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Adolescents on the Front Line: Exposure to Shelling Via Television and the Parental Role

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Objectives: Research suggests that exposure to traumatic content via television inadvertently increases posttraumatic stress symptoms (PTSS) as well as psychological distress, especially among adolescent viewers. The aim of the current study was to assess the effect of news consumption on PTSS and general distress among adolescents who live in a war area, as well as to examine the role of parents as intermediaries of news broadcasting. *Method*: A total of 65 adolescents who live in a war zone filled out the Child Post Traumatic Stress Reaction Index, the Brief Symptoms Inventory, and a scale measuring the level of real-life exposure, news broadcast consumption, and parents as intermediaries of news broadcasting. *Results*: A main effect for real-life exposure on both PTSS and general distress was revealed. Interestingly, a three-way interaction between real-life exposure, television exposure, and parents as intermediators was found for general distress. Only under low real-life exposure did parents as intermediaries buffer the effect of television exposure on general distress. *Conclusions*: Parental intermediation of news broadcasting of traumatic events, especially in situations of continuous, real-life exposure, is essential.

In recent years trauma research has shown a growing interest in the emotional effects of exposure to disaster via media. Alongside its central role as a means of communication used to educate and inform the public in times of emergency, it has been suggested that the media may also inadvertently increase psychological distress, especially among children and adolescent viewers (e.g., Eth, 2002; Houston, 2009). Studies conducted over a range of traumatic events and different geographic locations (e.g., Dugal, Berezkin, & Vineeth, 2002; Pfefferbaum et al., 2003; Pfefferbaum et al., 2000; Phillips, Prince, & Schiebelhut, 2004) point to a relation between exposure to media coverage of disasters and psychological distress, such as posttraumatic and anxiety symptoms among children viewers. Many of these studies have indicated that greater media exposure either in duration (i.e., longer hours) or intensity (i.e., highly gruesome images) is related to a higher prevalence of distress

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symptoms (e.g., Ahern et al., 2002; Pfefferbaum et al., 2003).

Some researchers claim that increased media exposure has an effect on posttraumatic stress symptoms (PTSS) and functional impairment even among children who were not directly exposed and have had no personal connection to the events (e.g., Pfefferbaum et al., 2000), and thus a relation between exposure to disaster via media and PTSS is established. Others claim that the pathogenic effects of media exist mainly among viewers who were exposed to the events both in reality and via media (Ahern et al., 2002). Lavi, Green, and Dekel (2013), who examined Israeli-Jewish school children following the Second Lebanon War, found that the highest rates of PTSS were present among both the highest consumers of media as well as participants who avoided almost all exposure to media coverage of the events. These findings could suggest that the relations between TV exposure and PTSS may be complex and in some cases influenced by other factors.

One possible intervening factor may be the intermediary role of parents. Studies focusing on children exposed to trauma point out that supportive, warm, and caring parental attitudes were found to be protective factors (e.g., Gil-Rivas, Holman, & Silver, 2004), including exposure via TV (Thabet, Ibraheem, Shivram, Van-Millingen, & Vostanis, 2009). The significance of this role may become even more pertinent considering that adolescents hold independent access to media, thus making parental control relatively limited.

Because the issue of exposure via media is of great interest for public health, the present study aims to assess its effect on Israeli-Jewish adolescents who were referred to a school psychologist following a military operation. The present study examines both the effect of media exposure beyond the effect of direct exposure to shelling and the role of parents as intermediaries of the media coverage of traumatic events. Specifically, we evaluate the effect of news broadcasting consumption and the moderating effect of parents as intermediators of the news on PTSS and emotional distress among adolescents who live in a war zone and have also been exposed to ongoing shelling.

METHOD

Participants and Procedure

The study took place in communities along the southern Israeli border with Gaza during the school year of 2009–2010 and following the military operation Cast Lead, involving Israeli and Palestinian forces following years of mutual firing. During the military operation these Israeli communities along the border experienced frequent alarms, which forced families to remain in their houses, to stay in nearby shelters, or to relocate temporarily to safer areas. An average of 25 rocket shellings a day caused property damage, physical injuries, and death. In an effort to provide the public with up-to-date information, all national channels drastically changed their broadcasting schedules to constant, round-the-clock news reporting of the events.

