

Research Article

DEVELOPMENTAL DIFFERENCES IN THE LINKAGES BETWEEN ANXIETY CONTROL BELIEFS AND POSTTRAUMATIC STRESS IN YOUTH

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Background: *Anxiety control beliefs have emerged as a trans-diagnostic risk factor for anxiety disorders and a potential mechanism of change in cognitive and behavioral therapies. The purpose of this study was to examine the association between anxiety control beliefs and anxiety disorder symptoms following exposure to hurricanes in youth and test a developmental hypothesis about those associations. Methods:* *A large school-based sample of (N = 1048) children and adolescents with a history of exposure to natural disaster were assessed with the short form of the Anxiety Control Questionnaire for Children (ACQ-C), symptom measures (PTSD and generalized anxiety disorder symptoms) and level of disaster exposure. Developmental differences in the association between ACQ-C scores and symptoms were tested, as well as the ACQ-C's ability to assess symptoms beyond level of exposure. Results:* *ACQ-C scores were associated with symptoms beyond level of exposure, but age moderated the strength of the association. Modeling the interaction suggested that the ACQ-C short had incremental validity beyond hurricane exposure in youth over 12 years. Conclusions:* *Findings extend previous work to a novel population of youth and add to the developmental understanding of the role of anxiety control beliefs in anxiety regulation. Age differences in the linkages between anxiety control and symptoms is consistent with a developmental model where low perceived control exhibited by younger children may be less indicative of problems with anxiety but may instead be related to normal cognitive development. Depression and Anxiety 32:356–363, 2015.* © 2014 Wiley Periodicals, Inc.

Key words: *anxiety; youth; cognition; stress disorders; posttraumatic*

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INTRODUCTION

Theoretical models of the development and maintenance of youth anxiety have suggested that cognitive factors represent a critical dimension of risk for anxiety disorders in childhood and adolescence.^[1–5] Anxiety control beliefs have emerged as one such cognitive factor,^[6–17] with evidence suggesting that changes in control beliefs may at least partially mediate changes in outcomes after cognitive behavior therapy (CBT) for anxiety disorder treatment in youth samples.^[18,19] Broadly, the perception of control involves a judgment of one's coping abilities.^[16] More specifically,

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Barlow's^[20,21] model of anxiety disorders proposes that an individual's judgment that they lack control over internal emotional reactions (i.e., the physiological reactions) and potential external threats (i.e., events, objects, or situations that are fear producing) is a critical reason why anxiety becomes a "problem" for some and not others. Weems and colleagues^[17] developed the Anxiety Control Questionnaire for Children (i.e., the ACQ-C is a 30 item modified version of the adult questionnaire, the ACQ^[22]) to test Barlow's theory and found that clinically anxious youth had lower perceived control over anxiety compared to nonanxious youth.

The ACQ-C short form^[23] consists of 10 items selected from the original measure and was developed for situations where time constraints limit the usefulness of the full instrument (e.g., clinical treatment studies and school-based screenings). Initial evidence indicated test-retest reliability and convergent associations similar to the full scale version.^[23] Frala et al.^[7] showed that the ACQ-C short form had incremental validity (beyond negative affect) in the identification of youth with generalized anxiety disorder (GAD) and in the prediction of child-reported worry. Using a Dutch version of the ACQ-C short, Muris et al.^[19] have shown that anxiety control beliefs increased following CBT for child anxiety disorders and predicted change in anxiety disorder symptoms (GAD and social anxiety) posttreatment. Pereira et al.^[13] developed a Portuguese version of the ACQ-C short form and found that the measure had high internal consistency (Cronbach's $\alpha = .85$), one month test-retest reliability ($r = .60$), and was associated with trait anxiety even after controlling for negative threat perceptions and cognitive errors.^[12-14]

