

Deficits in Emotional Clarity and Vulnerability to Peer Victimization and Internalizing Symptoms Among Early Adolescents

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Abstract Peer victimization is a significant risk factor for a range of negative outcomes during adolescence, including depression and anxiety. Recent research has evaluated individual characteristics that heighten the risk of experiencing peer victimization. However, the role of emotional clarity, or the ability to understand one's emotions, in being the target of peer victimization remains unclear. Thus, the present study evaluated whether deficits in emotional clarity increased the risk of experiencing peer victimization, particularly among adolescent girls, which, in turn, contributed to prospective levels of depressive and anxiety symptoms. In the present study, 355 early adolescents (ages 12–13; 53 % female; 51 % African American) who were part of the Adolescent Cognition and Emotion project completed measures of emotional clarity, depressive symptoms, and anxiety symptoms at baseline, and measures of peer victimization, depressive symptoms, and anxiety symptoms at

follow-up. Moderation analyses indicated that deficits in emotional clarity predicted greater peer victimization among adolescent girls, but not adolescent boys. Moderated mediation analyses revealed that deficits in emotional clarity contributed to relational peer victimization, which, in turn, predicted prospective levels of depressive and anxiety symptoms among adolescent girls, but not boys. These findings indicate that deficits in emotional clarity represent a significant risk factor for adolescent girls to experience relational peer victimization, which, in turn, contributed to prospective levels of internalizing symptoms. Thus, prevention programs should target deficits in emotional clarity to prevent peer victimization and subsequent internalizing symptoms among adolescent girls.

Keywords Peer victimization · Emotional clarity · Depression · Anxiety · Adolescence

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Introduction

Adolescence is a critical developmental period during which interpersonal relationships assume newfound importance. As adolescents transition to middle school, social networks are reorganized and a greater emphasis is placed on peer crowd affiliations and social status (Brown and Larson 2009). Events that threaten individuals' peer relationships or social standing are particularly detrimental during the adolescent years, especially among adolescent girls (Rose and Rudolph 2006). Specifically, relational peer victimization is a damaging type of victimization that targets individuals' peer relationships, reputation, or social status through social exclusion, spreading rumors, and manipulation through threats of friendship withdrawal (Crick and Grotpeter 1996). Consistent with this notion,

relational peer victimization has been found to predict a range of maladaptive outcomes, including depressive and anxiety symptoms (Desjardins and Leadbeater 2011; Hamilton et al. 2013a; Dempsey and Storch 2008). Although findings regarding sex differences in the prevalence of relational peer victimization are mixed (e.g., Merrell et al. 2006), this type of victimization may be more detrimental for adolescent girls (e.g., Paquette and Underwood 1999; Prinstein et al. 2001). Given the serious consequences of relational peer victimization and its increased prevalence during adolescence (e.g., Nansel et al. 2001), it is crucial to identify whether individual characteristics may contribute to this detrimental form of peer victimization, especially among adolescent girls.

Interpersonal stress generation theories posit that individuals are not simply reactors to stressful life events, but may possess certain characteristics or behaviors that increase the risk of experiencing stressors, particularly in interpersonal relationships (Hammen 1991; for a review, see Liu and Alloy 2010). The notion that individuals may contribute to stressors does not imply that individuals intentionally *cause* these stressful events, but rather that these personal characteristics may heighten the likelihood of experiencing certain stressors. In this sense, identifying potential individual factors that contribute to stressful events may highlight an important malleable pathway to reduce stressful events and the resulting negative consequences, such as depression and anxiety.

Research examining interpersonal stress generation originally focused on the role of depressive symptoms and disorders, finding that depressed youth experienced more interpersonal stressors (such as fights or conflicts with family and peers) than non-depressed youth (e.g., Harkness and Stewart 2009; Kercher and Rapee 2009; Shih et al. 2009). Recent studies also have extended this to the examination of anxiety symptoms and disorders, finding that clinically or subclinically anxious adolescents also experienced elevated levels of interpersonal stressors (e.g., Uliaszek et al. 2012). To increase the likelihood of prevention prior to the onset of depressive and anxiety symptoms and disorders, numerous studies have begun to evaluate vulnerabilities for depression and anxiety that also may lead to interpersonal stress generation, which, in turn, increases the risk of internalizing symptoms and disorders. Several identified characteristics and behaviors include cognitive vulnerabilities (e.g., rumination and negative cognitive styles; Hamilton et al. 2013b, 2014; Kercher and Rapee 2009), interpersonal vulnerabilities (e.g., excessive reassurance-seeking and co-rumination; Bouchard and Shih 2013; Eberhart and Hammen 2009), and personality characteristics (e.g., neuroticism; Uliaszek et al. 2010).

