror they have experienced (Crenshaw & Hardy, 2007; Haen, 2005). In contrast, the right hemisphere of the brain is responsive to play and creativity (Crenshaw & Hardy, 2007), meaning that such creative methods of treatment can be optimal in processing traumatic events. For example, in the context of group therapy with youth following September 11, Haen (2005) emphasized the utility of metaphor, play, symbolism, and enactment, which enable children to indirectly address and communicate the inexpressible. Another example is using relevant children’s books to help create a sense of security and safety in young children (McNamee & Mercurio, 2006). Books describing relevant events and legitimizing feelings of fear can help children empathize with others experiencing similar events, make them feel less alone, and help them express their own fears (McNamee & Mercurio, 2006).

Asking children to draw their experiences can be useful in helping recall both traumatic events and associated emotions (Pynoos & Eth, 1986). Children’s drawing acts as a transitional space in which feelings can be externalized into a concrete form and be reconstructed (Hanney & Kozlowska, 2002). In recent years, there is growing interest in the use of drawing as a means of facilitating communication with children in the interview process (e.g., Driessnack, 2005).

**Interventions Settings**

**Work with parents.** Some programs focus on educating and supporting parents so they, in turn, can support children. Important goals of family interventions such as these are the reduction of family distress and the promotion of strategies to support parental calm and stability, which in turn serve to promote children’s well-being (Machel, 1996). During World War II, Anna Freud (1974) observed “very anxious mothers with very anxious children” (p. 170) and noted that children shake and tremble with the anxiety of their mothers. This was demonstrated in a recent study that found Israeli children’s reactions to terrorism were associated with those of their parents (Moin et al., 2007). One such intervention targeting parents is a program conducted in the United States, aiming to train parents to learn to cope with media on the threat of terrorism and offer guidance and commentary to their children (Comer, Furr, Beidas, Weiner, & Kendall, 2008). An evaluation of the intervention showed that both trained parents and their children displayed less threat when watching media, in comparison with a control group (Comer et al., 2008). In another study
(Dybdahl, 2001), a 5-month psychosocial intervention was provided to mothers of children (average age = 5.5) who had been displaced (along with their mothers) during the war in Bosnia and Herzegovina. The mothers participated in a weekly therapeutic discussion group to increase their well-being and provide support, as well as the International Child Development Program, which aims to increase positive mother-child interactions through promotion of sensitive caregiving. The study findings indicated that in comparison with a control group that only received medical care, mothers who participated in the program showed a significantly greater improvement in well-being and posttraumatic symptoms. In addition, their children displayed a significant improvement in anxiety, sadness, cognitive performance, and weight gain (Dybdahl, 2001). These studies provide an example of parents' influence on children's ability to cope with threatening stimuli. This understanding has also led to the involvement of parents in individualized or group interventions for children, a strategy emphasized in a number of studies (Brown & Bubrow, 2004; Gammonley & Dziegielewski, 2006).

**School-based interventions.** In school-based interventions, the initial goal is to create an emotionally safe and friendly environment while incorporating mental health interventions (Kos & Derviskadic-Jovanovic, 1998). Such mental health interventions incorporate a variety of treatment techniques. For example, a program entitled “Overshadowing the Threat of Terror” was implemented in elementary schools in Israel to help children cope with the continuous exposure to terrorism (Berger, Pat-Horenczyk, & Gelkopf, 2007). The program included psycho-education, coping skills training, cognitive-behavioral techniques, art therapy, meditation exercises, and narrative methods. In comparison to a control group, those who participated in the program showed reductions in symptoms of stress and anxiety (Berger et al., 2007). In another example, a school-based intervention was implemented in the district of Poso, Indonesia, in which there has been continuous violence in conflicts between Muslims and Christians (Tol et al., 2008). Participation in the program, which incorporated CBT, cooperative play, and creative activities, led to a reduction of posttraumatic stress symptoms (Tol et al., 2008). School-based programs have been shown to be effective and can be cost-efficient by reaching large numbers of children (in the case of universal interventions) and in some cases, through the recruitment of home room teachers to run the program (Gelkopf & Berger, 2009). In addition, schools and other public services can help in monitoring children's adjustment and level of coping and in facilitating the provision of professional help when needed (Yule, 2002). Furthermore, the normative school setting enables participation in mental health interventions with no stigma (Brown & Bubrow, 2004). A review of the evidence base of interventions for children exposed to armed conflict indicated that trauma/grief-focused group psychotherapy and mind/body techniques (e.g., meditation, biofeedback, guided imagery) were effective school interventions for reducing symptoms of posttrauma (Betancourt & Williams, 2008).

**Group work.** Much of the literature on group work with children following exposure to war and terrorism has dealt with the aftermath of September 11. The literature pinpoints numerous advantages of such group therapy. From an attachment approach, the group can serve as a secure base (Aronson, 2005) and a safe place (Malekoff, 2008) in the face of insecurity. Group members can provide social support (Haen, 2005; Malekoff, 2008), and through listening to others who have similar experiences, participants receive legitimization and normalization of their responses (Aronson, 2005; Haen, 2005). These elements can help children work through feelings of guilt and shame that may arise following exposure to terrorism (Haen, 2005). An additional goal of group work following exposure to
Exposure to War and Terrorism

trauma is reaching a coherent narrative, which can be achieved as a group through working together to integrate information and correct cognitive distortions of the event (Aronson, 2005; Haen, 2005). Further elements that are often incorporated in group work include psycho-education, cognitive exercises, art therapy, coping skills training, and gradual exposure to traumatic events (Aronson, 2005; Haen, 2005). Undoubtedly, treatment procedures must be suited to the patients’ specific needs and, many times, multifaceted interventions are needed.

