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Exposure to 9/11 Among Youth and Their Mothers in New York City: Enduring Associations With Mental Health and Sociopolitical Attitudes

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Abstract

The enduring impact of exposure to the 9/11 terrorist attacks on mental health and sociopolitical attitudes was examined in a sample of 427 adolescents (M = 16.20 years) and their mothers residing in New York City. Direct exposure to the terrorist attack was associated with youth depression symptoms and with mothers' posttraumatic stress disorder symptoms. There was no evidence of reciprocal effects of mother exposure on youth or of youth exposure on mothers. Although mothers reported engaging in more emotional processing coping assistance with their children, coping assistance was not associated with youth's symptomatology. Media exposure was found to be a strong predictor of youth's and mothers' sociopolitical attitudes about issues such as prejudice toward immigrants, social mistrust, and current events.

It is not an exaggeration to say that nearly everyone in the United States was affected in some way by the September 11, 2001, terrorist attacks on New York City (NYC) and Washington, DC. The dramatic events of 9/11 were reasonably expected to have far-reaching and long-lasting effects on the mental health of adults and children throughout the United States. Yet, undoubtedly those individuals who witnessed the attacks and their aftermath first-hand will have been especially affected by the event. Without any form of warning, lower Manhattan was transformed into a disaster zone when terrorists attacked the World Trade Center (WTC) on 9/11. The scale of the devastation and the large number of victims meant that residents throughout NYC were directly affected. Individuals throughout the city had direct exposure to the 9/11 attacks by physically being at or near the WTC, by seeing the towers in flames or collapsing, by smelling the cloud of smoke that hovered over the city for days, or by having their day severely disrupted by lack of subway and bus transportation or

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by the pandemonium that waged throughout the city as residents worried if another attack was imminent and tried to reach their loved ones through clogged phone lines. Indeed, in the months following the attack, New Yorkers initially exhibited high rates of posttraumatic stress disorder (PTSD), with estimated rates of between 7.5% and 11.2% of probable PTSD among adult residents (Galea et al., 2002; Schlenger et al., 2002) compared to a rate of 5.8% among a national sample of Americans 6 months after the attacks (Silver, Holman, McIntosh, Poulin, & Gil-Rivas, 2002). A study of a representative sample of NYC school children 6 months after 9/11 determined that 28% of the students had one or more anxiety or depressive disorders and that greater exposure to 9/11 was associated with greater levels of problematic mental health symptoms (Hoven et al., 2005). In this article, we examine whether exposure to the 9/11 attacks had enduring effects on a sample of youth and their mothers residing in NYC.

Parents are typically more negatively affected by a disaster than are nonparent adults (Norris, Friedman, Watson, Byrne, et al., 2002) and thus we would expect New Yorkers who were parents at the time of the 9/11 attacks to have been at especially heightened risk for mental health problems. Parents are at increased risk for problems because the difficulties they face in addressing their own anxieties after a disaster are compounded by their empathy for their children's distress as well as their responsibility to help their children cope with the disaster. Phillips, Featherman, and Liu (2004) documented what they termed the evocative influence of children's stress symptoms on parents' own feelings of shaken security and threat, with adults exposed to children distressed by the events of 9/11 being twice as likely to feel threatened than adults who did not encounter distressed children. However, very little is known about how parents' mental health was affected by their children's exposure to the 9/11 attack, over and above their own exposure. We explore the possibility of reciprocal effects of parent and youth exposure on each others' mental health problems in this article.

Youth often turn to their parents for support in dealing with a traumatic event. In the aftermath of 9/11, 85% of youth residing just outside NYC used their parents as a source of support in the week after the 9/11 attacks, and 71% found parents' support to be beneficial (Gould, Munfakh, Kleinman, Lubell, & Provenzano, 2004). Although children's strategies for coping with a disaster or other stressful event have been shown to predict improved functioning (Compas, Worsham, & Ey, 1992; Vernberg, La Greca, Silverman, & Prinstein, 1996), and children do report receiving the most support from their parents and friends in the wake of disasters such as Hurricane Andrew or 9/11 (Phillips, Prince, & Schiebelhut, 2004; Prinstein, La Greca, Vernberg, & Silverman, 1996), there has been only limited research on the role parents play in helping children select coping strategies. This is despite the fact that official advice to parents in the wake of disasters specifically encourages parents to assist their children's coping with the disaster by talking with children and listening to their concerns as well as returning to predisaster routines as soon as possible (Federal Emergency Management Agency, 2004). Those studies of which we are aware have used child reports of parents' coping assistance (Prinstein et al., 1996; Vigil & Geary, 2008). In contrast, we examine parents' self-reports of their coping assistance, first as predicted by their own or their youth's exposure to a disaster, and then as predictors of youth mental health problems.

The effects of exposure to man-made disasters such as 9/11 are not restricted to mental health. Sociopolitical attitudes, such as prejudice toward immigrants and social mistrust, could also be affected. In particular, civil liberties groups were concerned that the nature of the attacks on NYC and Washington might evoke feelings of resentment of or prejudice toward immigrants and general mistrust of others. Such fears appear to have been unfounded; rather, the opposite appears to have occurred, with youth reporting more interest in politics and civic issues post-9/11 (Metz & Youniss, 2003). Putnam (2002) reported that young Americans' interest in public affairs increased by 27%, whereas trust in community leaders grew by 19%. Neither was there an observed increase in negative attitudes about immigrants as a result of the 9/11 attacks; even in the weeks immediately after 9/11, the majority (87%) of respondents in a national survey agreed that immigrants help make the United States more open to new cultures and ideas, and only 24% believed that immigrants contribute to increased crime in the United States (Traugott et al., 2002). In a survey 2 weeks after the attack, 61% of New Yorkers agreed that people are fair, 71% agreed that people are helpful, and 34% agreed that people are trustworthy; these attitudes remained largely unchanged 5 months after the attacks (Rasinski, Berktold, Smith, & Albertson, 2002). In this study, we examined whether and how the amount and type of individual and partner exposure to the events of 9/11 were associated with NYC youth's and mothers' sociopolitical attitudes several months after the attack.

The unpredictable nature of disasters such as terrorist attacks makes it especially difficult to judge their impact on individuals. Studies already in the field, preferably ones close to the disaster site, can provide a quick venue for disaster assessment by "piggybacking" disaster assessments onto preexisting studies (Gershoff & Aber, 2004). The results reported here draw from a study employing such a strategy. The study is the result of an amendment to a planned long-term follow-up of children in an evaluation of one of the largest school-based violence prevention programs in the country, the Resolving Conflict Creatively Program (RCCP). The influence of RCCP on the social-cognitive, behavioral, and academic development of elementary school children has been reported elsewhere by Aber and colleagues (Aber, Brown, & Jones, 2003; Aber, Jones, Brown, Chaudry, & Samples, 1998; Brown, Roderick, Lantieri, & Aber, 2004). We include measures of exposure to the RCCP intervention as controls in these analyses.

Data collection began 4 months after 9/11 and ended 2 years later; interviews were on average 15 months after 9/11. This long time lapse between 9/11 and data collection is not ideal for detecting immediate effects. However, findings that individuals exposed to disasters tend to show impaired functioning for a full year after the event, and that for some individuals these effects last for years (Norris, Friedman, & Watson, 2002), suggest that our time window is appropriate for assessing lasting impacts of 9/11 exposure among individuals residing in NYC.

The first aim of this study was descriptive, namely to document the rates of exposure to the 9/11 terrorist attacks on the WTC among a sample of youth and their mothers in NYC. Unlike studies that have used a pre- and postattack design that assumes equal exposure to the attacks and their aftermath (e.g., Hendricks & Bornstein, 2007; Henry, Tolan, & Gorman-Smith, 2004; Metz & Youniss, 2003), we assessed three forms of actual exposure to the

events of 9/11: individual direct exposure to the attacks and their immediate aftermath, family or friend direct exposure at the WTC site, and media exposure to coverage of the attack. To understand whether some youth and mothers were more likely than others to be exposed to the attack, we examined several demographic characteristics that have been associated with how well individuals cope with a disaster, namely gender, age, ethnicity, and socioeconomic status (see Norris, Friedman, Watson, Byrne, et al., 2002, and La Greca, Silverman, Vernberg, & Roberts, 2002, for reviews). We also were interested in whether youth and mothers reported similar or distinct rates of the three forms of exposure, given that youth tend to be more adversely affected by disasters than adults (see Norris, Friedman, Watson, Byrne, et al., 2002).