Within the context of peer victimization, considerable research has demonstrated that depressed and anxious

youth are more vulnerable to peer victimization, including relational peer victimization, than youth who are not depressed or anxious (Crawford and Manassis 2011; Shapero et al. 2013). Similarly, studies examining individual characteristics of youth as predictors of peer victimization point to internalizing behaviors, such as social withdrawal and avoidance (e.g., Boivin et al. 2010; Hanish and Guerra 2000; Hodges and Perry 1999), and externalizing behaviors, characterized by aggression, hostility, and poor self-control (Bakker et al. 2011; Hanish and Guerra 2000; Hodges and Perry 1999). Further, deficits in self-esteem and social competence (i.e., the ability to effectively interact socially) also have been found among youth who experience peer victimization (for a review, see Cook et al. 2010). Thus, these studies indicate that youth may possess certain characteristics that heighten the risk of peer victimization.

Given that adolescence is an important period for emotional development and successful navigation of social interactions (Buckley and Saarni 2009; Yurgelin-Todd 2007), it is surprising that few studies have evaluated the impact of emotional clarity, defined as the ability to label, understand, and distinguish one's emotional experiences (Gohm and Clore 2000, 2002), as contributors to relational peer victimization during adolescence. Although the ability to identify complex emotions generally improves during adolescence (Burnett et al. 2009), some children and adolescents possess deficits in emotional clarity that increase the risk of depressive symptoms (Flynn and Rudolph, 2010, 2014; Resurreccion et al. 2014; Stange et al. 2013a, 2013b). Recent research also indicates that deficits in emotional clarity may impair one's ability to adaptively respond to stressful life events (Ramos et al. 2007), including perceived peer victimization (Flynn and Rudolph 2010, 2014). These studies theorized that deficits in emotional clarity may result in greater efforts to understand one's emotions, leaving fewer resources (e.g., executive control, decision-making, problem-solving) to devote to goal-directed cognition and behaviors (Gohm and Clore 2000, 2002). Further, lacking clarity about one's own emotions may increase difficulty with controlling behaviors or responding appropriately, thereby heightening maladaptive responses to acute stressors, including perceived victimization by peers. Specifically, prior studies have found that youth with deficits in emotional clarity were more likely to prospectively engage in involuntary disengagement coping (e.g., emotional numbness) and involuntary engagement (e.g., rumination), and less likely to utilize engagement coping (e.g., problem-solving, emotional expression) following hypothetical peer victimization (Flynn and Rudolph 2010, 2014). These maladaptive responses, in turn, predicted increases in depressive symptoms (Flynn and Rudolph 2014).

Although these studies suggest that deficits in emotional clarity lead to maladaptive responses to interpersonal stress, deficits in emotional clarity also may contribute to the occurrence of real or perceived peer victimization, rather than just responses to these stressors. For example, deficits in understanding one's own emotions may impair one's ability to understand the emotional experiences of others, such that individuals with less emotional clarity may have difficulty with perspective-taking and understanding reasons for others' negative mood states (Ramos et al. 2007). Thus, youth with deficits in emotional clarity may not recognize when peers are irritated, angry, or upset, and unintentionally behave in certain ways that evoke negative reactions from their peers. Further, given that emotional clarity facilitates important self-regulation skills (Buckley and Saarni 2009), deficits in emotional clarity may impair adaptive strategies for navigating complicated social interactions with peers, which may result in social exclusion or gossiping by peers.

Possessing emotional clarity may be particularly important for girls during the adolescent years. Specifically, adolescent girls who are unable to understand their own emotional experiences may be less able to effectively participate in emotional expression, self-disclosure, and intimate conversations with their peers (Ramos et al. 2007), which are more common (Legerski et al. 2015) and more highly valued in female relationships during this developmental stage (Rose and Rudolph 2006). For example, an adolescent girl who has difficulty understanding her own emotions may experience difficulty understanding others' emotional states (Ramos et al. 2007) or have difficulty engaging in emotionally supportive relationships with female peers, which may in turn make her the target of future victimization. Interestingly, Flynn and Rudolph (2014) did not find evidence of sex differences in the prospective relationship between emotional clarity and responses to peer victimization. However, it could be that youth with deficits in emotional clarity respond to hypothetical peer victimization using similar maladaptive strategies, such as rumination and emotional numbing, but only adolescent girls with deficits in emotional clarity are particularly vulnerable to negative responses from peers, such as social exclusion and gossiping.

