Children's Fears: A Pre-9/11 and Post-9/11 Comparison Using the American Fear Survey Schedule for Children

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Children are influenced by the salient events surrounding them (e.g., 9/11 terrorist attacks, Hurricane Katrina, massacre at Virginia Tech). In this study, the author examined fears of children and adolescents in Grades 2–12 in a pre- and post-September 11, 2001, comparison using the American Fear Survey Schedule for Children (FSSC-AM; J. J. Burnham, 1995, 2005). Differences across age, gender, and year were examined. Multivariate analyses of variance yielded significant effects for terror fear items on the FSSC-AM.

Prior to the 1950s, very little research existed about children's reactions to disasters (Vogel & Vernberg, 1993). Early research in the 1950s "concluded that children's responses [were] relatively mild and transient" (Vogel & Vernberg, 1993, p. 465). By the 1970s and 1980s, the belief was that, in at least some cases, children had "more severe and longer lasting" (Vogel & Vernberg, 1993, p. 465) symptoms resulting from exposure to disasters. The introduction of posttraumatic stress disorder (PTSD) as a diagnostic category in the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 1980) prompted a focus on children's symptoms that appear after the occurrence of disasters. Improvements were also made in data collection in the aftermath of a tragedy. For example, a change from investigating children's concerns through parental interviews to working directly with children improved discernment of children's reactions to tragedy (Vogel & Vernberg, 1993).

On January 18, 1986, millions of school-age children watched as the Challenger space shuttle exploded during live television coverage of its launch. This tragedy offered insight into how normal children cope with levels of exposure to a disaster and whether PTSD symptoms occur as a result of such exposure. After studying children in the aftermath of the Challenger explosion, Terr et al. (1999) found that children who watched the event live at Cape Canaveral or knew the teacher, Christa McAuliffe, were deeply affected by the incident. In the early weeks after the disaster, these children exhibited such symptoms as "dreams, posttraumatic play (writing, drawing, pretending), trauma-specific fears (death and dying, taking risks, explosions, fires, space, airplanes), trauma-related approaches to space careers, and diminished expectations for the future" (Terr et al., 1999, p. 1542). Remnants of the psychological effects of the event were observable 1 year later, with the children demonstrating "posttraumatic play, new approaches to careers, and diminished expectations for the future" (Terr et al., 1999, p. 1542).

Terr et al. (1999) also observed a phenomenon identified as *distant trauma*. The researchers defined this condition as "the reaction (memory, thinking, symptoms) to a disastrous event, experienced at the time of the event" even though the traumatized children are "from a remote and realistically safe distance" (Terr et al., 1999, p. 1542). This incident was observed among children who had watched the Challenger explosion on television, giving credence to the conclusion that disasters can have traumatic and far-reaching effects on children even though they are not actually present at the event.

On April 19, 1995, the Alfred P. Murrah Federal Building in Oklahoma City was bombed. At the time, this "was the largest disaster of the century in this country . . . (and) exposed our vulnerability to terrorism and aroused intense fear of domestic threat" (Pfefferbaum et al., 1999, p. 1069). Following this disaster, Pfefferbaum et al. assessed more than 3,000 Oklahoma City area students for posttraumatic symptoms. These researchers found significant differences in gender, with girls having higher symptom levels than boys. As expected, students with close relatives who were injured or killed had higher posttraumatic stress levels.

The Pferrerbaum et al. (1999) results reinforced the association between distant trauma and PTSD. Pffefferbaum et al. affirmed that watching television coverage of a traumatic event played a role in sustaining PTSD symptoms for children who did not have a close relative injured or killed. This finding echoed Terr et al.'s (1999) distant trauma research regarding television coverage after tragedies. More recent studies have also supported the view that children can develop PTSD symptoms after disasters (DeVoe, Bannon, & Klein, 2006; Duarte et al., 2006; Duggal, Berezkin, & John, 2002; Pine & Cohen, 2002; Squires, 2002; Stuber et al., 2002; Terr et al., 1999; Vogel & Vernberg, 1993). Duggal et al. reiterated the harmful effects of television, noting that children can develop PTSD symptoms as a result of watching media coverage of traumatic events.