To determine the potential impact of 9/11 exposure on mental health, our second aim was to establish whether, controlling for demographic characteristics associated with exposure, self-reported direct, family and friend, and media exposure were associated with increases in youth's and mothers' PTSD and depression symptoms. We chose to focus on PTSD and depression because they are the two mental health problems most often observed after disasters (La Greca et al., 2002; Norris, Friedman, Watson, Byrne, et al., 2002). To examine potential bidirectional effects, we also tested whether partner exposure (i.e., mother exposure predicting youth symptoms, and youth exposure predicting mother symptoms) added to the likelihood that youth or their mothers reported symptoms of PTSD or depression.

Our third aim was to understand the role of parents' coping assistance in the face of such a disaster. We sought to determine whether the extent to which mothers assisted their adolescents in coping with the events of 9/11 was predicted by their own exposure or by their adolescents' exposure. We then examined whether mothers' coping assistance predicted lower rates of youth PTSD and depression symptomatology.

Finally, our fourth aim was to establish whether exposure to the events of 9/11 had any enduring association with youth's and mothers' reports of their families' and their personal sociopolitical attitudes. Specifically, we considered families' socialization around prejudice, social mistrust, and current events, as well as individuals' own attitudes about the level of trust in their communities and about immigrants' roles in their communities. As with the prediction of mental health, we also examined whether partner exposure predicted participants' sociopolitical attitudes over and above their own exposure.

Method

Participants

The sample for this study was drawn from a larger study of 908 youth who participated in a longitudinal follow-up of children in an evaluation of one of the largest school-based violence prevention programs in the country, the RCCP. For 498 of these youth, their primary caregiver was also interviewed. Of these 498 families, 31 were excluded because they were missing adolescent or caregiver exposure to the events of 9/11. Finally, only 40 of the primary caregivers were male; they were excluded from the analyses.

The final analysis sample consisted of 427 adolescents and their female caregivers residing in NYC. Because the vast majority of the female caregivers were mothers or stepmothers to the youth (94%), we will subsequently refer to them as ‘‘mothers.’’ Adolescents ranged in age from 12 to 20 years (M = 16.20, SD = 1.69). The youth sample was 54% females and 47% Hispanic American, 35% African American, 14% European American, and 4% of another race (e.g., Asian, Native American). The majority of the adolescents reported the United States as their country of origin (87%), but nearly two thirds (64%) of them had at least one parent born outside the United States. In the follow-up, 31% of the participants were in 7th–9th grades, 54% were in 10th–12th grades, 5% were in a GED (general equivalency diploma) or vocational program, 6% were in college, 2% were working and not in school, and 2% were not working or not in school. Of the students in school, 26% reported that they worked part-time or full-time as well. Most adolescents indicated that they attended or had attended a public junior or senior high school (91%) in NYC.

The mothers averaged 42 years of age (SD = 7.11). Half of the mothers reported that they were married (50%). The race-ethnic breakdown of the mothers was roughly equal to that of the adolescents: 44% Hispanic American, 37% African American, 15% European American, and 4% of another race. Two thirds of the mothers worked (63%). The mothers reported a range of educational backgrounds: Ten percent had only elementary school education; 17% had attended, but not graduated from, high school; 28% were high school graduates; 26% had attended college for 1–3 years; and 19% were college graduates. The median education level among mothers was high school graduate. Fifty-one percent of the mothers were born outside the United States, in a total of 35 countries. Of the foreign countries of origin, the most frequently reported were the Dominican Republic (n = 50), Puerto Rico (n = 37), Jamaica (n = 23), and Haiti (n = 20).

Protocol

Families were recruited for the study through mailings and phone calls using contact information obtained from the New York City Department of Education. Recruitment letters were written in both English and Spanish. Once consent was obtained from parents and assent or consent was obtained from youth (depending on whether they were under or over 18), youth were interviewed in person by trained research assistants for 2–3 hr using a structured format. Youth entered their responses directly into a laptop computer. To minimize any intimidation adolescents might feel, the interviewers were diverse (over half of the interviewers were racial-ethnic minorities), primarily female, and entirely young adults. The interviews primarily took place at public spaces such as community libraries or local parks, and commercial establishments such as coffee shops, or, less frequently, adolescents’ homes. The students were compensated $50 for their time.

Mother interviews followed a structured format that lasted approximately 1 hr. The majority of mother interviews were conducted by reading the complete questionnaire over the phone (55%). In 34% of the cases, the parent filled out a paper copy of the questionnaire in person with the interviewer, whereas 11% of the mothers filled out the paper copy on their own and mailed it to us. Both the written and oral versions of the parent interview were available in Spanish for mothers who preferred to read and speak Spanish; 21% of the mothers were

either read the Spanish version of the questionnaire or completed a paper copy of the Spanish version. Mothers were compensated $25 for their time.

Measures

Exposure to the 9/11 Attacks on the WTC—Exposure to the terrorist attacks on NYC on September 11, 2001, and their aftermath were assessed through sections of an instrument created by Hoven et al. (2002, 2005) through collaboration with the New York City Department of Education and the Centers for Disease Control and Prevention. Three forms of exposure to the events of 9/11 were assessed: direct exposure, media exposure, and family and friend exposure. *Direct exposure* was a count of 13 potential experiences with the event (e.g., seeing the planes crash or the towers collapse, having to leave where they were for safety concerns, smelling the smoke after the event; see Table 1 for all items). To assess *family and friend exposure*, we asked respondents whether they knew someone who escaped the WTC unharmed, someone who was at the WTC on 9/11 and was physically hurt, or someone who was killed in the WTC. The family and friend exposure scale was a count across these three categories and thus ranged from 0 to 3. We asked youth and mothers to report the extent of their *media exposure* to the events of 9/11 by asking them how much they reported learning about the event from (a) TV; (b) newspapers, radio, or magazines; or (c) the Internet, on a scale of 0 (*none*), 1 (*some*), or 2 (*a lot*). Each respondent's media exposure score was an average of these three ratings.

Youth interviews were conducted an average of 443 days (SD = 176) after September 11, 2001, which is roughly equivalent to 15 months. Mothers were interviewed on average 477 days (SD = 167) after 9/11, which is also roughly equivalent to 15 months. We included the intervals between 9/11 and the mothers' and youth's interviews as controls in all analyses.

Mothers' Coping Assistance to Youth—Mothers were asked to report the kinds of assistance they provided to their children in reaction to the 9/11 attacks using a version of the Children's Coping Assistance Checklist that we adapted to be a parent-report measure (Prinstein et al., 1996). Three types of coping assistance were assessed: emotional processing, roles and routines, and distraction. *Emotional processing* included items such as, ''I talked with my child about things she or he remembered most about the attack.'' The *roles and routines* subscale included items such as, ''I did things with my child that made him or her feel like things were back to normal since the attack.'' The *distraction* coping assistance subscale included items such as, ''I did things with my child to help him or her forget about the attack.'' In this study, the coping assistance subscales had strong internal consistency: emotional processing, α = .90; roles and routines, α = .84; distraction, α = .90. Each subscale ranged from 1 to 4 (emotional processing: M = 2.36, SD = 0.71; roles and routines: M = 2.66, SD = 0.84; distraction: M = 2.25, SD = 0.95).