Participants were 65 adolescents aged 11 to 18 (X = 12.28, SD = 1.37), both males (75.6%) and females (24.4%) who applied for psychological assistance in one of the six public clinics located along Israel's southern border with Gaza. In all, 92% were born in Israel. The number of children in our participants' families ranged from 1 to 10 (X = 3.14, SD = 1.73); 77% were the first-born children; and 23% were the second-born children.

The research was approved by the Trauma and Resilience Board of the Educational Psychologists. All participants and their parents voluntarily signed a consent form to participate in the study after receiving a brief description of the study and its aims.

Measures

Exposure to rocket shelling was assessed using one item, referring to the participant's exposure to rocket shelling. Answers ranged on 4-point scale between 0 (*Never*) and 3 (*Missiles fell inside my house or right near it*). *Exposure to news broadcasting* was measured through participants rating the frequency of their viewing ("Do you watch news updates on television?") on a scale between 1 (*Almost never*) and 3 (*Many times a day*). *Intermediation of news content by parents* was assessed by the following question: "Did your parents explain to you what was broadcast on television?" Respondents answered using a scale from 1 (*Not at all*) to 3 (*Always*).

Distress was measured using the general score (GSI) of the Brief Symptoms Inventory (BSI; Derogatis & Melisaratos, 1983). The BSI is a commonly used self-report symptom inventory designed to assess the psychological symptom status among both clinical and nonclinical samples. The GSI is the mean score of all the inventory items. In the current study we used the Hebrew version of the BSI, which has been commonly used in studies of trauma around the world and in Israel (e.g., Lavi & Solomon, 2005). In the current study the BSI evinced a good internal consistency ($\alpha = .94$).

PTSS was measured using the widely used and standardized Children's Post Traumatic Stress Reaction Index (CPTS-RI; Frederick, Pynoos, & Nader, 1992). This questionnaire has 22 items, based on *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition (*DSM*-IV), posttraumatic stress disorder (PTSD) symptoms. The Global Symptom Score consists of the sum of the scores. In the current study this scale evinced a good internal consistency ($\alpha = .88$).

RESULTS

Descriptive statistics concerning the frequencies of participants who reached the clinical cutoff score for the BSI's general score (GSI) and subscales, as well as the CPTS-RI's clinical cutoff score, separated for males and females, are presented in Table 1. A tremendously high rate of diagnoses was found among the study participants, especially among adolescent boys.

To assess the relation between the study variables, a Pearson correlation matrix was conducted. As can be seen in Table 2, real-life exposure is positively correlated with GSI and close to significant with PTSS. The relationship between PTSS and GSI was also found to be highly significant.

To examine the unique contribution of real-life exposure, television exposure as well as parents as intermediaries of news, we conducted two hierarchical multiple regression analyses (HMRAs), one for PTSS and the second for GSI (presented in Table 3). Each analysis was composed of five steps. First, demographic variables—age and gender—were entered to control for their effect. Second, we entered real-life exposure. In the third step, we included television exposure and parental intermediation. In the fourth step, two-way interactions between real-life exposure, television exposure, and parental intermediation were entered. In the fifth step, a three-way interaction between real-life exposure, television exposure, and parental intermediation.

TABLE 1. Frequency of Diagnoses in the Study's Sample, Separated by Gender

Diagnosis	Male	Female
PTSD	7%	5%
Somatization	7%	9%
Obsessive compulsive	13%	4%
Interpersonal sensitivity	5%	5%
Depression	5%	5%
Anxiety	12%	5%
Hostility	14%	9%
Phobia	10%	5%
Psychoticism	2%	—
GSI	12%	5%

Note. PTSD = posttraumatic stress disorder; GSI = general score of the Brief Symptoms Inventory.