On September 11, 2001, hijacked commercial airplanes flew into the World Trade Center towers and the Pentagon and attempted to attack a third target. The events were described as "the most deadly terrorist acts ever to occur in the United

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States" (Schlenger et al., 2002, p. 581). After these terrorist attacks, many researchers examined how this unprecedented act of terror affected children (DeVoe et al., 2006; Duarte et al., 2006; Pine & Cohen, 2002; Schlenger et al., 2002; Schuster et al., 2001; Squires, 2002; Stuber et al., 2002). Approximately 6 months after 9/11, 1 in 4 of 8,000 New York City children studied had anxiety and emotional symptoms related to the attacks, suggesting that they would benefit from mental health services (Hoff, 2002). In another study, Schuster et al. surveyed a randomly selected group of 768 parents to see what they perceived were their children's responses to 9/11. The results demonstrated "substantial symptoms of stress" among their children including "(1) avoiding talking or hearing about what happened, (2) having trouble keeping his or her mind on things and concentrating, (3) having trouble falling asleep or staying asleep, (4) losing his or her temper or being irritable, and (5) having nightmares" (Schuster et al., 2001, p. 1507).

Children have typical responses in postdisaster situations. Vogel and Vernberg (1993) noted that a "fear of reoccurrence is one of the most general postdisaster responses" (p. 469) for children. These authors also illustrated that fears can be broad and complex, such as "intrusive reexperiencing, attempts to avoid reminders, and arousal of PTSD syndrome as a type of extreme prolonged fear response" (Vogel & Vernberg, 1993, p. 469). Vogel and Vernberg also described an inverse relationship involving children's fears. They concluded that children's fears directly related to the disaster will increase in frequency and intensity, whereas fears unrelated to the disaster or trauma will not increase in the postdisaster time frame (Dollinger, O'Donnell, & Stanley, 1984; Yule, Udwin, & Murdoch, 1990). Based on this theory, it could be postulated that after 9/11, fears related to terrorist attacks would increase, but overall general fears (e.g., snakes, school-related fears, spooky things) would not increase.

Much has been written about the predictable patterns of response to traumas and disasters (Johnson & Tversky, 1983; Pfefferbaum et al., 1999; Terr et al., 1999). In addition, fears can be explained in terms of developmental factors. For instance, cognitive developmental theory has suggested that the maturity and development of children and adolescents play a role in how children cope with disasters. To illustrate, children younger than 10 years of age become concerned about external events and may develop event-specific fears (e.g., terrorist attacks, flying in airplanes), whereas adolescents are less symptomatic because they have experienced other crises (Terr et al., 1999). Adolescents are not "spared the effects of the events . . . their experiences are simply different from the younger children" thus, they "spare themselves overwhelming emotions and resulting symptoms" (Terr et al., 1999, p. 1542).

When working with youth after disasters, it is important to learn how to differentiate between "expected/age-appropriate and pathological responses" (Gaffney, 2006, p. 1008). The National Center for PTSD (Hamblen, 2005), citing DeWolfe (2004) and Pynoos and Nader (1993), offered a summary of descriptions of developmental reactions to trauma categorized for three age groups (see Table 1). By examining reactions, professional counselors are better equipped to understand how school-age children and adolescents cope with exposure to global events.

The current study had two objectives. The first objective was to compare overall fears and terror-related intensity fear scores (i.e., pre-9/11 to post-9/11) on the American Fear Survey Schedule for Children (FSSC-AM; Burnham, 1995, 2005). The second objective was to investigate whether or not the data substantiate the following postulations found in the literature: (a) Fears specifically related to a disaster will increase after the event (Vogel & Vernberg, 1993) and (b) general fears unrelated to the disaster will not increase after the traumatic event (Dollinger et al., 1984; Yule et al., 1990).

Method

Participants

The pre-9/11 data were collected in 1995 in 18 schools (Grades 2–12) in two southeastern states ($N = 720$). Following Gullone and King's (1992, 1993, 1997) methodology, the students were divided into the following groups: (a) 7–10 years, $n = 219$; (b) 11–14 years, $n = 257$; and (c) 15–18 years, $n = 244$. Four hundred and one participants were girls, 299 were boys, and 20 did not specify a gender. The racial identities were 414 Caucasians, 248 African Americans, 16 Hispanics, 28 Asians, 3 Native Americans, and 11 who did not specify ethnicity/race.