Youth's Mental Health—Youth's *PTSD symptoms* and *depression symptoms* were both assessed using the Computer Diagnostic Interview Schedule for Children–IV (C-DISC Development Group, 2000). The C-DISC is a highly structured interview designed to assess *DSM–IV* psychiatric disorders and symptoms in children and adolescents aged 9–17 years through self-report. (Although a young adult version for 18- to 25-year-olds was under

development and not available for use in this study, the DISC has been used successfully with an 18- to 24-year-old population; see Shaffer, Fisher, Lucas, Dulcan, & Schwab-Stone, 2000.) The adolescents were asked if they had experienced symptoms of major depression or PTSD during the past year. Previous research has found that the C-DISC–IV is answered more consistently than any other psychiatric diagnostic interview that has been prepared for either children or adults and has established reliability (C-DISC Development Group, 2000; Shaffer et al., 2000). Although clinical cutoffs applied by the DISC algorithm revealed that 4% of youth reached the level of a clinical diagnosis of PTSD symptoms in the last year and that 12% reached clinical levels of major depression disorder, for these analyses we used continuous counts of symptoms to capture the full range of symptomatology. It is also important to note that the PTSD symptoms reported by adolescents could be about any traumatic life event, not necessarily the events of September 11; only 10 of the 427 youth reported September 11 as their major traumatic life event.

Mothers' Mental Health—Mothers' *PTSD symptoms* were assessed using the PTSD subscale of the DISC Predictive Scales (DPS; Lucas et al., 2001). The DPS was created by the developers of the full interview to maximize specificity and sensitivity and to be predictive of full DISC diagnoses (Lucas et al., 2001). The DPS PTSD subscale is an eight-item scale; scores range from 0 to 1. For this sample of mothers, the DPS PTSD scale had acceptable internal consistency, $\alpha = .74$ ($M = 0.34$, $SD = 0.25$). The developers of the DPS suggest that the endorsement of five or more symptoms indicates a probably clinical level of the disorder (Lucas et al., 2001); applying this criterion, 20% of the mothers in our sample had probable clinical levels of PTSD. However, for our analyses, we used the symptom count as a continuous score to best capture the full variability of PTSD symptoms among mothers in our sample.

Mothers' *depression symptoms* were identified using the Center for Epidemiological Studies Depression Scale (CES–D; Radloff, 1977). Designed to assess depressive symptoms in normal populations, this widely used scale asks respondents to rate the frequency with which 20 states or behaviors related to depression occurred during the past week (e.g., ''I felt sad,'' ''I felt that everything I did was an effort,'' ''I enjoyed life''). The CES–D scale had excellent internal consistency with this sample ($\alpha = .90$; $M = 12.65$, $SD = 10.87$). Radloff (1977) identified 16 or more symptoms as a cutoff for potential clinical levels of depression. Mothers in our sample had CES–D scores of as high as 57 (of a possible 60), and 34% of the mothers reported elevated depression symptoms at or above the cutoff score of 16. As with youth's mental health symptoms and mothers' PTSD symptoms, however, we used the count of depressive symptoms as a continuous measure in our analyses.

Family and Personal Sociopolitical Attitudes—Both youth's and mothers' perceptions of the mothers' socialization around certain sociopolitical issues and of their own sociopolitical attitudes were assessed using the Intergroup Understanding or Bias Questionnaire (Flanagan, Gill, & Gallay, 1998; Flanagan, Ingram, Gallay, & Gallay, 1997). The questionnaire was written for adolescents and young adults; we created a companion version for parents. For this study, we used three subscales from this measure regarding sociopolitical socialization: family lessons about prejudice, family discussions of current

events, and family lessons about social mistrust. We also asked youth and mothers to complete subscales tapping two aspects of their sociopolitical attitudes, namely social integration and prejudice toward immigrants. Responses to all items were along a scale from 1 (*strongly disagree*) to 5 (*strongly agree*).

Family lessons about prejudice.: This subscale included five items that asked respondents how much they agreed with statements such as, ‘‘My parents have taught me [I have taught my children] it is wrong to judge people before you get to know them’’ and ‘‘My parents have told me [I have told my children] there might be times when people will be prejudiced against me [them].’’ This subscale showed strong internal consistency for the youth (α = .78; M = 4.07, SD = 0.74) and adequate internal consistency for the mothers (α = .69; M = 4.38, SD = 0.54) in this sample.

Family lessons about social mistrust.: This subscale consisted of four items, including, ‘‘My parents have warned me [I have warned my children] that people sometimes take advantage of you,’’ and ‘‘My parents have warned me [I have warned my children] you can’t always trust people.’’ This subscale had strong internal consistency for the youth (α = .83; M = 4.21, SD = 0.77) and adequate consistency for the mothers (α = .65; M = 4.33, SD = 0.52) in this sample.

Family discussions of current events.: Comprising six items, this subscale includes items such as, ‘‘In my house we have many discussions about current events and politics’’ and ‘‘I tell my parents [my children] my opinions about events in the news.’’ This subscale showed strong internal consistency for the youth (α = .83; M = 3.36, SD = 0.81) and adequate internal consistency for the mothers (α = .71; M = 3.77, SD = 0.60) in this sample.

Social integration.: The six items in this subscale include statements such as, ‘‘Most people in our community try to make this a good place to live’’ and ‘‘If someone in our community has a problem, they can usually count on others to help them out.’’ This subscale showed equally strong internal consistency for the youth (α = .84; M = 3.00, SD = 0.81) and the mothers (α = .84; M = 3.13, SD = 0.76).

Prejudice toward immigrants.: For this subscale, respondents indicated their agreement with nine statements such as, ‘‘If they want to be accepted, immigrants should learn our customs and language’’ and ‘‘The children of immigrants should have the right to a good education in our country’’ (reversed). This subscale also showed strong internal consistency for both the youth (α = .78; M = 2.25, SD = 0.61) and the mothers (α = .75; M = 3.65, SD = 0.56) in this sample.

Components of RCCP Intervention—Experience with the intervention in middle childhood was operationalized using data on two primary RCCP components. *Classroom instruction* in RCCP is composed of the total number of lessons given by trained teachers to children in their classrooms across the 2 years of the evaluation (range = 0–10, M = 2.36, SD = 2.53). *Teacher training and coaching* is a count of the number of contacts a teacher had with the RCCP and consists of training sessions attended, one-on-one meetings with an RCCP staff developer, and classroom visits by the staff developer (range = 0–8, M = 2.10,

SD = 2.02). (Please see Aber et al., 1998, 2003, for more indepth discussions of these variables.) As stated earlier, we included these two aspects of the RCCP intervention in the analyses as controls only.

Results

Youth and Mother Exposure to the 9/11 Terrorist Attacks on the WTC

The vast majority of both youth (87%) and their mothers (91%) reported one or more forms of direct exposure to the 9/11 attacks on the WTC and their aftermath (see Table 1). Youth reported an average of 3.27 forms of direct exposure (*SD* = 1.85), with a low of 0 and a high of 9 forms of direct exposure. Mothers reported more forms of direct exposure, averaging 4.22 (*SD* = 2.29) and ranging from 0 to 12 forms of direct exposure. One in 10 youth and 1 in 8 mothers reported having seen the planes crash into the Twin Towers or the towers collapse with their own eyes. Thankfully, few reported having been physically hurt themselves in the attacks (youth: 1%; mothers: 3%), but 1 in 5 youth and 1 in 4 mothers reported being in or near the cloud of smoke or dust that resulted from the towers' collapse. One half of youth and nearly two thirds of mothers reported smelling the smoke from the WTC site after the attack. Equivalent numbers of youth and mothers reported having difficulty getting home that day (34% and 33%), although more youth reported that they had to leave the location where they were for safety reasons because of the attacks (youth: 29%; mothers: 18%). Half of the mothers felt that their travel around the city was limited because of the attacks (53%); we did not ask this specific question of the youth, but when we asked youth if they felt their parents had restricted their travel around the city because of the attack, only 18% said ''yes.'' Youth and mothers were equally likely to say that someone in their family works near the WTC site (35%), although mothers were slightly more likely to report that someone in the family lost their job because of the attacks (20% vs. 15%) or that someone in the family worked in rescue or relief services at the WTC site (19% vs. 12%). Very few respondents (6% or less) reported that they had to change their school or their workplace, either temporarily or permanently, or that they had to move out of their home because of the attack.

Mothers were more likely than youth to report each form of family and friend exposure to the 9/11 attacks (see Table 2). Slightly less than half of all youth and two thirds of mothers reported one or more forms of family and friend exposure to 9/11; the average for youth was less than one form of family and friend exposure (*M* = 0.61, *SD* = 0.74), whereas for mothers the average was one form of family and friend exposure (*M* = 1.02, *SD* = 0.94). Mothers were twice as likely as youth to disclose that they knew someone who was killed in the attacks on the WTC (39% vs. 21%).