TABLE 2. Pearson Correlation Matrix Between Real Exposure, Media Exposure, and Parental Intermediate of News With the GSI and PTSS

Factor	Real Exposure	Media Exposure	Parental Intermediation	PTSS	GSI
Real exposure	1.00				
Media exposure	.12	1.00			
Parental intermediation	–.11	.25^	1.00		
PTSS	.23^	.14	.07	1.00	
GSI	.26*	.15	–.05	.77***	1.00

Note. PTSS = posttraumatic stress symptoms; GSI = general score of the Brief Symptoms Inventory.
***p <.001; *p < .05; ^ = trend.

TABLE 3. Results of the Hierarchical Regression Analyses Predicting PTSS

Step	Factor	*B*	SE *B*	β	R^2	*F*
1					.05	F (2, 58) = .62
	Age	–1.39	1.25	–.15		
	Gender	–.04	1.93	–.02		
2					.08	F (3, 54) = 1.69
	Age	–1.07	1.27	–.11		
	Gender	–1.20	1.67	–.08		
	Real exposure	3.43	1.93	.27*		
3					.34	F (5, 37) = 3.86**
	Age	–2.86	1.26	–.32*		
	Gender	2.27	2.08	.16		
	Real exposure	1.90	1.68	.16		
	Media exposure	3.05	1.74	.27^		
	Parental intermediation	4.54	2.85	.23		

Note. N = 60. PTSS = posttraumatic stress symptoms.
*$p \leq .05$; **$p \leq .01$; ^ = trend.

In the first HMRA predicting PTSS, the total set of variables explained 34% of the variance of PTSS. In the first step, none of the variables came up as a significant predictor. In the second step, real-life exposure came up as a significant predictor (β = .27, p = .04) of PTSS. In the third step, when adding television exposure and parental intermediation, real-life exposure contribution became insignificant, apparently because of a suppression effect by the parental intermediation variable that has the opposite effect on PTSS. Age came up as a significant predictor (β = –.31, p = .02): the younger the child, the higher the PTSS. Television exposure evinced a trend toward significance (β = .27, p = .08). The two-way interactions conducted in step 4 and the three-way interaction conducted in step 5 were nonsignificant and therefore were omitted from the analysis.

In the second HMRA predicting GSI, the total set of variables explained 32% of the variance of GSI (see Table 4). The first step yielded no main effect. Real-life exposure, entered in the second step, came up as significant (β = .27, p = .04). In the third step, when adding television exposure and parental mediation, real-life exposure became insignificant, apparently because of a suppression effect by the parental intermediation variable that has the opposite effect on GSI, and none of the other variables came up as significant, as was in step 4. The three-way interaction between real-life exposure, television exposure, and parental

TABLE 4. Results of the Hierarchical Regression Analyses Predicting GSI

Step	Factor	*B*	SE *B*	β	R^2	*F*
1					.05	F (2, 58) = 1.59
	Age	–.03	.05	–.09		
	Gender	.11	.09	.18		
2					.11	F (3, 56) = 2.42
	Age	–.03	.05	–.07		
	Gender	.08	.08	.13		
	Real exposure	.16	.08	.27*		
3					.17	F (5, 39) = 1.63
	Age	–.04	.06	–.10		
	Gender	.14	.10	.22		
	Real exposure	.06	.08	.11		
	Media exposure	.11	.09	.22		
	Parental intermediation	.02	.08	.04		
4					.23	F (8, 36) = 1.35
	Age	–.05	.07	–.14		
	Gender	.14	.10	.22		
	Real exposure	.02	.09	.04		
	Media exposure	.09	.09	.17		
	Parental mediation	.05	.10	.09		
	Real exposure × media exposure	–.11	.08	–.23		
	Real exposure × parental intermediation	–.01	.16	–.01		
	Media exposure × parental intermediation	.06	.09	.11		
5					.32	F (9, 35) = 1.82
	Age	–.12	.07	–.29		
	Gender	.14	.10	.21		
	Real exposure	–.01	.09	–.01		
	Media exposure	.11	.09	.21		
	Parental intermediation	.01	.10	.02		
	Real exposure × media exposure	–.13	.08	–.26		
	Real exposure × parental intermediation	.01	.15	.02		
	Parental intermediation × media exposure	–.13	.12	–.23		
	Real exposure × media exposure × parental intermediation	.35	.16	.47*		