The post-9/11 data were collected in 16 schools (Grades 2–12) in two southeastern states ($N = 598$) between November 2001 and

TABLE 1

Common Developmental Reactions to Trauma

Age	Common Reactions
1–5	• Helpless, "generalized fear," "heightened arousal and confusion," hard to talk about the event, sleep patterns are disturbed, separation anxiety, clinginess, regressive symptoms, startles easily to loud/unusual noises, fussy, cries
6–11	• Feels responsible, guilty, repeats traumatic play and retells story, reminders of the event are disturbing, nightmares, sleep disturbances, worries about safety and danger, displays "aggressive behavior and angry outbursts," pays attention to parents' anxieties, avoids school, worries for others, behavior changes, mood swings, fearfulness, withdrawal, trauma-related fears increase, regressive behaviors, separation anxiety, does not enjoy activities, cannot concentrate at school, school work suffers, easily distracted
12–18	• "Self-consciousness," rebels at home or school, relationships change abruptly, depression, withdraws socially, decrease in school performance, "trauma-driven acting out such as sexual activity, reckless risk taking," tries to run away from shame, guilt and humiliation, overly involved with others or gets away from others to manage internal havoc, prone to accidents, wants revenge and "action-oriented responses" to trauma, self-focus increases, "sleep and eating disturbances, including nightmares"

Note. From The National Center for Posttraumatic Stress Disorder (Hamblen, 2005) whose work cited DeWolfe (2004) and Pynoos and Nader (1993).

February 2003. The participants were divided into the following groups: (a) 7–10 years, $n = 174$; (b) 11–14 years, $n = 226$; and (c) 15–18 years, $n = 197$. Three hundred and nineteen participants were girls, 262 were boys, and 17 did not specify a gender. The racial identities were 418 Caucasians, 141 African Americans, 3 Hispanics, 9 Asians, 5 Native Americans, and 22 who did not specify ethnicity/race.

Instrument

The current study used the FSSC-AM (Burnham, 1995, 2005), an American version of Gullone and King's (1992, 1993) Fear Survey Schedule-II (FSSC-II). Gullone and King (1992, 1993) updated the widely used FSSC-R (Ollendick, 1983) in Australia and introduced the FSSC-II. The Australian FSSC-II is a 78-item, self-report fear measure for children and adolescents (Gullone & King, 1992, 1993). Burnham (1995) adapted the Australian FSSC-II for use with American children and validated it in the United States (cf. Burnham, 1995; Burnham & Gullone, 1997). In separate studies, Burnham (1995, 2005) added 20 contemporary fear items (e.g., terrorist attacks, drive-by shootings) to the FSSC-AM.

Participants responded to each of the 98 fear items with one of the following choices: *not scared* (1), *scared* (2), or *very scared* (3). A total overall fear intensity score was obtained by summing the scores across all fear items. A total terror score was obtained by summing the scores of the 9 terror fear items on the FSSC-AM. The terror fear items were "our country being invaded by enemies," "nuclear war," "murderers," "flying in a plane," "being threatened with a gun," "terrorist attacks," "having to fight in a war," "drive-by shootings," and "people carrying guns/knives/weapons."

Gullone and King (1992) reported that the FSSC-II had high internal consistency (i.e., Cronbach's alpha of .96), with 1-week test–retest reliability at .90. They also reported that convergent, divergent, and construct validity were good. Burnham (2005) found that the Cronbach's alpha reliability estimate for the FSSC-AM was .97. The reliability analysis suggested that the FSSC-AM has adequate internal consistency and compared well with the .96 reported by Gullone and King (1992, 1993).

Procedure

After receiving Institutional Research Board approval from the university, written parental consent and student assent were obtained before participants completed the survey. Specifications for administering the FSSC-AM were taken from Gullone and King (1992, 1993). Directions on the FSSC-AM were read aloud to all students. For the younger children (i.e., second and third grades), the directions and the survey were read aloud. Older students read and responded to each item independently. The survey was administered in classrooms at school. Questions raised during administration were answered by the administrator (the author).

Results

The overall total fear intensity scores for the pre-9/11 and post-9/11 samples were calculated on the 98-item FSSC-AM. The overall fear score means, gender means, and age group means are given for the pre-9/11 and post-9/11 studies in Table 2.