Anxiety control beliefs assessed by the ACQ-C can be thought of as a measure of perceived anxiety-related emotion regulation, in that items (e.g., "I can take charge and control my feelings") tap the executive control of emotions (see work of Gross and others^[24] reviewed in Weems and Pina^[25]). Indices of emotion regulation involving the perception of control over emotions have emerged as potential predictors of emotional difficulties following traumatic stress in adult samples.^[26] For example, Burns, Jackson, and Harding^[27] found that women with histories of abuse reported greater emotion regulation difficulties than those without histories of abuse. A perceived loss of control is central to PTSD^[28,29] and so the ACQ-C short form may provide important additional information about the emotional difficulties of individuals following exposure to trauma (such as disasters) in youth. The purpose of this study was to test the association between anxiety control beliefs (using the ACQ-C short form) and emotional reactions that are common in the aftermath of disasters (i.e., PTSD and GAD symptoms are commonly assessed and associated with exposure to disasters).^[30] We also sought to extend the understanding of developmental differences in the association between ACQ-C scores and anxiety symptoms. Theoretically, anxiety control may be an incremental predictor of PTSD symptoms beyond levels

of exposure. Alternatively, it may buffer the effects of trauma exposure on PTSD symptoms such that the association between exposure and psychological distress would be stronger among youth with lower levels of anxiety control and weaker among youth with higher levels of perceived control. Further still, higher exposure may be associated with decreased anxiety control and so ACQ-C scores may not incrementally predict PTSD symptoms beyond level of exposure.

Developmentally, the ACQ-C scores' (both the short and full version) association with age has been mixed, with some studies showing a positive association^[10,13] and some a negative association.^[7,17] There is evidence that boys tend to report greater control than girls on the ACQ-C.^[10,13,16] However, age and gender have not been found to moderate associations between the ACQ-C and anxiety in the only two studies that have tested these effects.^[6,17] Importantly, the majority of research to date on the ACQ-C has either not reported on age effects^[8,11,12,14,19] or has used age as a covariate^[7,10,13,16] rather than an interactive term. Research has indicated that age moderates the association between anxiety and other cognitive predictors such as cognitive errors.^[6,31] Moreover, a recent meta-analysis of both the adult and child versions of the ACQ has indicated that the association between perceived control and measures of anxiety may be significantly larger in adult samples (estimated 95% confidence interval for r was $-.530 : -.624$) than in children samples (where the estimated 95% confidence interval for r was $-.315 : -.481$).^[32]

Theoretically, control may not have equally strong associations with anxiety across developmental periods in childhood and adolescence.^[4] Weisz and Stipek^[33] have noted that a Piagetian view of cognitive development^[34,35] suggests that children gradually become less likely to attribute outcomes not under their control to their own behavior. In other words, control beliefs may become more realistic as youth's cognitive skills develop with age. Research has supported the notion that there are different developmental trajectories for different aspects of control^[36] (i.e., contingency vs. competence). For example, in terms of locus of control, research and theory suggest high levels of internal locus of control beliefs are normal for younger children.^[33-36] While research supports the notion that an internal locus of control is negatively correlated with anxiety in younger (pre-operational) children, we theorized that since an internal locus of control derives from an immature cognitive ability at this stage of development, it may play a weaker role in emotion regulation. Thus, the strength of the association between anxiety and perceived control beliefs may increase with age.^[4] This developmental model suggests that age should moderate the association between control and anxiety, adding a theoretical rationale to explain the meta-analytic findings comparing adult and child research.^[32]

In this paper, we tested if level of hurricane-related disaster exposure, age, and gender, influence the association between ACQ-C scores and anxiety-related

emotional reactions common to disaster-exposed youth (PTSD and GAD symptoms). Based on the literature reviewed above, it was hypothesized that anxiety control beliefs would be significantly negatively related to symptoms and level of exposure, but that ACQ-C scores would predict unique variance beyond exposure, and that age would moderate the association. Finally, gender was tested to confirm previous findings of no moderation effect (therefore, we did not expect gender to moderate the association).