Note. N = 60. GSI = general score of the Brief Symptoms Inventory.
*$p \leq .05$; **$p \leq .01$.

intermediation entered in step five was significant (β = .47, p = .04) (see Figures 1 through 3). Probing of this interaction from the perspective of high versus low values of real-life exposure revealed that when real-life exposure was high the interaction between television exposure and parental intermediation was not significant, whereas under low values of real-life exposure the interaction was significant (B = 1.28, p = .02). Specifically, television exposure was associated with more GSI when parental intermediation was low. This finding indicates that only under low real-life exposure does the mediation of news content by parents buffer the effect of exposure to news broadcasting on GSI.

DISCUSSION

This study aimed to examine the effect of exposure to war via TV on adolescents living along the Israeli border with Gaza

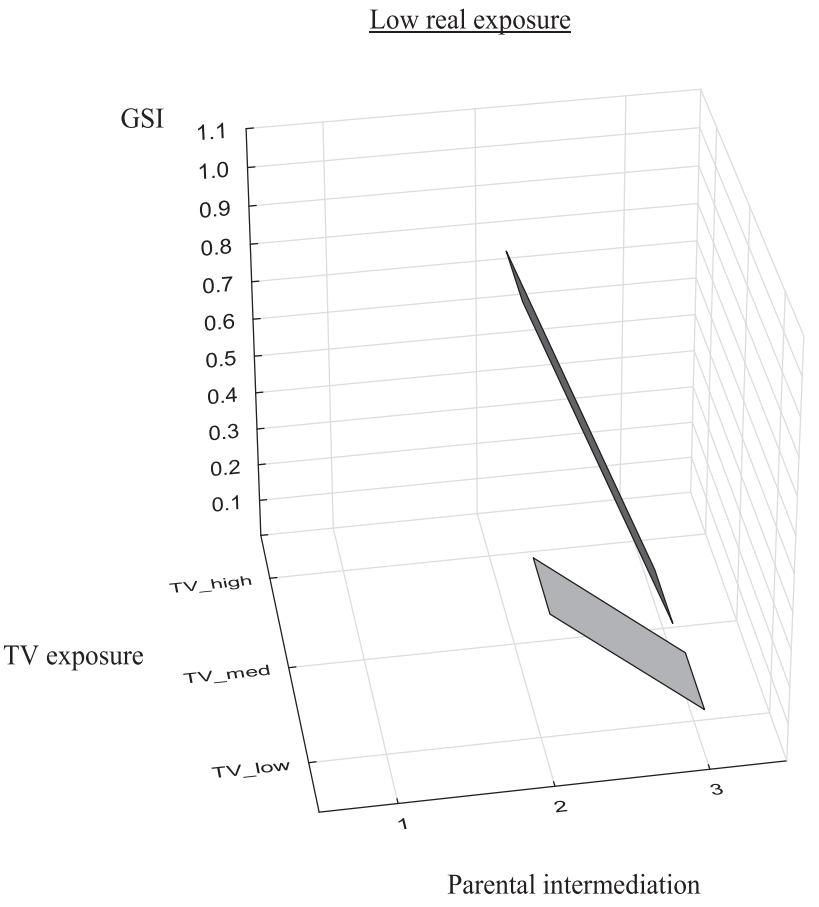

FIGURE 1. GSI mean scores by TV exposure and parental intermediation, under low real exposure.
Note. Parental intermediation: 1 = low, 2 = medium, 3 = high; none of the participants in the low real exposure group reported low parental intermediation or high TV exposure.

under ongoing shelling. The findings show that real-life exposure predicts both PTSS and general distress among outpatient adolescents. The effect of television exposure on PTSS and general distress was not significant. This aim should be addressed in a larger sample size as it may be that the small sample size did not allow detection of this effect.