A 2 (gender) × 2 (year) × 3 (age group) factorial analysis of variance (ANOVA) was conducted to examine pre-9/11 and post-9/11 fear intensity as a function of gender, age, and year on all fear items on the FSSC-AM. There were no significant interactions. There were two significant main effects, gender $F(1, 1342) = 330.48$, $p = .000$, $\eta^2 = .20$, and age group, $F(2, 1342) = 53.57$, $p = .000$, $\eta^2 = .08$. The effect of year was not significant, $F(1, 1342) = 80.06$, $p = .758$, $\eta^2 = .00$. Girls reported a significantly higher level of fear ($M = 179.65$, $SD = 1.07$) than did the boys ($M = 150.51$, $SD = 1.19$). Tukey follow-up comparisons for age group were completed as a follow-up analysis to observe differences between the age group pairs. All age groups were found to be significantly different. Participants in the youngest age group (7–10 years) were most fearful ($M = 176.57$, $SD = 1.05$), followed by participants in the middle age group (11–14 years; $M = 162.39$, $SD = 1.03$) and the oldest age group (15–18 years; $M = 156.27$, $SD = 1.05$).

A 2 × 2 × 3 factorial ANOVA was conducted to examine the terror fear intensity scores (i.e., 9 terror fear items) for the pre-9/11 and post-9/11 samples. The independent variables were gender (boys and girls), year (1995 and 2001), and age group (7–10 years, 11–14 years, 15–18 years), and the dependent variables were the 9 terror fear items on the FSSC-AM. There were no interactions. The main effects for gender, $F(1, 1292) = 228.12$, $p = .000$, $\eta^2 = .15$; age group, $F(1, 1292) = 40.53$, $p = .000$, $\eta^2 = .06$; and year, $F(1, 1292) = 11.45$, $p = .001$, $\eta^2 = .01$, were significant. The girls reported more terror fears ($M = 21.30$, $SD = 4.07$) than did the boys ($M = 17.62$, $SD = 4.92$). Tukey follow-up comparisons for the age groups indicated that the fears were found to decrease as age increased (i.e., 7–10 years, $M = 21.12$, $SD = 4.46$; 11–14 years, $M = 19.74$, $SD = 4.66$; and 15–18 years $M = 18.37$, $SD = 4.95$). The youngest students were most fearful, followed by the middle school students, and then the oldest students. Year was found to be significantly different across the 2 test years (1995 and 2001). The post-9/11 fear sample (i.e., $M = 20.06$, $SD = 4.79$) was more fearful of terror fears than the pre-9/11 fear sample ($M = 19.35$, $SD = 4.83$).

TABLE 2

Overall Fear Intensity on the American Fear Survey Schedule for Children 1995 ($N = 720$) and 2001 ($N = 598$)

	Pre-9/11 Fear Intensity Scores (1995)		Post-9/11 Fear Intensity Scores (2001)	
Item	***M***	***SD***	***M***	***SD***
Overall fear score	166.33	33.70	166.08	33.01
Gender				
Girls	178.16	30.78	180.25	29.01
Boys	150.78	30.90	149.45	29.61
Age group				
7–10 years	175.54	34.08	179.79	31.52
11–14 years	166.05	32.02	164.41	33.07
15–18 years	158.74	33.64	156.62	30.13

Three of the 9 terror fear items, "terrorist attacks," "our country being invaded by enemies," and "flying in a plane," were investigated further. A 2 (year) × 2 (gender) × 3 (age group) multiple analysis of variance (MANOVA) was used to determine gender and age differences between the pre-9/11 and the post-9/11 years. The independent variables were age group, gender, and year. The dependent variables were the scores on the 3 fear items: "terrorist attacks," "our country being invaded by enemies," and "flying in a plane." Univariate ANOVAs, simple effect tests, and Tukey post hoc tests were conducted as follow-up tests.