MATERIAL AND METHODS

PARTICIPANTS

One thousand forty-eight youths from five public schools in an urban city in the Gulf South region in grades 3 through 12 were screened as part of a larger parent study.^[37,38] The sample was 53% female, 91% African American, 6% “mixed African-American/other,” 1% Hispanic, 1% Euro-American, 0.5% Asian, and 0.5% other. Each of the schools predominantly serves youth from low-income families (available school data indicate that greater than 94% of the students are eligible to receive a free lunch).

MEASURES

The ACQ-C short form^[17] was used to assess perceived control over threats (e.g., feared objects or situations) and bodily reactions associated with anxiety (e.g., “I can take charge and control my feelings”). Youth rate their agreement on a 5-point Likert-type scale consisting of “None” (0), “A Little” (1), “Some” (2), “A Lot” (3), and “Very Much” (4), with higher scores representing more control. In this study, scores for the ACQ-C are derived by taking the mean ranking of all 10 items. In this way, an individual’s score represents their average rating and provides a clear metric for interpreting analyses (e.g., a score of 2 indicates that the child endorsed an average of “Some” control). However, multiplying the means reported here makes scores comparable to a sum used in some previous work. In the current study, Cronbach’s alpha for the ACQ-C was .89. The Flesch-Kincaid grade level estimate was 6.2.

Symptoms of PTSD were measured using a modified version of the *PostTraumatic Stress Reaction Index for Children*^[39] (PTSD-RI). As done in previous research,^[40–42] the PTSD-RI used in this study focuses on a hurricane/disaster as the trauma of focus, and contains 20 items with answer choices modified for ease of administration by reducing the original five options to three (“None of the time,” “Some of the time,” “Most of the time”—coded as 0, 2, and 4, respectively). Total PTSD-RI scores thus range from 0 to 80. Internal consistency for the present sample was good (Cronbach’s alpha = .87).

Hurricane Katrina exposure experiences and hurricane-related distress/fear were assessed via a survey of exposure to the hurricane and its aftermath based on the work of La Greca and colleagues.^[42,43] The survey consists of 16 items representing disaster exposure (i.e., exposure experiences). Example items include, “Did you get hurt during the hurricane?” and “Was your home damaged badly or destroyed by the hurricane?” Respondents indicated “Yes” (1) or “No” (0) to whether they were exposed to each event. Items are summed to create an exposure events score. This measure of hurricane events has been shown to be a valid and reliable index of exposure^[41,44,45] with strong test-retest reliability (e.g., 6 month estimate of .69).^[45]

The Revised Child Anxiety and Depression Scale^[46] (RCADS) items were used to assess symptoms of GAD using a 4-point Likert-type scale consisting of “Never” (1), “Sometimes” (2), “Often” (3), and “Always” (4). In this study, scores for GAD symptoms are derived by

taking the mean ranking of all 38 items, with total scores thus ranging from 1 to 4. An individual’s score represents the average rating of the items and provides a clear metric for interpretation. The modified version of the RCADS has demonstrated good reliability and validity estimates among the age range in this study^[47] and internal consistency of the GAD scale was high in the present sample (Cronbach’s alpha = .95).

PROCEDURES

Data collection was conducted as a part of the schools’ counseling curriculum in the context of a larger intervention project^[37] addressing potential effects of hurricane exposure such as the lingering effects of the Katrina disaster (data collection was approximately from 36 to 65 months following Hurricane Katrina) and subsequent hurricanes (Gustav was also a destructive hurricane that made landfall three years after Katrina and triggered the largest evacuation in US history). Informed consent for use of the data in research was obtained from parents. Oral assent was also obtained from youth, who were not required to participate in the study or to complete the questionnaires. The procedures were reviewed by the University of New Orleans IRB, and approved. Participants completed the measures within a group classroom setting and were assisted by trained staff. All staff had taken a class in research methods and were trained on the assessment procedures and measures via a standardized presentation consisting of at least two, hour-long meetings. Younger children were read the instructions along with each item, while other trained assessors helped individual children as necessary (as done in previous research^[41]). The teachers and/or counselors for each classroom were queried about the reading level of the class and shown the measures. Students were read the measures in a group format in grade 3–5 classrooms, where teachers or counselors indicated possible need, or where assessors noticed difficulty with reading level. Based on the total *N* of the schools involved and the *n* of collected data, the participation rate was above 80%.

