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Brief report: Associations between adolescent girls' social emotional intelligence and violence perpetration

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Abstract

This study examined associations between social emotional intelligence (SEI) and two measures of violence perpetration (relational aggression and physical violence) in a cross-sectional sample of high-risk adolescent girls ($N = 253$). We evaluated three aspects of SEI: stress management, intrapersonal, and interpersonal skills. Results of a multiple linear regression model accounting for participants' age, race/ethnicity, and experiences of relational aggression victimization indicated that girls with better stress management skills were less likely to perpetrate relational aggression. A parallel model for perpetration of physical violence showed a similar pattern of results. Study findings suggest that SEI, and stress management skills in particular, may protect adolescent girls – including those who have been victims of violence – from perpetrating relational aggression and physical violence. Interventions that build adolescent girls' social and emotional skills may be an effective strategy for reducing their perpetration of violence.

Keywords

social emotional intelligence; relational aggression; physical violence; female adolescents

Background

In the last decade, adolescent girls have increasingly engaged in violent behavior (Zahn, Hawkins, Chiancone, & Whitworth, 2008). Violence perpetration and victimization have important consequences for girls' physical and mental health, with physical violence

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involvement being linked to depression, emotional distress, externalizing behaviors, pregnancy and childbearing during adolescence (Buka, Stichick, Birdthistle, & Earls, 2001; Kirby & Lepore, 2007). Similarly, involvement in relational aggression has been linked to greater internalizing problems, binge drinking, and tobacco use, and may be particularly relevant for girls (Card, Stucky, Sawalani, & Little, 2008; Herrenkohl, Catalano, Hemphill, & Toumbourou, 2009). Despite these trends and growing concerns voiced by scholars, practitioners, and policymakers (Zahn, et al., 2008), relatively few studies have examined what protects adolescent girls from engaging in relational aggression and physical violence and what puts them at risk, particularly girls experiencing multiple environmental risks for violence involvement.

Biases in social cognition, especially with regard to reading others' emotions and intent in ambiguous situations, consistently emerge as risk factors for violence involvement (de Castro, Eerman, Koops, Bosch, & Monshouwer, 2002; Mathieson et al., 2011). Social-emotional intelligence (SEI), an aspect of social cognition, includes the ability to recognize and manage one's own and others' emotions (Bar-On & Parker, 2000). These skills may be important during situations that can lead to aggression and violence, such as peer conflict, personal slights, and victimization (Adamshick, 2010). Furthermore, SEI is associated with mental and physical health (Schutte, Malouff, Thorsteinsson, Bhullar, & Rooke, 2007; Trinidad & Johnson, 2002). Thus, SEI skills may both influence adolescents' choice of non-violent actions and counter the effects of risk factors for violence perpetration, such as previous violence victimization (Adamshick, 2010).

Several studies have documented negative associations between bullying perpetration and emotional intelligence (Kokkinos & Kipritsi, 2012; Lomas, Stough, Hansen, & Downey, 2012); however, the definition of bullying used combined both physical and relational bullying. Because SEI involves multiple components, including stress management, intrapersonal, and interpersonal skills, determining which aspects of SEI are related to violence perpetration can inform intervention and prevention efforts. The present study sought to examine associations between specific aspects of girls' SEI, violence victimization, and involvement in relational aggression and physical violence. Given associations between perpetration and victimization (Adamshick, 2010), we controlled for victimization to assess independent associations between SEI and perpetration.

Methods

Participants

This study utilized baseline data from *Prime Time*, a randomized trial of a youth development intervention for adolescent girls at high risk for pregnancy. *Prime Time* study design, procedures, and participants are described elsewhere (Sieving et al., 2011). A total of 253 girls (ages 13–17 years) provided written informed consent and completed baseline data collection between April 2007 and October 2008. All study protocols were approved by university and clinics' institutional review boards.