Regarding media exposure to 9/11, nearly all youth and all mothers reported learning about the attacks by watching TV (96% of youth and 98% of mothers; see Table 3). The percentages of youth and mothers who reported learning about the attacks from radio, newspapers, or magazines were also roughly equal at 93% and 91%, respectively. Youth were more likely to have used the Internet to learn about the attacks (38%) than mothers (25%). When their ratings for each of these forms of media exposure were combined into

one subscale, youth's and mothers' average media exposures were strikingly similar: youth media exposure, $M = 1.20$, $SD = 0.44$; mothers' media exposure, $M = 1.29$, $SD = 0.40$.

We next examined whether certain groups of individuals were more vulnerable to exposure to the terrorist attacks than others. Table 4 contains the results of six separate regressions predicting youth and then mother direct, family and friend, and media exposure. Demographic characteristics largely did not predict exposure, with only two of the six models significant. Even the significant models, predicting youth's and then mothers' family and friend exposure, did only a modest job predicting the variance in exposure (8% and 10%, respectively). In the model predicting youth family and friend exposure, girls reported more, and African Americans and Hispanics Americans less, exposure. African Americans and Hispanic American mothers as well as mothers of another race or ethnicity also reported less family and friend exposure than European American mothers. Mothers with higher levels of education reported more family and friend exposure. Notably, the time lapse between 9/11 and the date of the youth or mother interview was not significantly associated with the amount of exposure reported by participants.

Exposure to 9/11 and Mental Health

To determine the impact of exposure to 9/11 on youth's and mothers' PTSD and depression symptoms, we conducted two regressions for each outcome. We first regressed the mental health outcome on youth and mother demographic characteristics and respondents' own 9/11 exposures to the model (e.g., youth exposure predicting youth PTSD symptoms), reported as Model A in Table 5. We then ran a second set of models, adding partner's exposures as predictors of mental health (e.g., mother exposure predicting youth PTSD symptoms). We report the results of these models as Model B in Table 5. By running the analyses in these two stages, we are able to isolate the impacts of own and partner exposure on PTSD and depression symptoms from each other while controlling for demographic characteristics.

Turning first to the prediction of youth mental health, we found that although youth's own direct exposure to 9/11 contributed significantly to the prediction of their self-reported depression symptoms, exposure did not predict youth's PTSD symptoms. Each of the minority race-ethnic groups reported more PTSD symptoms compared to European American youth, whereas youth who are second-generation immigrants reported fewer PTSD symptoms. Girls reported more, and first-generation immigrant youth fewer, depression symptoms. In neither of the two regressions for Model B was the F_{Δ} statistic significant; thus, none of mothers' exposures to 9/11 predicted youth PTSD or depression symptoms.

Mothers' own direct exposure to 9/11 did predict more of their own PTSD symptoms, over and above the contribution of demographic characteristics, $F(17, 321) = 5.04$, $p < .001$. Mothers' family and friend exposure and media exposure did not predict their own PTSD symptoms, and none of the forms of mothers' exposure to 9/11 predicted their depression symptoms. Mothers with higher levels of education reported fewer PTSD and depression symptoms, and employed mothers reported fewer depression symptoms; no other demographic characteristics predicted symptoms. The addition of youth exposure to the regressions did not improve any of the models significantly. Youth media exposure did

predict mothers' PTSD symptoms (the more media exposure reported by youth, the fewer PTSD symptoms reported by mothers), although youth media exposure did not significantly improve the prediction of mothers' PTSD symptoms over and above demographic characteristics and mothers' own exposure.

Mothers' Coping Assistance as a Function of Exposure to 9/11

To determine whether mothers' coping assistance was in response to exposure to 9/11, we regressed each of the three forms of coping assistance first on mothers' exposure and then on youth's exposure. We followed a two-regression sequence similar to that used in the prediction of mental health outcomes, again to isolate the unique impacts of mothers' and youth's exposure to 9/11 on mothers' coping assistance. The results from these sets of regressions are presented in Table 6. Older mothers reported using emotional processing and roles and routines coping assistance less than younger mothers, whereas Hispanic American mothers reported using more distraction coping than European American mothers. Mother education was associated with less use of distraction coping, whereas mother employment was associated with more roles and routines coping.

The extent to which mothers engaged in emotional processing coping was significantly predicted from their own direct exposure to 9/11; the more direct exposure mothers experienced, the more they engaged in emotional processing coping with their adolescents ($\beta = .23$, $p < .001$). However, the extent to which mothers used roles and routines or distraction as methods of helping their children cope with the events of 9/11 was not predicted by the extent of their own exposure. Contrary to our prediction, mothers' coping assistance was not a function of the extent of youth's direct, family and friend, or media exposure to the events of 9/11; in other words, mothers did not engage in certain forms of coping assistance depending on the type of exposure their children experienced.

Mothers' Coping Assistance and Youth Mental Health

We examined whether mothers' coping assistance was associated with youth mental health by regressing youth PTSD symptoms and depression symptoms first on youth exposure to 9/11 and then on the three forms of mothers' coping. The pattern of significant demographic predictors was the same as that presented in Table 5. We again used two regressions to allow us to consider the possibility that mothers' coping assistance might function as mediators of the impact of youth exposure on their mental health. However, after the impact of youth's exposure to 9/11 on their mental health was controlled in Model A, none of the forms of mothers' coping assistance predicted youth mental health in either Model B (see Table 7).

Exposure to 9/11 and Youth Reports of Family and Personal Sociopolitical Attitudes

Youth's and mothers' exposure to 9/11 were used as predictors of youth reports of three aspects of family sociopolitical attitudes, namely family lessons about prejudice, family discussions about current events, and family discussions about social mistrust. Girls, African Americans, and Hispanic Americans were most likely to report their parents taught them about prejudice and about needing to mistrust others. Youth whose parents are immigrants report more trust in their local communities, whereas both African American and Hispanic American youth reported less trust. Youth whose mothers were married or working reported

less prejudice toward immigrants. Interestingly, youth's prejudice toward immigrants was higher the longer the gap between 9/11 and their interviews.

The more youth reported media exposure to 9/11, the more likely they were to agree that their family discussed circumstances in which they might personally encounter prejudice, as well as the extent to which they should be vigilant about and distrustful of other people (see Table 8). Youth media exposure was also associated with more family discussions of current events. Mothers' exposure to 9/11 was not predictive of any of the youth-reported measures of family sociopolitical attitudes. Regarding youth's self-reported sociopolitical attitudes, youth's media exposure significantly predicted youth's trust in the local community. The only sociopolitical attitude affected by youth's direct exposure to 9/11 was their prejudice toward immigrants, although it did not account for a significant improvement in the R^2. Contrary to expectation, more exposed youth reported less, not more, prejudice toward immigrants.

Exposure to 9/11 and Mother Reports of Family and Personal Sociopolitical Attitudes

Similar to the models predicting youth reports, mothers' reports of the extent of their own socialization of their adolescents around issues of prejudice, social mistrust, and current events were predicted significantly by their own media exposure to 9/11 (see Table 9). In addition, mothers' family and friend exposure predicted a greater extent of mother-reported family lessons about prejudice, whereas the more mothers reported direct exposure to 9/11, the less likely they were to discuss issues of social mistrust with their adolescents. Youth exposure did not significantly improve the prediction when added in the second models.

In the models predicting mothers' own sociopolitical attitudes, neither mothers' own nor youth's exposure to 9/11 predicted mothers' trust in the local community. Mothers' prejudice toward immigrants was predicted by their media exposure, with more exposure associated with less prejudice toward immigrants. Youth exposure to 9/11 did not predict mothers' self-reported trust in the local community or mothers' self-reported prejudice toward immigrants.

African American and Hispanic American mothers reported higher levels of talking with their children about social mistrust and less likely to have trust in their local community. Mothers who are immigrants or married to an immigrant report more trust in their local communities and, somewhat surprisingly, more prejudice toward fellow immigrants. Older mothers report more trust in their communities, married mothers report fewer family lessons about social mistrust, and educated mothers report more family discussions about current events.