RESULTS

DESCRIPTIVE STATISTICS

Means, standard deviations, and correlations among variables are presented in Table 1. Youth in the sample reported an average of 6.6 of 16 hurricane exposure events, with common experiences being “clothes or toys ruined” (69%), “thought someone might die” (68%), “home badly damaged or destroyed” (67%), and “witnessed others hurt during the storm” (40%). Examination of the variables’ range and skew indicated acceptable levels for the planned analyses. The distribution of the PTSD symptom severity categories for the participants was as follows 36.5% “Doubtful,” 32.8% “Mild,” 20.2% “Moderate,” 9.3% “Severe,” and 1.3% “Very Severe.” As shown in Table 1, the ACQ-C was significantly negatively correlated with PTSD symptoms, level of exposure, GAD symptoms, and age.

HYPOTHESIS TESTING

Hierarchical linear regression analyses tested whether lower levels of anxiety control beliefs were related to higher levels of PTSD symptoms after controlling for hurricane exposure, age, and gender. As shown in Table 2, hurricane exposure, age, and gender were significant predictors, and after controlling for these

TABLE 1. Means, standard deviations, and correlations among the study variables

	1	2	3	4	5	6
1. ACQ-C	—	—	—	—	—	—
2. PTSD Symptoms	-.17**	—	—	—	—	—
3. RCADS General Anxiety	-.14**	.53**	—	—	—	—
4. Hurricane Exposure	-.16**	.43**	.28**	—	—	—
5. Age	-.08*	-.17**	.01	.08**	—	—
6. Gender	.06	-.20**	.17**	.13**	.07*	—
Mean	2.32	19.30	0.92	6.56	13.39	N/A
SD	0.97	14.67	0.74	3.19	1.53	N/A
Range	0–4	0–72	0–3	0–16	7–18	N/A

Note. * $P < .05$ (2-tailed). ** $P < .01$ (2-tailed)

Gender correlation point-biserial coded 1 (male), 2 (female).

ACQ-C = Anxiety control questionnaire – child version; PTSD = Posttraumatic stress disorder; RCADS = Revised child anxiety and depression scale.

TABLE 2. Summary of regression analyses predicting PTSD and GAD symptoms

	PTSD		GAD	
	Slope (S.E.)	Semi-partial	Slope (S.E.)	Semi-partial
<i>Model 1</i>				
Exposure	29.23 (2.16)	.39**	0.94 (0.12)	.24**
Age	-1.26 (0.18)	-.21**	-0.00 (0.01)	-.01
Gender	4.73 (0.85)	.16**	0.20 (0.05)	.13**
ACQ-C	-1.11 (0.45)	-.07*	-0.07 (0.03)	-.09**
ACQ-C by Exposure	-1.01 (2.06)	-.01	-0.04 (0.12)	-.01
<i>Model 2</i>				
Exposure	29.28 (2.15)	.39**	0.94 (0.12)	.24**
Age	-1.27 (0.18)	-.21**	-0.00 (0.01)	-.01
Gender	4.74 (0.85)	.16**	0.20 (0.05)	.13**
ACQ-C	-1.14 (0.45)	-.07*	-0.07 (0.03)	-.09**
ACQ-C by Gender	-0.91 (0.87)	-.03	-0.00 (0.05)	-.00
<i>Model 3</i>				
Exposure	29.10 (2.14)	.39**	0.92 (0.12)	.24**
Age	-1.28 (0.18)	-.21**	-0.00 (0.01)	-.01
Gender	4.62 (0.84)	.16**	0.19 (0.05)	.12**
ACQ-C	-1.25 (0.45)	-.08**	-0.08 (0.03)	-.11**
ACQ-C by Age	-0.52 (0.18)	-.08**	-0.04 (0.01)	-.11**

