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Adolescent Distress in Traumatic Stress Research: Data From the National Survey of Adolescents-Replication

Kristyn Zajac and

National Crime Victims Research and Treatment Center, and Department of Psychiatry and Behavioral Sciences, Medical University of South Carolina

Kenneth J. Ruggiero

Department of Psychiatry and Behavioral Sciences, Medical University of South Carolina, and Ralph H. Johnson Veterans Affairs Medical Center, Charleston

Daniel W. Smith, Benjamin E. Saunders, and Dean G. Kilpatrick

National Crime Victims Research and Treatment Center, and Department of Psychiatry and Behavioral Sciences, Medical University of South Carolina

Abstract

Small numbers of adults report distress in response to traumatic stress surveys. Less is known about adolescent research participants. We examined distress in response to a survey on traumatic stress using data from the National Survey of Adolescents-Replication, a nationally representative sample of 3,614 youth aged 12–17 years. Although 204 (5.7%) adolescents found some questions distressing, only 8 (0.2%) remained upset at the end of the interview, and 2 (<0.1%) wished to speak to a counselor. Adolescents reporting traumatic experiences or mental health problems were significantly more likely to report distress compared to those not endorsing such problems. Significantly more girls (7.5%) reported distress than boys (3.9%). Findings suggest that survey questions about trauma pose minimal risk to adolescents.

Over the past two decades, researchers have sought to determine whether study participants experience distress when asked about difficult topics, particularly exposure to traumatic events. Studies have consistently found that only a small minority (generally <10%) report distress in response to such questions (see Jorm, Kelly, & Morgan, 2007). It is important to note that participants who actually endorse exposure to traumatic events are more likely to report distress than those who do not; however, few report distress beyond the confines of the interview (Jorm et al., 2007).

This is an important area of research because researchers and institutional review boards (IRBs) frequently express concerns about asking research participants questions about traumatic experiences (Becker-Blease & Freyd, 2006). In addition, some researchers worry that asking about trauma may increase attrition from studies. These concerns are particularly relevant for research with adolescents, as they are considered a vulnerable population. Limited data are available from national samples about participant distress in the context of traumatic stress research among this age group. Several studies with children and adolescents have found results similar to adult studies when participants were asked about traffic-related injuries (Kassam-Adams & Newman, 2005), psychiatric symptoms (Reich &

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Correspondence concerning this article should be addressed to: Kristyn Zajac, National Crime Victims Research and Treatment Center, Department of Psychiatry and Behavioral Sciences, Medical University of South Carolina, 67 President St., MSC861, Charleston, SC 29425. zajac@musc.edu..

Kaplan, 1994), and refugee experiences (Dyregrov, Dyregrov, & Raundalen, 2000). In addition, a recent study found that 1 in 4 youth from 10 to 15 years of age reported being upset by survey questions about bullying, witnessed violence, and violence perpetration (Ybarra, Langhinrichsen-Rohling, Friend, & Diener-West, 2009). However, few have looked at other types of traumatic events, including physical and sexual assault, an important area of research given the high prevalence and deleterious effects of these experiences among adolescents (e.g., Kilpatrick et al., 2003).

The purpose of this study was to examine adolescent distress in relation to an extensive interview assessing traumatic experiences, including sexual assault, physical assault, and witnessing violence. Data from the National Survey of Adolescents-Replication were used to examine both the presence of participant distress in response to this interview as well as relationships between participant distress and (a) demographics, (b) attrition from the study between baseline and one-year follow-up, (c) endorsement of traumatic events, and (d) trauma-related mental health problems (i.e., posttraumatic stress disorder [PTSD], depression, and alcohol abuse). We predicted that, consistent with findings from adult studies, analyses would reveal low levels of participant distress (<10%) and that adolescents endorsing traumatic events or mental health problems would be more likely to report distress than participants without such problems.