Discussion

The 9/11 attacks live on in the memories of many Americans and most New Yorkers. Our main conclusion from this study is thus a surprising one—namely that variations in exposure to the events of 9/11 had very modest associations with the longer term mental health of New York youth and their mothers. We also found that variation in exposure to the events of 9/11 was associated to a small degree with both mothers' coping assistance and youth's and

mothers' sociopolitical attitudes. We found little evidence of reciprocal influences of mothers' or youth's exposure on each others' mental health and sociopolitical attitudes.

Exposure to 9/11 and Parent and Youth Mental Health

Although other studies have found that media exposure alone to the 9/11 attacks induced PTSD symptoms in children geographically distant from the sites of the attacks (Otto et al., 2007), we did not replicate this finding with our NYC sample, instead determining that only direct exposure was associated with youth's and mothers' mental health. It may be that direct exposure to the attacks overshadowed the impacts of media exposure among individuals so proximal to the attack site. The physical reminders of the attack, including the smoke rising from what was left of the towers, the restricted access to Lower Manhattan, the rerouted subways, and the pictures of missing victims of the attacks posted around the city in vain by family members, were present for days and weeks afterward, prolonging exposure to the attacks among New Yorkers. It may also be that families living so close to the site of the attacks felt less reason than Americans living elsewhere to turn to the media to learn about the attack, as they need only go to any street corner, subway car, diner, or office lunchroom to hear the latest information on victim counts, conspiracy theories, and warnings of future attacks.

Despite nearly universal direct exposure to the 9/11 attacks, very little of the variance in the mental health symptoms of youth and parents in our study was explained by 9/11 exposure. Even for the two models in which exposure to 9/11 significantly predicted symptomatology, exposure accounted for only 2% of the variance in youth depression symptoms and 7% of the variance in mothers' PTSD symptoms. The lack of association between 9/11 exposure and mental health symptoms may be a function of the length of time between 9/11 and the interviews (on average 15 months for both youth and their mothers). Although we controlled for the time lapse between 9/11 and each interview, we identified few enduring associations of 9/11 exposure with youth's and mothers' mental health. It is still quite possible, if not likely, that there were more immediate effects of 9/11 exposure on the mental health of our participants, but our results suggest that any such impacts on PTSD and depression symptoms have largely receded with the passage of time.

Given the nontrivial rates of PTSD (youth: 4%; mothers: 20%) and depression (youth: 12%; mothers: 34%) symptoms in this sample of youth and their mothers living in NYC, it is clear that something other than the trauma of the 9/11 attacks is responsible for these elevated levels of problematic mental health symptoms. In our previous empirical paper from this study (Aber, Gershoff, Ware, & Kotler, 2004), we explored community violence exposure as a potential predictor and found that exposure to community violence as a victim or witness significantly predicted PTSD and depression symptoms, with near zero associations for 9/11 exposure dwarfed by the very large effects of violence victimization. We concluded then that the effects of traumatic events such as disasters and terrorist attacks need to be understood in the context of youth's everyday lives. Similarly, parents' PTSD and depression symptoms may be predicted more by daily exposures to stress or violence in their homes and communities. Unfortunately, we did not have measures of mothers' individual violence exposure in this study and so could not test this alternative hypothesis; such a question is

ripe for future research. We encourage future researchers of the impacts of disasters to include measures of ‘‘everyday’’ stress and violence to put the impacts of disasters in context.

Other studies of 9/11 have found similarly modest associations of 9/11 exposure with child and youth mental health. One longitudinal study of children in NYC found that parents reported fewer child behavior problems 4 months after the attack, but by 6 months later behavior problems had returned to pre-9/11 levels (Stuber et al., 2005). Similarly, a study of high school students in Boston found that while political interest and civic participation increased slightly right after 9/11, they returned to pre-9/11 levels by 9 months after the attacks (Metz & Youniss, 2003). A study of 9- to 13-year-olds similarly found that neither knowing someone directly affected by the attacks nor having moderate media exposure to the 9/11 attacks predicted children’s PTSD symptoms 7 months after 9/11 (Lengua, Long, & Meltzoff, 2006). In that study, preattack stress load (e.g., moving, serious illness/injury, death of a loved one) and the extent of children’s 9/11-specific threat appraisal and avoidant coping were much stronger predictors of PTSD symptoms. Among fourth graders living in inner-city Chicago at the time of the 9/11 attack, those assessed post-9/11 did not have higher levels of depression symptoms than the children assessed pre-9/11 (Henry et al., 2004).

The good news of our null findings is that even among a sample of families with extensive direct exposure to the 9/11 terrorist attacks and its aftermath, there were few lasting associations of this exposure with mental health on average 1 year later. We may be tempted to conclude that youth and their mothers are ‘‘resilient’’ to the impacts of 9/11. However, resilience is a dynamic construct that involves positive adaptation after an experience of adversity (Luthar, Cicchetti, & Becker, 2000). To determine whether our participants are in fact doing as well as they were before 9/11, we would need pre- and postmeasures of functioning. Without preevent measures, we are only able to predict post-9/11 levels of functioning and not change or adaptation of functioning after 9/11. We further argue that any conclusion about resilience in our sample is belied by the fact that the mothers and youth in our sample reported high levels of symptomatology over 1 year after the 9/11 attack. If 9/11 is not the cause of these mental health problems, what is? We suggest that greater attention needs to be paid to everyday stress and trauma in the lives of inner-city families.

Exposure to 9/11 and Parent Coping Assistance

Mothers of youth in New York did report small differences in their modes of helping their children cope with 9/11 depending on their own exposure. Specifically, mothers’ higher direct exposure was associated with higher levels of coping focused on emotions. Yet in contrast to the literature that describes an important role for parents’ coping styles in helping children and youth adjust after a disaster (Compas et al., 1992; Vernberg et al., 1996), we found that mothers’ self-reported coping assistance to their adolescents was not associated with adolescents’ PTSD and depression symptoms. Ours is not the only study to not find positive outcomes associated with parental coping; in a study of adolescents whose families were displaced by Hurricane Katrina, only one of five forms of parental coping was associated with youth mental health, namely the extent to which parents sought professional

help for their adolescents, and the association was with higher distress and depression scores (Vigil & Geary, 2008).

Exposure to 9/11 and Sociopolitical Attitudes

In contrast to the meager associations between exposure to the events of 9/11 and mental health, there were more and stronger associations between youth's and mothers' exposure and their family and personal sociopolitical attitudes. Of the three types of youth's exposure, media exposure had the clearest connection to youth attitudes, being associated with four of the five sociopolitical constructs measured, namely family lessons about prejudice, mistrust, and current events as well as youth's trust in their local communities. Youth with more media exposure had families more actively engaged in a political socialization process after the events of 9/11. Youth family and friend exposure and direct exposure were, in large part, not associated with families' sociopolitical socialization or with youth's sociopolitical attitudes.

A notable exception to this pattern was the association between youth direct exposure and less prejudice toward immigrants. This finding suggests that public concern that a consequence of 9/11 would be an increase in xenophobia was misplaced. Interestingly, youth's prejudice toward immigrants was not predicted by their own or their parents' immigrant status; given that fully 64% of the youth had at least one parent who was born outside the United States and thus are themselves second-generation immigrant youth, it may be that generational status does not differentiate among these youth. It is also important to note that we asked about prejudice toward immigrants in general, not toward any specific immigrant groups. If we had asked specifically about prejudice toward Muslims or Arabs, the groups most associated with the 9/11 terrorist attackers, we may very well have found that exposure to 9/11 predicted more prejudice toward these groups.

Mothers' reports of family and personal sociopolitical attitudes were associated with their own exposure. As with their adolescents, mothers' media exposure was most strongly and consistently predictive of the extent to which mothers report they socialize their children regarding the issues of prejudice, social mistrust, and current events. For mothers, media exposure predicted less prejudice toward immigrants, and direct exposure predicted less socialization around social mistrust.