Note. * $P < .05$. ** $P < .01$. ACQ-C = Anxiety Control Questionnaire for Children.

variables, ACQ-C scores were still significantly negatively associated with symptoms of PTSD. Additional separate steps of the regression analysis were added to investigate whether age, gender, or level of exposure moderated the association between hurricane exposure and symptoms of PTSD. Prior to testing, age, exposure, and ACQ-C scores were centered to reduce potential influ-

TABLE 3. Johnson-Neyman significance regions for the conditional effect of age on associations between PTSD symptoms and anxiety control

Age	Slope (S.E.)	t	P	LCI	UCI
7.00	2.05 (1.48)	1.38	0.16	-0.86	4.95
7.55	1.76 (1.37)	1.28	0.20	-0.93	4.44
8.10	1.46 (1.26)	1.16	0.25	-1.01	3.93
8.65	1.17 (1.15)	1.02	0.31	-1.09	3.43
9.20	0.88 (1.04)	0.84	0.40	-1.17	2.93
9.75	0.59 (0.94)	0.62	0.53	-1.26	2.43
10.30	0.29 (0.84)	0.35	0.73	-1.35	1.94
10.85	0.00 (0.74)	0.00	1.00	-1.46	1.46
11.40	-0.29 (0.65)	-0.44	0.66	-1.57	0.99
11.95	-0.58 (0.57)	-1.01	0.31	-1.71	0.54
12.50	-0.87 (0.51)	-1.72	0.09	-1.88	0.13
12.68	-0.97 (0.49)	-1.96	0.05 ^a	-1.94	0.00
13.05	-1.17 (0.47)	-2.50	0.01	-2.08	-0.25
13.60	-1.46 (0.45)	-3.24	< 0.01	-2.34	-0.58
14.15	-1.75 (0.46)	-3.78	< 0.01	-2.66	-0.84
14.70	-2.04 (0.50)	-4.05	< 0.01	-3.03	-1.05
15.25	-2.34 (0.57)	-4.12	< 0.01	-3.45	-1.22
15.80	-2.63 (0.64)	-4.08	< 0.01	-3.89	-1.36
16.35	-2.92 (0.73)	-3.98	< 0.01	-4.36	-1.48
16.90	-3.21 (0.83)	-3.88	< 0.01	-4.84	-1.59
17.45	-3.50 (0.93)	-3.77	< 0.01	-5.33	-1.68
18.00	-3.80 (1.03)	-3.68	< 0.01	-5.82	-1.77

^aDenotes the point of statistical significance; LCI = Lower confidence interval for the slope, UCI = Upper confidence interval for the slope.

ences of multicollinearity. Moderation by exposure was examined first. Initial PTSD symptoms were entered as the dependent variable, with ACQ-C, exposure, their interaction term (ACQ-C $\times$ Exposure), age, and gender entered simultaneously as predictors. The interaction term (ACQ-C $\times$ Exposure) was not a significant predictor (see Table 2), indicating that level of exposure to hurricane events did not moderate the association between PTSD symptoms and anxiety control beliefs. Moderation by gender was examined in a similar fashion, with gender, ACQ-C score, an interaction term (ACQ-C $\times$ Gender), age, and total exposure entered as predictors of PTSD. Again, gender did not moderate the link between anxiety control and PTSD (i.e., the interaction term was not significant; see Table 2).

Moderating effects of age on ACQ-C prediction of PTSD symptoms were tested next. Similar to above, gender, exposure, age, ACQ-C scores, and the interaction term (ACQ-C $\times$ Age) were entered as independent variables predicting PTSD symptoms. Results showed a significant age by ACQ-C score interaction (see Table 2). The nature of the effect is depicted in Fig. 1. To identify the age(s) at which the ACQ-C became a significant predictor, we tested the conditional effect of ACQ-C scores on PTSD at values of the moderator (age) using Johnson-Neyman significance regions^[48] with PROCESS software.^[49] Results for PTSD symptoms are presented in Table 3 and show that ACQ-C scores became a significant predictor after age 12 (i.e., at 12.68, $P = .05$ for the conditional effect).