The second aim of our study was to examine parental mediation of television exposure. Our results suggest that the parents' role as intermediaries was not effective for PTSS. However, with regard to general distress, it was most effective in moderating the pathogenic effects of exposure among adolescents whose exposure was relatively low.

Parents have a crucial role in their children's responses to trauma. Parents' stress response to trauma and war has been repeatedly recognized as a risk factor for their children in developing PTSS (e.g., Pfefferbaum, Noffsinger, Wind, & Allen, 2014). Conversely, good parent–child relationship and a functioning familial context were found to buffer the pathogenic effects of war and disaster (Chrisman & Dougherty, 2014). Our results may reflect the capacity of the parents to model

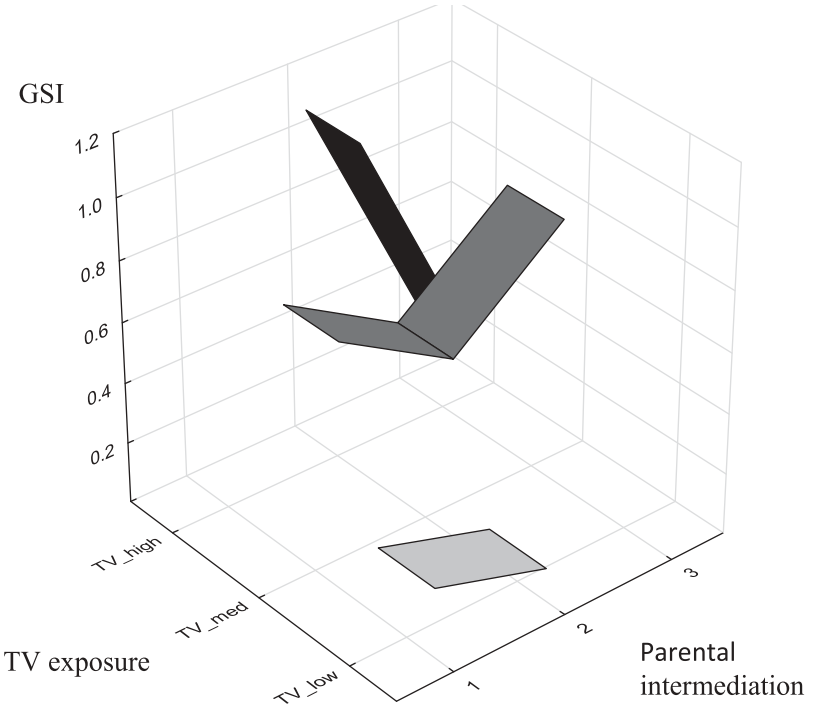

FIGURE 2. GSI mean scores by TV exposure and parental intermediation under medium real exposure.
Note. Parental intermediation: 1 = low, 2 = medium, 3 = high; none of the participants in the medium real exposure group reported high parental intermediation under low TV exposure.

an adaptive understanding and appraisal of the events that are then adopted by the adolescent. However, they may also reflect the fact that parental interpretations and emotional reactions provide their children with a means to understand and appraise the events adaptively. Interestingly, our results show that parental mediation of television exposure was less efficient in moderating the pathogenic effects of television exposure for adolescents who reported high real-life exposure (high proximity to rocket shelling). This could be due to the fact that firsthand traumatic experiences have a stronger impact than the media; therefore parental mediation of television exposure has little or no effect in changing the perception of reality.

Practical implications can be drawn from the current study's results. Emphasis on the importance of parental intermediation of adolescents' exposure to television reports of traumatic events is evident in the results, especially in situations of continuous, ongoing exposure and high geographic proximity to the events. Therapeutic interventions with adolescents should encourage parental involvement. While adolescents have independent access to television and other media devices, such as their personal computers and mobile phones, parents must be encouraged to initiate active involvement. Specifically, it is important to educate and train parents how to mediate the information flow and television in circumstances of war.