Taken together, this pattern of findings suggests that, while the events of 9/11 were associated with limited enduring associations with the mental health of youth and their mothers, 9/11 exposure did predict mothers' socialization of and youth's development of sociopolitical attitudes. It is important to note, however, that any significant associations with 9/11 exposure occurred largely within persons (in the form of individual effects) rather than across persons (as reciprocal effects).

Limitations

Several aspects of the study limit the strength of our conclusions. First, all of the data were collected via self-reports and so are susceptible to reporter bias. For instance, if more sociopolitically engaged mothers and adolescents are more media attentive, the association between media exposure and sociopolitical attitudes could be epiphenomenal. Second, while

the events of 9/11 constitute a truly uncontrollable, exogenous shock, recalling exposure is not purely exogenous. The associations we report are vulnerable to selection effects. Although we would have preferred to model selection into our models, data limitations prevented us from doing so. However, by reporting the extent to which individual characteristics predicted ‘‘selection’’ into 9/11 exposure and by including these characteristics in our models, we have accounted for selection effects.

There are also many limitations characteristic of disaster studies, particularly inadequate predisaster ‘‘baseline’’ data (see Aber & Gershoff, 2004; Gershoff & Aber, 2004, for more comprehensive review of such limitations), which this study was unable to transcend. As noted earlier, context matters in understanding the effect of systemic violence and man-made disaster on child and parent development (Aber et al., 2004). This was not a study of the distant trauma of 9/11 but rather was a study of parents and youth who were in NYC on 9/11 and thus in close proximity to the attacks on the WTC. Nor was this a study of a demographically representative sample of NYC children (see Hoven et al., 2005, for such a study). Rather, this was a study of primarily Hispanic American and African American families from low-income communities. These contextual factors limit our ability to generalize these findings to broader populations. But they also help generate ideas about how contextual factors may moderate some of the influences we investigated in this study. To help inform not only developmental theory and research but also program and policy initiatives related to children and parents in disasters or other emergencies, the field needs to develop a more complete and unifying theoretical frame for the integration of such studies as Norris and colleagues (Norris, Friedman, Watson, Byrne, et al., 2002) have begun to do.

Conclusion

We have used rich data on three forms of exposure to the 9/11 terrorist attacks to examine whether such exposure had long-term impacts on youth and their families living, working, and going to school in relatively close proximity to the site of the WTC attacks. Rather than finding evidence of enduring impairment following from the attacks on 9/11, we have found a silver lining. Exposure to the 9/11 attacks appears to have prompted these families to have more discussions about serious social and political issues, discussions that we hope will lead to a more informed and civically minded generation of young adults.

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Table 1

Youth's and Mothers' Direct Exposure to the 9/11 Attack on the World Trade Center (WTC)

Type of direct exposure	Youth (%)	Mothers (%)
Smelled the smoke from the WTC buildings after the attack	51	64
Someone in family works near the WTC site	35	35
Had difficulty getting home that day	34	33
Had to leave the location where they were for safety reasons	29	18
Was in or near the cloud of smoke or dust caused by the attack	20	25
Parents have cut down on freedom to travel around the city since September 11 (youth)/ Feel travel around city is limited because of the attack (mothers)	18	53
Someone in family has lost job because of the attack	15	20
Saw the planes crash or the towers collapse with own eyes	10	12
Someone in family worked in rescue or relief services at the WTC site	12	19
Had to attend another school/workplace temporarily because it was closed due to the attack	1	6
Changed school/job permanently because of the attack	1	4
Was physically hurt during the attack	1	3
Had to move out of home because of the attack	< 1	2
Any one of the above	87	91

Table 2

Youth's and Mothers' Family and Friend Exposure to the 9/11 Attack on the World Trade Center (WTC)

	Youth (%)	Mothers (%)
Knew someone who was in the WTC on the day of the attack but escaped without being hurt	34	47
Knew someone who was physically hurt in the WTC attack but not killed	7	16
Knew someone who was killed in the WTC	21	39
Any one of the above	47	64

Table 3

Youth's and Mothers' Media Exposure to the 9/11 Attack on the World Trade Center

Time spent learning about the attack from …	Youth (%)	Mothers (%)
TV		
A lot	69	87
Some	28	11
None	4	2
Radio, newspapers or magazines		
A lot	52	65
Some	41	26
None	7	9
Websites		
A lot	12	8
Some	27	17
None	62	75

Table 4

Demographic Predictors of Youth and Mother Exposure to 9/11

	Youth exposure to 9/11			Mother exposure to 9/11		
	Direct	**Family and friend**	**Media**	**Direct**	**Family and friend**	**Media**
Adolescent's age	.02	−.03	−.02	.09	.01	.10
Adolescent's gender[a]	.17***	.15**	.08	.04	.02	.00
Adolescent is immigrant	−.04	−.08	−.01	.05	−.07	.08
One or both parents are immigrants	.04	.05	.06	−.04	−.03	−.01
Is African American[b]	−.24**	−.31***	.03	−.09	−.24**	.17*
Is Hispanic American[b]	−.20**	−.35***	.10	−.13	−.23*	.14
Is of another race or ethnicity[b]	−.09	−.08	.06	−.05	−.15*	.04
Mother's age	−.03	.01	.02	−.03	−.03	.08
Mother is married	−.05	.02	.06	−.07	.06	.08
Mother's level of education	−.02	−.02	−.04	−.01	.11*	.06
Mother is employed	.04	−.06	.05	.09	.06	.04
Time between 9/11 and the interview[b]	−.01	−.00	.09	−.07	.08	−.09
RCCP intervention—Lessons	.08	.02	.02	.06	.10	.08
RCCP intervention—Staff development	−.09	−.01	−.03	−.09	−.09	−.15*
R^2	.06	.08	.04	.04	.10	.05
F	1.68	2.31**	1.14	1.15	2.96***	1.36
df	14, 373	14, 373	14, 373	14, 369	14, 369	14, 369

[a]0 = *male*, 1 = *female*.

[b]These characteristics were for youth in the models predicting youth exposure, and for parents in the models predicting parent exposure. European Americans are the reference category for the race-ethnicity variables.

*$p < .05$.

**$p < .01$.

***$p < .001$.

Child Dev. Author manuscript; available in PMC 2021 March 22.

Table 5

Youth's and Mothers' PTSD and Depression Symptoms Predicted From Their Own and Each Others' Exposure to 9/11

	Youth's PTSD symptoms		Youth's depression symptoms		Mothers' PTSD symptoms		Mothers' depression symptoms	
	Model A: Own exposure (β)	**Model B: Adding mothers' exposure (β)**	**Model A: Own exposure (β)**	**Model B: Adding mothers' exposure (β)**	**Model A: Own exposure (β)**	**Model B: Adding youth's exposure (β)**	**Model A: Own exposure (β)**	**Model B: Adding youth's exposure (β)**
Adolescent's age	.08	.07	.04	.04	.01	.01	.03	.02
Adolescent's gender[a]	.07	.07	.15**	.15**	−.01	−.01	−.09	−.08
Adolescent is immigrant	−.09	−.10	−.17**	−.17**	.05	.04	.00	−.00
One or both parents are immigrants	−.13*	−.13*	−.04	−.04	.06	.06	−.09	−.09
Is African American[b]	.24**	.22*	−.03	−.04	−.09	−.08	.06	.05
Is Hispanic American[b]	.28**	.27**	−.04	−.04	.04	.06	.03	.03
Is of another race or ethnicity[b]	.16**	.16*	−.03	−.03	−.02	−.01	.01	.01
Mother's age	.08	.08	.03	.03	−.07	−.06	−.09	−.09
Mother is married	−.02	−.02	.03	.04	−.10	−.09	−.11	−.10
Mother's level of education	−.04	−.04	−.08	−.08	−.23***	−.23***	−.22***	−.23***
Mother is employed	.07	.06	.02	.02	−.08	−.07	−.13*	−.12*
Time between 9/11 and the interview[b]	−.08	−.07	−.02	−.01	.01	.02	−.01	.00
RCCP intervention—Lessons	.04	.04	.05	.05	.08	.08	.06	.06
RCCP intervention—Staff development	.00	.01	.02	.02	−.12	−.12	−.04	−.04
Youth's exposure to 9/11								
Direct exposure	.09	.08	.12*	.12*	—	.03	—	−.04
Family exposure[c]	.01	.01	−.02	−.02	—	.02	—	.02
Media exposure	.06	.05	.03	.03	—	−.13*	—	−.06
Mothers' exposure to 9/11								
Direct exposure	—	.08	—	.02	.27***	.27***	−.02	−.01