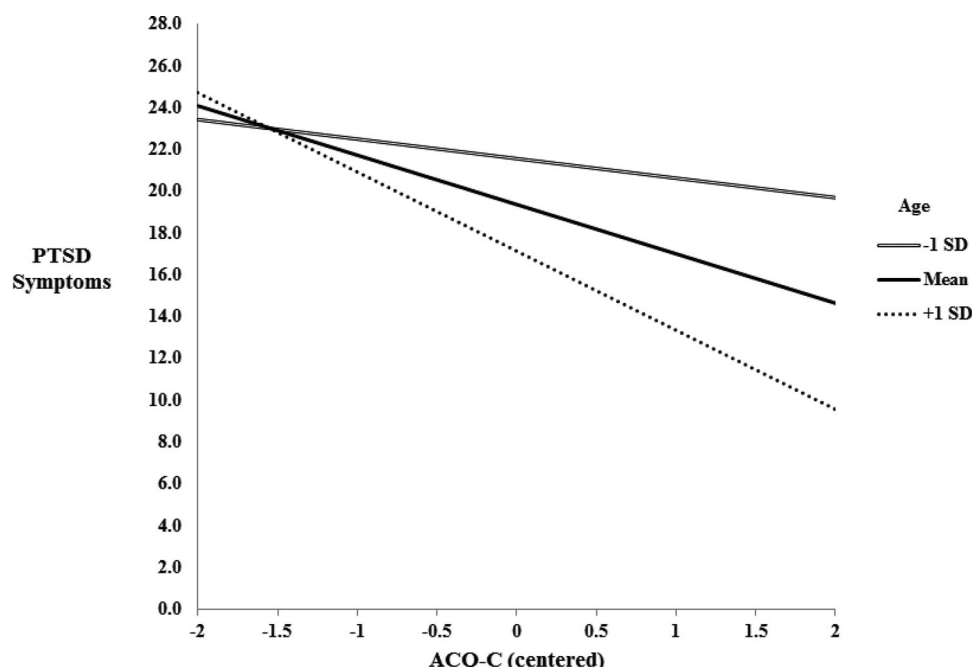


Figure 1. Effect of age (at the mean, plus and minus one standard deviations of age) on association between PTSD symptoms and anxiety control. Slopes become significant at the mean of age

Identical analyses using GAD symptoms as the dependent variable predicted by ACQ-C scores, hurricane exposure, age, gender, and interactions with ACQ-C scores indicated a similar pattern. Hurricane exposure and gender were significant predictors, and while controlling for these additional variables, ACQ-C scores were still significantly negatively associated with symptoms of PTSD. An age by ACQ-C score interaction was significant in predicting GAD ($B = -.04$, $S.E. = .01$, $P < .01$). Examination of the conditional effect of ACQ-C on PTSD across age using Johnson-Neyman significance regions with the PROCESS software again indicated that the association became significant after age 12 (i.e., at age 12.70 years, $P = .05$ for the conditional effect) and continued increasing thereafter (similar to PTSD in Table 3). Evaluation of potential moderation by hurricane exposure and gender similarly indicated that these did not significantly influence the association.

DISCUSSION

This study adds to the literature by demonstrating the potential utility of the ACQ-C short form as a tool for screening trauma-exposed youth. Findings were consistent with Barlow's^[20,21] model emphasizing the role of an individual's judgment that they lack control as central to anxiety problems. Findings extend the extant research in youth^[13,16,17] by showing a linkage between a perceived loss of control and PTSD symptoms in disaster-exposed youth.^[27-29] In the prediction of GAD symptoms, the results were also consistent with past research

using the ACQ-C full scale^[6,9,10] as well as the short form.^[7] Findings further emphasize the importance of considering developmental context when studying the association between anxiety control beliefs and post-traumatic stress symptoms. Consistent with previous research, gender did not moderate associations between the ACQ-C and PTSD symptoms and anxiety. However, consistent with a developmental hypothesis, results did show that the strength of the predictive negative relationship with symptoms began around age 12 and increased steadily with age (see Table 3). The finding that the predictive relationship became significant around the onset of adolescence was consistent with theory (see Weems and Silverman^[4]). Though this has not been established in the limited extant research on the role of age using the ACQ-C,^[6,16,17] evidence supports age moderating other cognitive predictors (such as cognitive errors^[6,31]). The sample or research context may account for this.