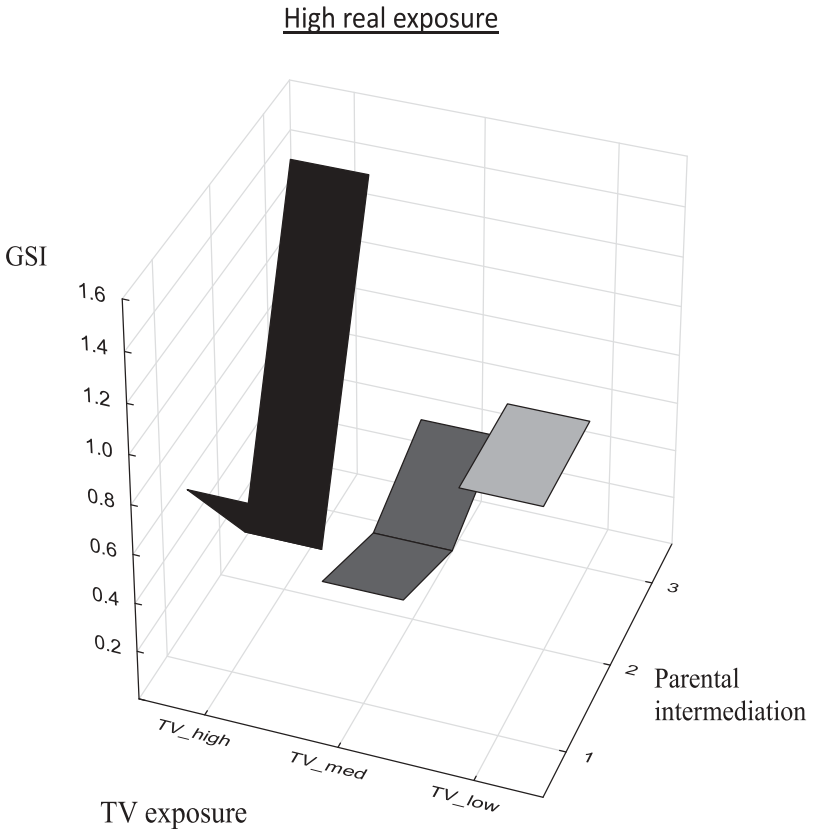

FIGURE 3. GSI mean scores by TV exposure and parental intermediation under high real exposure.
Notes. Parental intermediation: 1 = low, 2 = medium, 3 = high; none of the participants in the high real exposure group reported high parental intermediation under low TV exposure.

For example, modeling a critical point of view when watching the broadcasting, broadening the understanding of the specific situation and the general picture, and talking about the emotional experiences that arise while watching the news broadcast, as well as educating children regarding the marketing interests of the broadcasting channels and how these interests may influence the viewers' emotional response.

A number of limitations in this study should be acknowledged. First, the study has a small sample size and is of cross-sectional design. It is likely that due to small sample size our study was underpowered to detect significant findings. Furthermore, three-way interactions in a small sample size are not stable and may not be replicated (Dawson & Richter, 2006); replication in future research may strengthen this result. A second limitation is that participants were referred to therapy by their school and represent an outpatient population, which may restrict generalization to other populations, such as the general population or inpatient adolescents. Third, data of the current study are based on self-report questionnaires, which may affect their reliability. Finally, it should be kept in mind that all our participants reside in areas at high risk for political violence and have been exposed, on some level, to real-life rocket shelling. However, despite these limitations, the current

study is one of the few studies that examines the effect of trauma exposure via television as well as parents as intermediators in a group of adolescents during real-life exposure to war trauma.

Future studies, based on larger samples and using a longitudinal design, should investigate the causal relationship between real-life and television exposure, as well as parental intermediation of broadcasting and psychological distress. Along with that, future research should also include examination of the specific intervention methods to improve parental intermediation.