Present Study

The current study sought to extend past research by examining the role of emotional clarity as a predictor of relational peer victimization among adolescents. Specifically, we evaluated deficits in emotional clarity as a predictor of relational peer victimization, and whether this effect was stronger among adolescent girls than boys. Further, we

examined whether relational peer victimization subsequently contributed to internalizing symptoms (depression and anxiety) among early adolescents. Consistent with past research indicating that deficits in emotional clarity contribute to maladaptive responses to peer victimization (e.g., Flynn and Rudolph 2014) and research highlighting the role of individual characteristics as predictors of peer victimization (e.g., Shapero et al. 2013), it was hypothesized that deficits in emotional clarity would predict higher levels of relational peer victimization, which, in turn, would lead to greater symptoms of depression and anxiety. However, given the higher rates of internalizing symptoms among adolescent girls (e.g., Hankin et al. 1998), and the likely importance of emotional understanding and awareness for adjustment among adolescent girls (Rose and Rudolph 2006), we expected that the relationship between emotional clarity and peer victimization would be particularly strong among adolescent girls compared to boys.

Methods

Sample Recruitment

Caucasian and African-American adolescents (12- and 13-year-olds) were recruited from Philadelphia-area private and public schools for the current investigation, as part of an ongoing longitudinal study (Adolescent Cognition and Emotion Project) to assess the emergence of depressive and anxiety disorders during adolescence, as well as sex and racial differences in the development of these disorders. Participants were recruited through advertisements in Philadelphia-area newspapers (about 32 % of the sample) and through school mailings and follow-up phone calls (about 68 % of the sample). To be eligible for participation in the study, adolescents had to be 12 or 13 years old, self-identify as Black/African-American or White/Caucasian, and have a mother or primary female caregiver who was also willing to participate in the study.¹ Exclusionary criteria included: (1) the absence of a mother or female caregiver, (2) the adolescent or mother was mentally retarded, psychotic, or had a severe developmental disorder or severe learning disability, and (3) the inability to complete measures in the study by adolescents or mothers due

¹ One of the larger goals of this longitudinal study was to examine potential racial differences in the emergence of internalizing disorders during adolescence; thus, only adolescents who self-identified as African American or Caucasian were included in the present study. In addition, maternal psychopathology has been linked to the development of depression in their offspring (Goodman et al. 2011). Thus, mothers were selected to participate in this longitudinal study to examine all variables of interest related to the larger longitudinal study goals.

to being unable to speak or read English (for more details regarding recruitment, see Alloy et al. 2012).

Study Sample

The current sample included 355 adolescents (Mean age = 12.83, SD = 0.60) who completed the baseline assessment and one follow-up assessment. The participants were 51 % African-American, 53 % female, and experienced wide variability in socioeconomic status (SES), with 25 % of participants falling below \$30,000 annual family income, 35 % falling between \$30,000 and \$59,999, 18 % falling between \$60,000 and \$89,999, and 22 % falling above \$90,000. Additionally, 48 % of participants were eligible for subsidized school lunch, an indicator of lower SES that takes into account the number of dependents in the family.

Originally, 386 adolescents completed the baseline assessment; however, 31 families declined further participation (92 % retention), and therefore did not complete a follow-up assessment. There were no significant differences between those who completed both assessments and those who only completed the study at baseline on primary study (depressive symptoms, anxiety symptoms, emotional clarity) or demographic variables (age, sex, race, SES). List-wise deletion was used for the final sample of 355 adolescents, indicating that only participants with complete data on all study variables were used for the present analyses.

Procedures

The current study utilized a prospective design, with two assessments spaced approximately 9 months apart ($M = 283.33$ days; $SD = 97.40$ days). At the baseline assessment, adolescents completed self-report questionnaires to evaluate emotional clarity, depressive symptoms, and anxiety symptoms. At the follow-up assessment, participants completed self-report measures to assess experiences of peer victimization that had occurred since baseline, as well as symptoms of depression and anxiety.

Measures

Emotional Clarity

The Emotional Clarity Questionnaire (ECQ; Flynn and Rudolph 2010) is a self-report questionnaire that was designed to measure perceived emotional clarity in youth. This 7-item measure was adapted for use with children and adolescents from the measure commonly used with adults (Trait Meta-Mood Scale; Salovey et al. 1995). It asks participants to rate their responses on a 5-point Likert scale that ranges from 1 (*not at all*) to 5 (*very much*). Items on

the ECQ inquire about how youths experience their feelings, such as “My feelings usually make sense to me” or “I am often confused about my feelings” (reverse-scored). Total ECQ scores were calculated by reverse-scoring appropriate items and summing item scores, with lower scores indicating less emotional clarity (i.e. greater deficits in emotional clarity). The ECQ has demonstrated good internal consistency (Flynn and Rudolph 2014; Stange et al. 2013a) and convergent validity with congruent behavioral measures that measure emotion-processing abilities, such as identifying affect via facial expressions (Flynn and Rudolph 2010, 2014). In the present study, the ECQ scores also showed acceptable internal consistency ($\alpha = .81$).