First, the wide age range and relatively large sample used in this study may have helped detect the hypothesized developmental differences. Second, the sample was composed of urban minority youth screened in groups in a school-based setting. This differs from the other studies in which participants were individually assessed in a lab setting. Recently, Hogendoorn et al.^[10] found that both younger children (aged 8–11 years) and girls (aged 12–18 years) reported less perceived control, independent of anxiety level (i.e., there was not an age by anxiety interaction effect on ACQ-C scores) in a sample of Dutch youth using the full scale. Pereira et al.^[13] found a similar effect of gender with a Portuguese

version of the ACQ-C short, but reported no significant difference between those participants aged 8–10 years and those aged 11–15 years. Here we found the opposite (i.e., a negative correlation with age) such that the direction and size of the effect was similar to that reported by Frala et al.^[7] with the short form, and Weems et al.^[17] with the full (i.e., in both the correlation with age was nonsignificant). It is important to note that the effect size of the correlation with age in this study was very small.

The finding of age moderation is consistent with a developmental model where low perceived control exhibited by younger children may not be indicative of anxious symptoms but may instead be related to their normal cognitive development.^[31] Findings from the Johnson-Neyman significance regions analysis point to the importance of age 12 or 13, but highlight the use of age as a continuous variable and as a moderator of effects. The moderation by age in this sample might be seen as consistent with cognitive developmental theory^[33–35] which suggests that children gradually become less likely to attribute outcomes not under their control to their own behavior. As control beliefs become more realistic, they become more predictive of emotional outcomes. Research testing the association between actual control (using physiological indices of emotional control; e.g., vagal tone) and ACQ-C scores in adolescents has begun to demonstrate a link between real control and perceived control.^[15,50] Extension of this research using physiological indicators or a more objective measure of actual control (e.g., observations) in younger youth may help further explicate developmental effects.

Although the current paper provides the evidence for the developmental hypothesis of emerging anxiety regulation via control beliefs among trauma exposed youth, the study is not without limitations. First, the cross-sectional nature of the present study limits our ability to ascertain whether the links are predictive of anxiety in youth or are simply associated with them. Longitudinal data are needed to make temporal conclusions. Second, the study is limited by the fact that youth completed self-report measures to assess symptoms. The finding of age moderation shows that ACQ-C became a significant predictor of anxiety symptoms around age 12. This result could be because younger children have an unrealistic perception of control (noted above) but might also be explained by younger children's difficulty in understanding the questionnaire. It may be important to construct a more developmentally sensitive questionnaire, or alternatively, use parent reports to evaluate control beliefs in younger children. For example, it is possible that other sources (such as parents or teachers) would have provided different findings. Future research that incorporates information from multiple informants (e.g., youth, parents, and teachers) is needed. Finally, our sample was predominantly comprised of low SES, minority youth, limiting generalization to other populations. While the makeup of our sample is a positive feature in that it extends the literature to a population that has

been understudied,^[51] the effect on majority youth is less clear. Further, findings may also not generalize to other samples of (nondisaster) trauma exposed youth such as those with interpersonal traumas or clinic referred samples.

CONCLUSIONS

This study adds to the literature by demonstrating the potential utility of the ACQ-C short form as a tool for screening trauma-exposed youth. Consistent with a developmental hypothesis and building upon meta-analysis comparing adults and youths, results identify a potential developmental shift in emotion regulation imparted by perceived control that began around age 12 and increased with age. As found in previous research, gender did not moderate associations between the ACQ-C and PTSD symptoms and anxiety.

Conflict of interest. The authors declare no conflicts of interest in reporting this work.

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