Measures

Social Emotional Intelligence (SEI)—SEI was assessed using three scales from the BarOn Emotional Quotient Inventory: Youth Version (Bar-On & Parker, 2000). Response options for all items ranged from *never/seldom* (0) to *very often* (3), and responses were averaged; higher scores indicated better skills. Intrapersonal skills (6 items, $\alpha=.79$) assessed participants' abilities to recognize, express, and regulate their own emotions (e.g., *I can easily describe my feelings*). Interpersonal skills (7 items, $\alpha=.81$) assessed participants' abilities to recognize and affect others' emotions, and to empathize with others' feelings

(e.g., *I care what happens to other people*). Stress management skills (8 items, $\alpha=.86$) assessed participants' abilities to cope positively with stress and control their emotions (e.g., *I can stay calm when I'm upset*).

Violence Victimization—A 6-item scale ($\alpha=.86$) from the Multisite Violence Prevention Project victimization scale (Miller-Johnson, Sullivan, & Simon, 2004) assessed relational aggression victimization in the past 30 days (e.g., *In the last 30 days, how many times has someone told lies about you?*). A 4-item scale ($\alpha=.74$) from a National Longitudinal Study of Adolescent Health (AddHealth) measure (Resnick, Ireland, & Borowsky, 2004) assessed physical violence victimization in the past 6 months (e.g., *In the last 6 months, how often has someone hit you or beat you up?*). Responses to individual items included *never* (0), *once or twice* (1), *3–5 times* (2), and *6 or more times* (3). For each scale, responses were summed for a final scale score.

Violence Perpetration—A 6-item scale ($\alpha=.77$) from the Multisite Violence Prevention Project victimization scale (Miller-Johnson, et al., 2004) asked about relational aggression perpetration (e.g., *In the last 30 days, how many times have you told lies about someone?*). Adapted from an AddHealth measure (Resnick, et al., 2004), a 5-item scale ($\alpha=.79$) assessed perpetration of physical violence in the past 6 months (e.g., *In the last 6 months, how often have you hit or beat up another person?*). Responses to individual items paralleled the victimization measure and were summed for final scale scores.

Analysis Plan

Both perpetration measures were positively skewed; to address this, these scales were natural log transformed prior to analyses. Multiple linear regression models evaluated the effects of SEI and violence victimization on natural log transformed violence perpetration outcomes. SEI variables with significant bivariate correlations with perpetration ($p < .05$) were entered as predictors, controlling for violence victimization, age, race/ethnicity, and clustering of participants within clinics. Models were estimated using generalized estimating equations, adjusting for intercorrelations between girls recruited from the same clinic. Analyses were conducted in STATA version 11.0.

Results

Table 1 presents participant demographics and descriptive data for variables of interest. Participants' racial/ethnic distribution reflects the composition of neighborhoods from which girls were recruited. In bivariate analyses, only stress management skills were associated with relational aggression perpetration ($r(250) = -.34, p < .001$). Both stress management ($r(250) = -.41, p < .001$) and interpersonal skills ($r(251) = -.17, p < .01$) were related to physical violence perpetration.

In multiple regression models, SEI and violence victimization were associated with both types of violence perpetration (Table 2). Stress management skills and relational aggression victimization were significantly associated with relational aggression perpetration. While participants with higher levels of relational aggression victimization were more likely to perpetrate relational aggression, girls with better stress management skills exhibited lower levels of perpetration. The model for physical violence perpetration identified two significant predictors. While participants with higher levels of violence victimization engaged in more physical violence perpetration, girls with better ability to manage stress had lower levels of physical violence perpetration.

Discussion

The purpose of this study was to examine associations between SEI, violence victimization, and violence perpetration in a sample of urban, high-risk adolescent girls. Consistent with past research, we found that girls who experienced victimization were more likely to perpetrate violence (Molnar, Browne, Cerda, & Buka, 2005). Stress management skills in particular appeared to be the SEI component associated with lower levels of both forms of perpetration. Girls who were better able to manage their emotions and reactions in stressful situations engaged in less relational aggression and physical violence perpetration. That these effects were present after controlling for victimization suggests that stress management skills may be an important protective factor in this vulnerable population.