METHOD

Participants and Procedure

The National Survey of Adolescents-Replication (NSA-R) is a national household probability study of 3,614 youth aged 12–17 years using structured telephone interviewing. Participants were selected using a multistage, stratified, random-digit dial procedure within each region of the country. The primary goals were to examine prevalence, risk factors, and mental health outcomes associated with violence exposure and other major life stressors. During 2005, 6,694 households were contacted that resulted in a completed parent interview and identification of at least one eligible adolescent. Of these, 1,505 (22.5%) youth were unavailable for callback during the field period, 307 (4.6%) refused or did not complete the interview, and 1,268 (18.9%) were lost due to lack of parental consent. Cases were weighted by age, gender, and urbanicity in all analyses to maximize generalizability to the U.S. population. Participants were recontacted approximately 1 year after the baseline interview for follow-up, and the same protocol was followed. There was an attrition rate of 29% between interviews with a sample size of 2,560 at Wave 2.

The structured telephone interview was administered by trained interviewers employed by Schulman, Ronca, and Bucuvalas, Inc., a survey research firm with significant experience managing survey studies. A computer-assisted telephone interview system aided this process by prompting interviewers with each question consecutively on a computer screen. To increase the likelihood that adolescents would answer in an open manner, interviewers asked if they were in a private situation where they could answer freely and made arrangements to call back if they were not. Verbal consent from a caregiver or legal guardian was obtained before interviewing the adolescents; all youth participants gave verbal assent. This study was approved and monitored by the Institutional Review Board of the Medical University of South Carolina.

Measures

To assess violence exposure, behaviorally specific questions were constructed to assess physical assault and abuse, sexual assault, witnessed community and parental violence, and other potentially traumatic events. Physical assault was defined as being (a) attacked with or

without a weapon such that the participant was badly injured or beaten up, or (b) threatened with a dangerous weapon. Sexual assault was defined as (a) forced anal, vaginal, and/or oral sex; (b) forced digital or foreign-object penetration; and/or (c) forced touching of genitalia. Other potentially traumatic events included motor vehicle accidents, other serious accidents, house fires, natural disasters, and loss of a loved one to homicide. The full interview can be obtained from the first author. Past-year stressful life events were also assessed, including death of a loved one, serious illness (self, sibling, or parent), and parental divorce.

Mental health symptoms of lifetime PTSD, major depressive episode, and alcohol abuse were assessed using psychometrically sound measures described in greater detail elsewhere (Kilpatrick et al., 2003; Wolitzky-Taylor et al., 2008).

Participant distress was assessed at the end of the interview, using the following four questions:

Were any of the survey questions emotionally upsetting to you?

[If “yes” to item 1] Before I go on, I want to make sure that you are feeling okay. Are you still feeling emotionally upset or are you okay now?

[If respondent still upset] If you would like to talk to someone about how you are feeling, I can have one of our counselors give you a call. Would you like me to have someone call you?

[If call requested] Do you need to talk with a counselor (today/this evening), or can I have someone call you (tomorrow/Monday) during regular business hours?

RESULTS

Of the 3,614 adolescents, 3,609 had complete data on the distress questions. Of these, 204 (5.7%) reported that some questions had been emotionally upsetting to them, 8 (0.2%) reported still feeling upset by the end of the interview, 2 (<0.1%) wished to speak to a counselor, and 1 (<0.1%) required immediate contact with a counselor.

To examine demographic differences in participant distress, chi-square analyses were conducted to determine whether adolescents were more likely to consider questions emotionally upsetting based on their age, gender, or race/ethnicity (Table 1). There were no significant differences based on age or race/ethnicity; however, girls were significantly more likely than boys to find questions distressing. A chi-square analysis was also conducted to examine whether adolescents who were upset by baseline interview questions were more likely than their counterparts to drop out of the study (Table 1). There was not a significant difference between completers and noncompleters of the Wave 2 interview on ratings of distress.