The results of the MANOVA indicated one significant interaction, Gender × Year, Wilks's $\Lambda = .994$; $F(3, 1321) = 2.64$, $p = .048$, $\eta^2 = .01$. No significance was detected for the other two-way or three-way interactions. There were three significant main effects: gender, Wilks's $\Lambda = .888$, $F(3, 1321) = 55.71$, $p = .000$, $\eta^2 = .11$; age group, Wilks's $\Lambda = .950$, $F(6, 2642) = 11.54$, $p = .000$, $\eta^2 = .03$; and year, Wilks's $\Lambda = .976$, $F(3, 1321) = 10.80$, $p = .000$, $\eta^2 = .02$. For the Gender x Year interaction, girls and boys had significantly higher fears post-9/11 for "our country being invaded by enemies," $F(1, 1323) = 4.90$, $p = .027$, $\eta^2 = .004$, and "terrorist attacks," $F(3, 1323) = 4.13$, $p = .042$, $\eta^2 = .003$, than did both genders at the pre-9/11 measurement.The univariate ANOVAs were significant for gender, age group, and year. For gender, all 3 fear items were significant: "our country being invaded by enemies," $F(1, 1323) = 87.53$, $p = .000$, $\eta^2 = .06$; "terrorist attacks," $F(1, 1323) = 116.69$, $p = .000$, $\eta^2 = .08$; and "flying in a plane," $F(1, 1323) = 64.12$, $p = .000$, $\eta^2 = .05$; with girls more fearful than boys for all 3 fear items. The univariate ANOVA for age group was significant for 2 of the fear items: "our country being invaded by enemies," $F(2, 1323) = 29.36$, $p = .000$, $\eta^2 = .04$; and "terrorist attacks," $F(2, 1323) = 22.47$, $p = .000$, $\eta^2 = .03$. The youngest age group had the highest level of fears, followed by the middle and the oldest age groups. Tukey's post hoc test was used to examine the differences between the three age groups. The age groups were not significantly different at the .05 level. The univariate ANOVA for year was significant for all 3 fear items: "our country being invaded by enemies," $F(1, 1323) = 14.95$, $p = .000$, $\eta^2 = .01$; "terrorist attacks," $F(1, 1323) = 28.35$, $p = .000$, $\eta^2 = .02$; and "flying in a plane," $F(1, 1323) = 7.33$, $p = .007$, $\eta^2 = .01$. The post-9/11 participants were significantly more fearful of the terror fear items than were the pre-9/11 participants. Means for gender, age group, year, and the interaction are given in Table 3.

Discussion

As the first pretest and posttest examination of the 9/11 terrorist attacks using the "exclusive assessment tool for fear assessment" (Gullone, 2000, p. 435), this study revealed new findings and subsequently supported previous postdisaster studies. By using the terror fear items on the FSSC-AM, meaningful inferences were made about fears of youth who were distant from 9/11. In the past, most disaster-related fear studies have considered children who were near disasters. The results of this study indicate that more research is needed on youth who are exposed to disasters but located at a "safe distance" (Terr et al., 1999) from the actual disaster site. Examining youth in other geographic regions of the United States is also indicated.

Several conclusions were notable. The pre-9/11 and post-9/11 fear intensity scores for all fear items on the FSSC-AM were not significantly different. This aspect of the study revealed similarities in overall general fears between the pre-

TABLE 3

Means for Terror Fears on the American Fear Survey Schedule for Children

	Terror Fear Item					
	Our Country Being Invaded by Enemies		Terrorist Attacks		Flying in a Plane	
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*
Gender						
Girls	2.33	0.72	2.42	0.70	1.64	0.79
Boys	1.96	0.80	2.00	0.79	1.32	0.62
Age group						
7–10 years	2.37	0.75	2.40	0.72	1.50	0.74
11–14 years	2.18	0.75	2.25	0.75	1.51	0.74
15–18 years	1.98	0.79	2.07	0.80	1.50	0.73
Year						
2001	2.25	0.75	2.34	0.75	1.55	0.75
1995	2.10	0.80	2.14	0.78	1.46	0.72
Gender × Year						
Girls						
2001	2.46	0.67	2.58	0.63	1.68	0.79
1995	2.23	0.75	2.28	0.78	1.61	0.78
Boys						
2001	1.98	0.76	2.05	0.78	1.40	0.67
1995	1.94	0.84	1.94	0.80	1.25	0.55