	Youth's PTSD symptoms		Youth's depression symptoms		Mothers' PTSD symptoms		Mothers' depression symptoms	
	Model A: Own exposure (β)	**Model B: Adding mothers' exposure (β)**	**Model A: Own exposure (β)**	**Model B: Adding mothers' exposure (β)**	**Model A: Own exposure (β)**	**Model B: Adding youth's exposure (β)**	**Model A: Own exposure (β)**	**Model B: Adding youth's exposure (β)**
Family exposure	—	−.02	—	−.04	.01	−.00	−.04	−.05
Media exposure	—	.05	—	−.01	−.01	.01	−.01	.00
R^2	.08	.09	.08	.08	.21	.23	.12	.13
F	1.83*	1.68*	1.86*	1.59*	5.04***	4.63***	2.62***	2.33***
df	17, 365	20, 362	17, 365	20, 362	17, 321	20, 318	17, 321	20, 318
R^2_Δ	—	.01	—	.00	—	.02	—	.01
F_Δ	—	0.85	—	0.16	—	2.00	—	0.71
df_Δ	—	3	—	3	—	3	—	3

Note. PTSD = posttraumatic stress disorder; RCCP = Resolving Conflict Creatively Program.

[a]0 = *male*, 1 = *female*.

[b]These characteristics were for youth in the models predicting youth mental health, and for parents in the models predicting parent mental health. European Americans are the reference category for the race-ethnicity variables.

[c]For brevity, family and friend exposure is abbreviated to family exposure in this and subsequent tables.

*$p < .05$.

**$p < .01$.

***$p < .001$.

Table 6

Mothers' Ratings of Their Coping Assistance to Their Children Predicted From Their Own and Their Children's Exposure to 9/11

	Mothers' coping assistance					
	Emotional processing		Roles and routines		Distraction	
	Model A: Own exposure (β)	Model B: Adding youth's exposure (β)	Model A: Own exposure (β)	Model B: Adding youth's exposure (β)	Model A: Own exposure (β)	Model B: Adding youth's exposure (β)
Adolescent's age	.07	.07	.02	.03	.04	.04
Adolescent's gender[a]	.01	−.01	.03	.01	.03	.03
Adolescent is immigrant	−.05	−.04	−.10	−.10	−.03	−.04
One or both parents are immigrants	.04	.02	−.04	−.05	−.02	−.01
Is African American[b]	−.05	−.00	.01	.04	.12	.11
Is Hispanic American[b]	−.10	−.05	.02	.05	.30**	.29**
Is of Another race or ethnicity[b]	.02	.04	.01	.03	.07	.07
Mother's age	−.11*	−.11*	−.13*	−.13*	−.04	−.04
Mother is married	−.03	−.02	.02	.02	.05	.05
Mother's level of education	−.10	−.09	−.02	−.02	−.15*	−.15*
Mother is employed	.08	.08	.12*	.12*	.10	.10
Time between 9/11 and the interview[b]	−.06	−.07	−.04	−.05	.05	.05
RCCP intervention—Lessons	−.02	−.02	.04	.04	−.05	−.05
RCCP intervention—Staff development	−.04	−.04	−.03	−.03	.02	.02
Mothers' exposure to 9/11						
Direct exposure	.23***	.22***	.10	.09	.08	.08
Family exposure	.00	−.01	.07	.06	−.02	−.02
Media exposure	.07	.05	.07	.07	.09	.09
Youth's exposure to 9/11						
Direct exposure	—	.05	—	.05	—	.02
Family exposure	—	.08	—	.04	—	−.03

	Mothers' coping assistance					
	Emotional processing		Roles and routines		Distraction	
	Model A: Own exposure (β)	Model B: Adding youth's exposure (β)	Model A: Own exposure (β)	Model B: Adding youth's exposure (β)	Model A: Own exposure (β)	Model B: Adding youth's exposure (β)
Media exposure	—	.06	—	−.01	—	−.02
R^2	.10	.12	.07	.08	.11	.11
F	2.44***	2.35***	1.68*	1.49	2.68***	2.28***
df	17, 358	20, 355	17, 358	20, 355	17, 358	20, 355
R^2_Δ	—	.01	—	.00	—	.00
F_Δ	—	1.75	—	0.49	—	0.14
df_Δ	—	3	—	3	—	3

Note. RCCP = Resolving Conflict Creatively Program.

[a]0 = *male*, 1 = *female*.

[b]These characteristics were for mothers, with European Americans as the reference category for the race-ethnicity variables.

*$p < .05$.

**$p < .01$.

***$p < .001$.

Child Dev. Author manuscript; available in PMC 2021 March 22.

Table 7

Youth's PTSD and Depression Symptoms Predicted From Their Own Exposure to 9/11 and Mothers' Coping Assistance

	Youth's PTSD symptoms		Youth's depression symptoms	
	Model A: Own exposure (β)	**Model B: Adding mothers' coping assistance (β)**	**Model A: Own exposure (β)**	**Model B: Adding mothers' coping assistance (β)**
Adolescent's age	.07	.08	.06	.05
Adolescent's gender[a]	.07	.07	.16**	.16**
Adolescent is immigrant	−.10	−.09	−.17**	−.17**
One or both parents are immigrants	−.13*	−.13*	−.05	−.05
Is African American[b]	.25**	.25**	−.04	−.04
Is Hispanic American[b]	.30**	.31**	−.02	−.01
Is of another race or ethnicity[b]	.15*	.16*	−.02	−.02
Mother's age	.08	.08	.03	.03
Mother is married	−.02	−.02	.03	.03
Mother's level of education	−.04	−.05	−.07	−.07
Mother is employed	.08	.08	.03	.04
Time between 9/11 and the interview[b]	−.06	−.06	−.00	−.00
RCCP intervention—Lessons	.04	.04	.06	.06
RCCP intervention—Staff development	−.01	−.00	.01	.01
Youth's exposure to 9/11				
Direct exposure	.09	.09	.12*	.12*
Family exposure	.02	.02	−.02	−.02
Media exposure	.04	.04	.03	.03
Mothers' coping assistance				
Emotional processing	—	−.00	—	.06
Roles and routines	—	.03	—	−.08
Distraction	—	−.05	—	.00
R^2	.08	.08	.08	.09
F	1.79*	1.54	1.86*	1.67*
df	17, 360	20, 357	17, 360	20, 357

	Youth's PTSD symptoms		Youth's depression symptoms	
	Model A: Own exposure (β)	**Model B: Adding mothers' coping assistance (β)**	**Model A: Own exposure (β)**	**Model B: Adding mothers' coping assistance (β)**
R^2_{Δ}	—	.00	—	.01
F_{Δ}	—	0.20	—	0.60
df_{Δ}	—	3	—	3

Note. PTSD = posttraumatic stress disorder; RCCP = Resolving Conflict Creatively Program.

[a] 0 = *male*, 1 = *female*.

[b] These characteristics were for youth, with European Americans as the reference category for the race-ethnicity variables.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Child Dev. Author manuscript; available in PMC 2021 March 22.