Chi-square analyses were then conducted to examine whether adolescents endorsing traumatic or other stressful life events were more likely than nonvictimized adolescents to find survey questions upsetting (Table 2). Adolescents who endorsed any type of traumatic or stressful life event were more likely than other adolescents to report distress. Post-hoc chi-square analyses were conducted separately for boys and girls to determine whether the significant differences between adolescents endorsing and not endorsing potentially traumatic events were due to the aforementioned gender difference in distress. Analyses revealed that both boys and girls who reported any type of trauma were significantly more likely to find questions upsetting than adolescents not reporting such events.

Finally, chi-square analyses were conducted to examine whether adolescents who reported mental health problems reported higher levels of participant distress (Table 3). Adolescents

who met criteria for a lifetime diagnosis of a mental health disorder were more likely than those without such a history to report being upset by the questions.

DISCUSSION

Institutional Review Boards and researchers recognize traumatic stress research as highly important, but are concerned about the potential for behaviorally explicit questions about sexual assault, physical assault, and other traumatic events to produce harmful levels of participant distress. This is particularly true for research with adolescents. The NSA-R is an example of a traumatic stress study that uses numerous highly specific questions targeting a range of major life stressors. The purpose of this study was to determine whether these interview questions produced distress among participants. A major strength of the study was the use of a nationally representative sample of adolescents aged 12 to 17 years.

A modest percentage of adolescents (5.7%) reported that some study questions produced transitory distress. This finding is consistent with traumatic stress studies with adults, indicating that a very small proportion of participants find traumatic stress questions distressing (Jorm et al., 2007). Findings also supported our hypothesis that adolescents who reported exposure to traumatic events—including physical and sexual assault, witnessed violence, and other stressful life events (illness, parental divorce)—or who meet lifetime diagnostic criteria for a mental health problem would be more likely to find the survey questions briefly distressing compared to those not endorsing such events. It is not surprising that some adolescents who have experienced trauma find questions about these topics temporarily upsetting, as talking and thinking about these experiences may evoke negative emotions. This may be particularly true for adolescents who have experienced interpersonal violence (e.g., sexual abuse). This is consistent with findings from adult studies that show elevated rates of participant distress among populations with trauma histories or mental health problems (Jorm et al., 2007). However, even among adolescents who reported these problems, the large majority reported no distress over answering questions, and almost all of those who were initially upset by the questions reported no distress by the end of the interview.

With the exception of gender, demographics were not associated with distress responses to interview questions. Girls were more likely than boys to endorse being upset by the interviews. Although these gender differences did not account for the higher ratings of distress reported by victims of traumatic events, it was also true that sexual assault victims—who are disproportionately female—were more likely than victims of other traumatic events to report distress.

Only 0.2% of adolescents were still distressed at the end of the interview. Thus, even among adolescent victims, interview distress was transitory in nature for all but a few participants. Consistent with this notion, participant distress was not related to attrition between the baseline and follow-up interviews. Overall, the implication of this study is that participation in traumatic stress research poses only minimal risk to adolescents. Further, we found no evidence that asking adolescents about trauma affects retention in longitudinal studies.

Results should be considered in light of certain limitations. Distress ratings were not anchored to particular questions within the interview. Future studies might consider adding follow-up questions to identify which questions adolescents found distressing. It is also possible that in-person administration of the survey would have yielded a different pattern of findings. Research that focuses specifically on participants who report persistent distress would be of interest; however, these cases are very rare (0.2% in this study), and such research would require enormous sample sizes to achieve adequate statistical power.