9/11 and post-9/11 samples. The conclusion also supports previous work. Dollinger et al. (1984), Vogel and Vernberg (1993), and Yule et al. (1990) posited that general fears do not increase after a disaster. Thus, it can be surmised that the general fears of this population of students were stable during the tumultuous months after September 11, 2001. Conversely, the 9 terror fears on the FSSC-AM showed significant increases post-9/11, which also corroborated with past research (Dolliger et al., 1984; Vogel & Vernberg, 1993; Yule et al., 1990). By comparing pre-9/11 and post 9/11 years, the results indicated that post-9/11 participants were significantly more fearful of "our country being invaded by enemies," "terrorist attacks," and "flying in a plane" than were pre-9/11 participants. Thus, specific disaster-related fears increased after 9/11 in this study, similar to findings in past studies. The significant post-9/11 terror fear increases reinforced previous 9/11 studies that were completed near disaster sites. Further examination of the interaction of the fear items "our country being invaded by enemies," "terrorist attacks," and "flying in a plane," at the post-9/11 measurement revealed that boys and girls in three age groups were significantly more frightened of "our country being invaded by enemies" and "terrorist attacks" than were their counterparts at the pre-9/11 measurement. This was compelling, not only for the significance of the 2 fear items, but also because boys rarely report higher fears than girls. Studies have shown for decades that girls overwhelmingly report more fears than boys on self-report fear instruments (Burnham & Gullone, 1997; Gullone & King, 1992, 1993; Ollendick, 1983). By investigating the gender, age group, and year effects, more light was shed on the influences of 9/11. The gender effect supported typical trends in fear research literature that indicate higher endorsements of fears for girls than for boys. In the current study, girls were significantly more fearful of "our country being invaded by enemies," "terrorist attacks," and "flying in a plane" than were boys. The current study also affirmed typical developmental fear patterns indicating that fears decrease as children mature with age (Burnham & Gullone, 1997; Gullone & King, 1992, 1993; Ollendick, 1983). For example, the fears of "our country being invaded by enemies" and "terrorist attacks" decreased for the sample of older children, suggesting that the children in primary grades were the most frightened, scared, and confused after 9/11. By comparing the pre-9/11 and post 9/11 test years, the results indicated that post-9/11 participants were significantly more fearful of "our country being invaded by enemies," "terrorist attacks," and "flying in a plane" than were pre-9/11 participants.

Overall, meaningful conclusions and practical applications can be drawn from the findings of the current study for mental health counselors, school counselors, psychologists, and other helping professionals who work with children and adolescents. Studies in the past have shown that traumatic events stimulate anxiety and fear in children (Pffefferbaum et al., 1999; Pine & Cohen, 2002; Squires, 2002; Terr et al., 1999). Furthermore, conclusions from past studies indicate that distant trauma effects, even PTSD symptoms, can be found in children who are distant from disasters (Terr et al., 1999; Vogel & Vernberg, 1993). The current study found that the 9/11 events significantly aroused fear levels for post-9/11 youth residing in the southeastern United States, distant in proximity to Washington, DC and New York City. Similar to Terr et al.'s assumptions of distant trauma resulting from television exposure, it can be assumed that television exposure to 9/11 had a strong, negative impact on the youth in the current study, particularly the younger children. The connection between fears and developmental theory was also observed. The terrorist attacks were most vivid and scary for the young children because of their developmental stage (Hamblen, 2005).

There were numerous implications to be drawn from the current study. Young children were the most frightened participants in this study, likely because of their cognitive development at the time of 9/11, indicating that screening procedures and interventions may be necessary for them after exposure to traumatic events. Nonetheless, counseling resources for all grade levels at school and in the community are beneficial after major disasters occur (e.g., school counseling interventions, mental health professionals at school, service providers in the community). As DeVoe et al. (2006) reiterated, the need for "developmentally relevant mental health services" (p. 173) to be made available to children and parents "in the aftermath of a significant community trauma like 9/11" (p. 173) was evident in this study. Furthermore, with the significance of television in the lives of youth (i.e., a means by which many participants gained knowledge of 9/11), counselors should advocate for the "less is better" perspective on media coverage after trauma (Duggal et al., 2002). Therefore, counselors should encourage parents to limit television viewing of the coverage of traumatic events.

Studies of the effects of disasters and tragedies that have occurred during the past 20 years have taught that youth are influenced by the salient events surrounding them. The examples given in the current study offer a glimpse of the fears and anxieties that were manifested for children and adolescents after 9/11, even in communities far away from the disaster sites. In the future, being cognizant of these findings should avert certain negative impacts on children and adolescents.

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