Discussion

This article reviewed the negative influence of exposure to terrorism and war on children, indicating that both direct and indirect exposure put children at risk for short- and long-term mental health problems. Nonetheless, studies also indicate children’s resilience in the face of war and terrorism. Such resilience may be partially attributed to the adaptive function of participants’ defense mechanisms, which may enhance the short-term coping of children in conditions of prolonged terror. Anna Freud (1915) claimed that as defenses become hardened due to habit, the child learns to filter out additional stimulations. Freud (1914) as well as Melanie Klein (1946) suggested that humans have a drive for life and a drive for death, which are in constant struggle with one another. When many life-threatening situations introduce the probability and fear of death, children are able to overcome their fear of death by clinging strongly to their life drive.

Factors such as the child’s developmental stage, gender, social support, and life disruption have a strong influence on children’s ability to cope with exposure to war and terrorism. The finding that girls have more internalizing problems, whereas boys have more externalizing problems, is not surprising and goes in hand with girls’ general tendency toward great internalization and boys’ toward externalization of mental health problems (Achenbach & Edelbrock, 1981).

The role of parents in helping children adjust during war and terrorism cannot be understated. This is the case for young children, who rely heavily on their parents’ responses and interpretations of events in order to understand them, as well as older children, who depend on their parent’s emotional support when coping with the threat and trauma of war and terrorism. Parent’s own personal experiences of trauma may have a strong impact on their ability to support their children and provide them with a secure base during times of war and terrorism. Furthermore, the parents’ personality, background, and ability to empathize with and contain their children’s feelings both before, during, and after the traumatic events all function as protective or risk factors in children’s resilience to trauma.

Furthermore, the duration and extent of exposure to traumatic events determine the intensity of children’s responses. Although war tends to expose populations to ongoing traumatic events over a relatively long duration of time, acts of terror that are ongoing, such as those which occurred in Israel during various Intifadas, may directly expose people to prolonged threat of terror through their unpredictable nature and targeting of civilians. Though this topic has not received much empirical attention, it would be interesting to compare states of war and those of ongoing terror, to reach a greater understanding of their distinct impact on children’s lives.

Another topic that has not been studied extensively is the impact of culture on children’s responses to war and terrorism. Studies conducted to date have provided evidence of the influence of cultural identity on the interpretation of acts of war and terrorism, which consequently affects responses to the events. Further research is needed to gain a broader
understanding of intercultural differences beyond identification with the aggressor, including the way in which cultural norms and values affect the manifestations of distress among children. Such studies are difficult to conduct because it is difficult to obtain a comparison of different cultures exposed to similar experiences of war and terrorism. Such a comparison is possible in locations where different populations coexist and are exposed to the same events. A study comparing the responses of Arab and Israeli children to armed conflict in Israel could be informative for this purpose.

In terms of the methodological issues that became evident when examining the studies in this review, studies adopted an array of different outcome variables and used different measures for the same outcome variables across studies. On the one hand, the fact that so many studies found negative outcomes nonetheless demonstrates the extent to which war and terrorism impede on adjustment. On the other hand, some mixed findings were revealed such as contradictions in relation to the age at which children are most vulnerable to mental health problems following exposure to war and terrorism. The variation in measures and outcome variables makes comparisons between studies more difficult. Furthermore, few studies focused on children younger than the age of 9, and even fewer younger than the age of 5. In contrast, the majority of studies worked with samples of adolescents, indicating that there may be more knowledge on the adjustment of older children to war and terrorism than that of younger children. Considering the cognitive and social limitations in early childhood and the early school years, it seems imperative that further research is dedicated to examining the effects of exposure to war and terrorism during these developmental stages. This is especially important in relation to the strong impact that traumatic events have during early childhood.

Interventions to Promote Children’s Resilience and Reduce Risk of Long-Term Mental Health Problems

The first goal of interventions following exposure to war or terrorism is to find a safe place, provide a sense of security, address basic needs, and establish rapport and trust with the child. Exposure to traumatic events challenges children’s sense of security and safety, making the task of reestablishing trust a difficult mission, one that requires much empathy on the part of the therapist (Crenshaw & Hardy, 2007). Once these aims have been achieved, mental health interventions can be used to address posttrauma symptoms. A variety of interventions have been used to help children exposed to warfare and terrorism, including relaxation techniques, art therapy, CBT, narrative exposure therapy, and group therapies. To summarize the existing strategies, one of the first goals of therapy following war and terrorism is to facilitate children in controlling feelings of stress through a reacquisition of feelings of control both over the situation and over the feelings that have emerged as a consequence of the traumatic events (Barenbaum et al., 2004). Although CBT has received the most empirical support, other techniques, such as art therapy, are commonly used in CBT as a means of facilitating children’s expression of unspeakable traumas. Although it is clear that creative arts cannot stand alone as a therapeutic technique, they are an important and effective tool stimulating children’s self-expression and can be implemented in different forms of therapy. More important than the specific treatment technique chosen is the relationship between the therapist and patient, which must be based on trust, containment, holding, and empathy in any treatment approach.

An important issue that has been debated relates to efforts to prepare preventative mental health programs prior to exposure to war and terrorism. It is unclear whether investing in such efforts is effective because it is unknown whether addressing such issues with children
Increases or decreases their anxieties. However, it is clear that schools and family doctors can be helpful in identification of those at risk of developing mental health problems immediately after terrorist events or acts of war. Hence, intervention in continuous identification of at-risk children is recommended at all times and especially during crises, such as war and terrorism. Because we cannot prevent wars, and it does not seem that world peace is just around the corner, we hope this article joins the increasing body of research aimed to benefit practitioners treating children exposed to wars and terrorism throughout the world.

References