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REFERENCES

- Becker-Blease KA, Freyd J. Research participants telling the truth about their lives: The ethics of asking and not asking about abuse. *American Psychologist*. 2006; 61:218–226. doi: 10.1037/0003-066X.61.3.218. [PubMed: 16594838]
- Dyregrov K, Dyregrov A, Raundelan M. Refugee families' experiences of research participation. *Journal of Traumatic Stress*. 2000; 13:413–426. doi:10.1023/A:1007777006605. [PubMed: 10948482]
- Jorm AF, Kelly CM, Morgan AJ. Participant distress in psychiatric research: A systematic review. *Psychological Medicine*. 2007; 37:917–926. doi:10.1017/S0033291706009779. [PubMed: 17224097]
- Kassam-Adams N, Newman E. Child and parent reactions to participation in clinical research. *General Hospital Psychiatry*. 2005; 27:29–35. doi:10.1016/j.genhosppsych.2004.08.007. [PubMed: 15694216]
- Kilpatrick DG, Ruggiero KJ, Acierno R, Saunders B, Resnick HS, Best CL. Violence and risk of PTSD, major depression, substance abuse/dependence, and comorbidity: Results from the National Survey of Adolescents. *Journal of Consulting and Clinical Psychology*. 2003; 71:692–700. doi: 10.1037/0022-006X.71.4.692. [PubMed: 12924674]
- Reich W, Kaplan L. The effects of psychiatric and psychosocial interviews on children. *Comprehensive Psychiatry*. 1994; 35:50–53. doi:10.1016/0010-440X(94)90169-4. [PubMed: 8149729]
- Wolitzky-Taylor KB, Ruggiero KJ, Danielson CK, Resnick HS, Hanson RF, Kilpatrick DG. Prevalence and correlates of dating violence in a national sample of adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*. 2008; 47:755–762. doi:10.1097/CHI.0b013e318172ef5f. [PubMed: 18520962]
- Ybarra ML, Langhinrichsen-Rohling J, Friend J, Diener-West M. Impact of asking sensitive questions about violence to children and adolescents. *Journal of Adolescent Health*. 2009; 45:499–507. doi: 10.1016/j.jadohealth.2009.03.009. [PubMed: 19837357]

Table 1
 Percentage of Adolescents Reporting Distress From Survey Questions by Demographics and Attrition

Variable	Value	n	Reported distress		χ^2
			Yes (%)	No (%)	
Age	<15 Years	1806	5.1	94.9	2.20
	≥ 15 Years	1796	6.2	93.8	
Gender	Male	1849	3.9	96.1	21.23**
	Female	1760	7.5	92.5	
Race/ethnicity comparison 1	African American	463	6.3	93.7	0.40
	Non- African American	3036	5.5	94.5	
Race/ethnicity comparison 2	Hispanic	371	5.7	94.3	0
	Non-Hispanic	3128	5.6	94.4	
Dropout	T2 Completer	2556	5.5	94.5	0.67
	T2 Dropout	1053	6.2	93.8	

Note. T2 = Time 2. *df* for all χ^2 tests = 1.

** $p < .001$.

Table 2
Percentage of Adolescents Reporting Distress by Endorsement of Specific Traumatic Events

Variable	Value	n	Reported distress		χ^2
			Yes (%)	No (%)	
Sexual abuse	Yes	267	20.6	79.4	121.54**
	No	3300	4.4	95.6	
Physical assault	Yes	566	12.5	87.5	58.99**
	No	3042	4.4	95.6	
Physical abuse	Yes	442	16.1	83.9	102.31**
	No	3166	4.2	95.8	
Witnessed neighborhood violence	Yes	1362	7.7	92.3	17.30**
	No	2245	4.4	95.6	
Witnessed parental violence	Yes	322	11.5	88.5	22.53**
	No	3283	5.1	94.9	
Stressful life events	Yes	1276	7.8	92.2	17.82**
	No	2300	4.4	95.6	
Other trauma	Yes	1803	7.6	92.4	25.90**
	No	1772	3.7	96.3	

Note. df for all χ^2 tests = 1.

**
*** $p < .001$.

Table 3
 Percentage of Adolescents Reporting Distress by Lifetime Mental Health Diagnosis

Variable	Value	n	Reported distress		χ^2
			Yes (%)	No (%)	
PTSD	Yes	291	22.0	4.2	159.41**
	No	3313	4.2	95.8	
MDE	Yes	504	20.2	79.8	233.58**
	No	3104	3.3	96.7	
Alcohol abuse	Yes	251	10.8	89.2	12.89*
	No	3350	5.3	94.7	

Note. PTSD = posttraumatic stress disorder; MDE = major depressive episode.

*df*s for all χ^2 tests = 1.

* $p < .01$.

** $p < .001$.