Table 8

Youth's Reports of Family and Personal Sociopolitical Attitudes Predicted From Youth's and Mothers' Exposure to 9/11

	Youth's reports of family and personal sociopolitical attitudes									
	Family lessons about prejudice		Family lessons about social mistrust		Family discussions about current events		Trust in local community		Prejudice toward immigrants	
	Model A: Own exposure (β)	Model B: Adding mothers' exposure (β)	Model A: Own exposure (β)	Model B: Adding mothers' exposure (β)	Model A: Own exposure (β)	Model B: Adding mothers' exposure (β)	Model A: Own exposure (β)	Model B: Adding mothers' exposure (β)	Model A: Own exposure (β)	Model B: Adding mothers' exposure (β)
Adolescent's age	.08	.08	.06	.05	.11*	.10	−.07	−.08	−.01	−.00
Adolescent's gender[a]	.10*	.10	.17***	.17***	.05	.05	−.07	−.06	−.02	−.02
Adolescent is immigrant	−.04	−.04	−.04	−.04	−.07	−.08	.04	.04	−.04	−.03
One or both parents are immigrants	−.05	−.05	−.04	−.03	−.06	−.05	.14*	.15*	−.06	−.07
Is African American[b]	.25**	.25**	.20*	.19*	−.02	−.03	−.18*	−.19*	−.09	−.07
Is Hispanic American[b]	.24*	.23*	.23*	.22*	−.02	−.03	−.25*	−.25*	−.14	−.14
Is of another race or ethnicity[b]	.09	.09	.02	.02	.04	.04	−.06	−.05	−.09	−.08
Mother's age	−.02	−.02	−.06	−.06	−.00	−.01	.02	.02	.01	.01
Mother is married	−.05	−.04	−.03	−.03	.09	.09	−.02	−.02	−.12*	−.13*
Mother's level of education	.00	.00	−.03	−.03	−.04	−.04	.06	.05	−.12*	−.13*
Mother is employed	−.11	−.11*	−.10	−.11	−.09	−.09	−.04	−.05	.06	−.07
Time between 9/11 and the interview[b]	−.11	−.10	−.09	−.08	.01	.01	−.03	−.02	.15**	.13*
RCCP intervention—Lessons	−.03	−.03	−.03	−.03	−.09	−.10	−.18*	−.20**	.10	.09
RCCP intervention—Staff development	.02	.02	.00	.02	.04	.05	.15*	.17*	−.04	−.04

	Youth's reports of family and personal sociopolitical attitudes									
	Family lessons about prejudice		Family lessons about social mistrust		Family discussions about current events		Trust in local community		Prejudice toward immigrants	
	Model A: Own exposure (β)	Model B: Adding mothers' exposure (β)	Model A: Own exposure (β)	Model B: Adding mothers' exposure (β)	Model A: Own exposure (β)	Model B: Adding mothers' exposure (β)	Model A: Own exposure (β)	Model B: Adding mothers' exposure (β)	Model A: Own exposure (β)	Model B: Adding mothers' exposure (β)
Youth's exposure to 9/11										
Direct exposure	.10	.10	.02	.02	.08	.08	.07	.06	−.11*	−.10
Family exposure	.09	.09	.05	.05	.07	.06	.09	.06	.05	.04
Media exposure	.15**	.15**	.15**	.14**	.24***	.23***	.11*	.10	−.01	−.01
Mothers' exposure to 9/11										
Direct exposure	—	.02	—	.02	—	.04	—	.06	—	−.11
Family exposure	—	−.02	—	.01	—	−.01	—	.08	—	.08
Media exposure	—	−.01	—	.06	—	.05	—	.08	—	.03
R^2	.12	.12	.12	.12	.12	.13	.10	.12	.08	.09
F	2.76***	2.34***	2.84***	2.48***	3.02***	2.62***	2.33***	2.42***	1.92*	1.85*
df	17, 363	20, 360	17, 363	20, 360	17, 363	20, 360	17, 363	20, 360	17, 363	20, 360
R^2_Δ		.00		.00		.00		.02		.01
F_Δ		0.08		0.52		0.47		2.73*		1.44
df_Δ		3		3		3		3		3

Note. RCCP = Resolving Conflict Creatively Program.

[a] 0 = *male*, 1 = *female*.

[b] These characteristics were for youth, with European Americans as the reference category for the race-ethnicity variables.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Child Dev. Author manuscript; available in PMC 2021 March 22.

Table 9

Mothers' Reports of Family and Personal Sociopolitical Attitudes Predicted From Mothers' and Youth's Exposure to 9/11

	Mothers' reports of family and personal sociopolitical attitudes									
	Family lessons about prejudice		Family lessons about social mistrust		Family discussions about current events		Trust in local community		Prejudice toward immigrants	
	Model A: Own exposure (β)	Model B: Adding youth's exposure (β)	Model A: Own exposure (β)	Model B: Adding youth's exposure (β)	Model A: Own exposure (β)	Model B: Adding youth's exposure (β)	Model A: Own exposure (β)	Model B: Adding youth's exposure (β)	Model A: Own exposure (β)	Model B: Adding youth's exposure (β)
Adolescent's age	−.03	−.03	.02	.02	−.09	−.08	.04	.04	−.04	−.04
Adolescent's gender[a]	−.06	−.07	−.01	−.01	−.05	−.05	−.09	−.08	−.08	−.09
Adolescent is immigrant	.02	.02	.02	.03	−.03	−.03	.04	.04	.08	.08
One or both parents are immigrants	−.08	−.09	−.03	−.03	.01	.00	.13*	.14*	.21***	.21***
Is African American[b]	.14	.17*	.22**	.24**	.09	.09	−.29***	−.31***	−.09	−.08
Is Hispanic American[b]	.08	.12	.28**	.30**	.02	.01	−.33***	−.35***	−.00	.01
Is of another race or ethnicity[b]	−.06	−.04	.11	.12*	−.00	−.01	−.12*	−.13*	−.05	−.04
Mother's age	.05	.05	−.06	−.06	.05	.05	.13*	.13*	.06	.06
Mother is married	−.03	−.03	−.11*	−.11*	.01	.01	.01	.01	.00	.00
Mother's level of education	.02	.02	−.04	−.04	.20***	.20***	.03	.03	.08	.08
Mother is employed	.04	.05	−.00	.01	−.03	−.04	.07	.07	.05	.04
Time between 9/11 and the interview[b]	.06	.07	.08	.08	−.03	−.03	−.11*	−.11	.05	.05
RCCP intervention—Lessons	.03	.03	−.08	−.07	−.15*	−.15*	−.05	−.04	.04	.03
RCCP intervention—Staff development	.08	.08	.14	.13	.07	.06	.08	.07	−.04	−.03

Child Dev. Author manuscript; available in PMC 2021 March 22.

	Mothers' reports of family and personal sociopolitical attitudes									
	Family lessons about prejudice		Family lessons about social mistrust		Family discussions about current events		Trust in local community		Prejudice toward immigrants	
	Model A: Own exposure (β)	Model B: Adding youth's exposure (β)	Model A: Own exposure (β)	Model B: Adding youth's exposure (β)	Model A: Own exposure (β)	Model B: Adding youth's exposure (β)	Model A: Own exposure (β)	Model B: Adding youth's exposure (β)	Model A: Own exposure (β)	Model B: Adding youth's exposure (β)
Mothers' exposure to 9/11										
Direct exposure	−.03	−.03	−.12*	−.11*	.05	.05	.07	.08	.06	.04
Family exposure	.13*	.12*	.05	.03	.04	.05	.07	.07	.01	.02
Media exposure	.12*	.13*	.19***	.19***	.28***	.26***	−.02	−.02	−.11*	−.11*
Youth's exposure to 9/11										
Direct exposure	—	.02	—	−.07	—	−.06	—	−.07	—	.07
Family exposure	—	.09	—	.10	—	.02	—	.00	—	−.02
Media exposure	—	−.03	—	.02	—	.09	—	.00	—	.03
R^2	.08	.09	.14	.15	.18	.19	.13	.13	.09	.10
F	1.88*	1.75*	3.34***	3.09***	4.66***	4.15***	3.18***	2.79***	2.17**	1.96**
df	17, 362	20, 359	17, 362	20, 359	17, 362	20, 359	17, 632	20, 359	17, 632	20, 359
R^2_Δ	—	.01	—	.01	—	.01	—	.00	—	.01
F_Δ	—	1.01	—	1.59	—	1.21	—	0.63	—	0.77
df_Δ	—	3	—	3	—	3	—	3	—	3

Note. RCCP = Resolving Conflict Creatively Program.

[a] 0 = *male*, 1 = *female*.

[b] These characteristics were for mothers, with European Americans as the reference category for the race-ethnicity variables.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Child Dev. Author manuscript; available in PMC 2021 March 22.