Study results extend findings from prior research indicating that SEI protects against violence involvement among 10–12 year old students from urban, low income neighborhoods (Jagers et al., 2007; Polan, Sieving, & McMorris, 2013; Sieving & Widome, 2008). The persistence of this protective association into the 13–17 year age range suggests that development alone does not account for these findings. Across early and middle adolescence, individual differences in stress management skills are associated with reduced violence involvement. Prevention efforts targeted at improving stress management skills throughout early and middle adolescence, particularly among youth at risk for violence involvement, should be explored.

Caution must be used when interpreting these findings. Study limitations include reliance on self-report, although past research supports the reliability of adolescent self-report of violence involvement (Turner et al., 1998). Additionally, the study's cross-sectional design prevents us from inferring causal relationships. As our study was conducted in a single geographic area among high-risk adolescent females who accessed clinic services, findings may not be generalizable to other populations, including adolescent males. This study adds violence perpetration to the growing list of behaviors associated with SEI. However, longitudinal research is needed to better understand relationships between SEI and violence perpetration across adolescence and into early adulthood.

Despite these limitations, study findings provide support for interventions that seek to build girls' stress management skills in order to reduce aggressive and violent behaviors. There is growing evidence for the effectiveness of school-based social-emotional learning interventions on multiple indicators of social adjustment and academic performance (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). Because adolescents with a history of violence involvement may be less likely to attend school (Ellickson, Saner, & McGuigan, 1997) and because these youth often experience violence in multiple social contexts (Secor-Turner, Garwick, Sieving, & Seppelt, 2011), interventions in settings outside of school are also needed. Although not all girls in this study were enrolled in school, all were accessing health clinic services, which suggests that clinics may be a strategic venue for delivery of interventions to expand social-emotional skills among vulnerable youth.

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Table 1

Characteristics of study participants (N = 253)

	%	Mean (SE)	Range
Demographic characteristics			
Race/ethnicity			
American Indian/Native American	2.8		
Asian/Asian American/Pacific Islander	11.9		
Black/African/African American	41.1		
Hispanic/Latina	12.3		
White/European American	11.1		
Mixed/Multiple race	20.9		
Age in years		15.59 (.13)	13–17
Social Emotional Intelligence			
Intrapersonal skills		1.39 (.08)	0–3
Interpersonal skills		2.19 (.03)	0–3
Stress management skills		1.54 (.05)	0–3
Violence involvement^a			
Relational aggression			
Perpetration		3.40 ^b (.08)	0–18
Victimization		5.39 ^b (.28)	0–18
Physical fighting			
Perpetration		2.11 ^b (.20)	0–15
Victimization		1.46 ^b (.08)	0–9

^aValues presented for untransformed variables. Log transformed variables used in all analyses.

^bWhen compared to a state-wide sample of 9th and 12th grade girls (Minnesota Student Survey, 2007), *Prime Time* girls were considerably more likely to engage in physical violence and relational aggression perpetration and victimization. More details are available upon request.

Note. Robust SE reported to account for clustering of participants within clinics.

Table 2

Effects of Social Emotional Intelligence Indicators and Violence Victimization on Violence Perpetration

	Relational aggression perpetration		Physical violence perpetration	
	<i>b</i>	(95% CI)	<i>b</i>	(95% CI)
Social emotional intelligence				
Intrapersonal skills	--		--	
Interpersonal skills	--		-.09	(-.21, .03)
Stress management skills	-.23	(-.35, -.11)*	-.29	(-.40, -.18)*
Violence victimization				
Relational aggression	.31	(.19, .42)*	n/a	
Physical violence	n/a		.52	(.40, .64)*
Model R^2	.23		.42	

Notes. Table shows results of models regressed on natural log transformed study outcomes, controlling for participants' race/ethnicity and age. Multiple regression models included only variables that were significant ($p < .05$) in bivariate models. All models account for clustering of participants within clinics. Dashes (--) indicate variables that were not significant in bivariate models; n/a indicates not applicable because variable was not included in model.

* $p < 0.001$.