REFERENCES

Ahern, J., Galea, S., Resnick, H., Kilpatrick, D., Bucuvalas, M., Gold, J., & Vlahov, D. (2002). Television images and psychological symptoms after the September 11 terrorist attacks. *Psychiatry*, *65*, 289–300. doi:10.1521/psyc.65.4.289.20240

Chrisman, A. K., & Dougherty, J. G. (2014). Mass trauma: Disasters, terrorism, and war. *Child and Adolescents Psychiatric Clinic of North America*, *23*, 257–279. doi:10.1016/j.chc.2013.12.004

Dawson, J. F., & Richter, A. W. (2006). Probing three-way interaction in moderated multiple regression: Development and application of a slope difference test. *Journal of Applied Psychology*, *91*, 917–926. doi:10.1037/0021-9010.91.4.917

Derogatis, L. R., & Melisaratos, N. (1983). The Brief Symptom Inventory: An introductory report. *Psychology Medicine*, *13*, 595–605. doi:10.1017/S0033291700048017

Dugal, H., Berezkin, G., & Vineeth, J. (2002). PTSD and TV viewing of World Trade Center. *Journal of American Academy of Child and Adolescent Psychiatry*, *41*, 494–495. doi:10.1097/00004583-200205000-00002

Eth, S. (2002). Commentary on "Television Images and Psychological Symptoms After the September 11 Terrorist Attacks": Television viewing as risk factor. *Psychiatry*, *65*(4), 301–303. doi:10.1521/psyc.65.4.301.20245

Frederick, C., Pynoos, R., & Nader, K. (1992). *Childhood Posttraumatic Stress Reaction Index*. Los-Angeles, CA: University of California.

Gil-Rivas, V., Holman, E., & Silver, R. (2004). Adolescent vulnerability following the September 11th terrorist attacks: A study of parents and their children. *Applied Developmental Science*, *8*, 130–142. doi:10.1207/s1532480xads0803_3

Houston, B. (2009). Media coverage of terrorism: A meta-analytic assessment of media use and posttraumatic stress. *Journalism and Mass Communication Quarterly*, *86*, 844–861. doi:10.1177/107769900908600408

Lavi, T., Green, O., & Dekel, R. (2013). The contribution of personal and exposure characteristics to the adjustment of adolescents following war. *Journal of Adolescence*, *36*, 21–30. doi:10.1016/j.adolescence.2012.09.003

Lavi, T., & Solomon, Z. (2005). Palestinian youth of the Intifada: PTSD and future orientation. *Journal of the American Academy of Child and Adolescent Psychiatry*, *44*, 1176–1183. doi:10.1097/01.chi.0000177325.47629.4c

Pfefferbaum, B., Noffsinger, M. A., Wind, L. H., & Allen, J. R. (2014). Children's coping in the contexts of disasters and terrorism. *Journal of Loss and Trauma*, *9*(1), 78–97. doi:10.1080/15325024.2013.791797

Pfefferbaum, B., Seale, T. W., Brandt, E. N., Pfefferbaum, R. L., Doughty, D. E., & Rainwater, S. M. (2003). Media exposure in children one hundred miles from a terrorist bombing. *Annuals of Clinical Psychiatry*, *15*, 1–8. doi:10.3109/10401230309085664

Pfefferbaum, B., Seale, T. W., McDonald, N. B., Brandt, E. N., Jr, Rainwater, S. M., Maynard, B. T., & Miller, P. D. (2000). Posttraumatic stress two years after the Oklahoma City bombing in youths geographically distant from the explosion. *Psychiatry*, *63*, 358–370.

Phillips, D., Prince, S., & Schiebelhut, L. (2004). Elementary school children's responses 3 months after the September 11 terrorist attacks: A study in Washington, DC. *American Journal of Orthopsychiatry*, *74*(4), 509–528. doi:10.1037/0002-9432.74.4.509

Thabet, A. A., Ibraheem, A. N., Shivram, R., Van-Millingen, E. A., & Vostanis, P. (2009). Parenting support and PTSD in children of war zone. *International Journal of Social Psychiatry*, *55*(3), 226–237. doi:10.1177/0020764008096100