Peer Victimization

The Social Experiences Questionnaire (SEQ; Crick and Grotpeter 1996) is a self-report measure used to assess two types of peer victimization (overt and relational) and peer social support. Only the relational peer victimization subscale of the SEQ was included in the longitudinal study; therefore, analyses were conducted using only the relational peer victimization subscale. This subscale consists of six items to measure the frequency with which adolescents feel peers attempted to harm their relationships with others (i.e., “A teen told lies about you to make other teens not like you anymore”). Participants were asked how often they experienced each type of event since the Time 1 assessment on a 5-point Likert scale, ranging from 1 (*once*) to 5 (*daily or almost daily*). Relational peer victimization frequency scores were created separately by summing the frequency scores (ranging from 1 to 5) of each victimization item, with total scores ranging from 5 to 25. The SEQ was found to be internally consistent and have good test–retest reliability for use with adolescents (Storch et al. 2005). In the present study, internal consistency for scores of the SEQ relational peer victimization subscale was $\alpha = .86$.

Depressive Symptoms

The Children’s Depression Inventory (CDI; Kovacs 1985) is a self-report measure of current depressive symptoms (i.e. over the past 2 weeks) for children and adolescents ages 7–17. The questionnaire consists of 27 items that assess cognitive, behavioral, and affective depressive symptoms, which are scored from 0 to 2. Higher scores on the CDI indicate higher levels of depressive symptoms. The CDI is the most widely used self-report measure to assess depressive symptoms in youth, and has good validity and reliability (Klein et al. 2005). Internal consistency for the CDI scores in the current study was $\alpha = .85$ at baseline and $\alpha = .86$ at follow-up.

Anxiety Symptoms

The Multidimensional Anxiety Scale for Children (MASC; March et al. 1997) is a 39-item self-report questionnaire assessing anxiety symptoms among children and adolescents. The MASC assesses physiological symptoms of anxiety (e.g., tenseness, restlessness, heart racing), social anxiety (e.g., fear of evaluation by others; performance fears), harm avoidance (e.g., perfectionism), and separation anxiety (fear of separation from parents). Adolescents responded to each item on a 4-point Likert scale with response options ranging from 1 (*never*) to 4 (*often*). All items were summed for a total score of anxiety symptoms, with higher scores indicating greater symptom levels. The MASC has been demonstrated to have excellent retest and internal reliability, and good convergent and discriminant validity (Baldwin and Dadds 2007; March et al. 1997; March and Albano 1998). The MASC scores in the present study showed good internal consistency at baseline and follow-up ($\alpha = .86$ and $.87$, respectively).

Results

Descriptive Statistics

Table 1 presents bivariate correlations between primary study variables. As expected, baseline depressive symptoms were significantly correlated with baseline anxiety symptoms, peer victimization, and follow-up depressive symptoms. In addition, baseline anxiety symptoms were significantly correlated with peer victimization and follow-up depressive and anxiety symptoms. Emotional clarity was significantly negatively correlated with peer victimization, as well as baseline and follow-up depressive and anxiety symptoms.

Table 2 presents descriptive statistics for primary study variables for the overall sample and by sex. Analyses also

were conducted to determine whether study variables differed by demographics, including sex, race, and socioeconomic status (*t* statistics and effect sizes by sex are presented in Table 2). Girls reported greater peer victimization, and anxiety symptoms at baseline and follow-up, and depressive symptoms at follow-up (Table 2). In addition, youth who were not eligible for subsidized school meals (i.e., greater socioeconomic status) reported greater anxiety symptoms than those who were eligible for subsidized meals. Thus, socioeconomic status was included as covariate when predicting to anxiety symptoms. There were no other significant differences on sex, race, or socioeconomic status for primary study variables (emotional clarity, peer victimization, and symptoms of depression and anxiety at baseline or follow-up).

Moderation Analyses

To test our first hypothesis that deficits in emotional clarity would contribute to peer victimization among adolescent girls more strongly than boys, we conducted moderation analyses using the PROCESS macro in SPSS, which is a computational tool that can conduct moderation and mediation procedures (Hayes 2012). Specifically, moderational analyses were used to test whether the effect of emotional clarity on peer victimization was dependent on different levels of the moderating variable (i.e., girls versus boys). Emotional clarity was mean-centered prior to analyses. First, baseline depressive and anxiety symptoms were entered as covariates to determine the effects of emotional clarity on peer victimization independent of these related variables. Second, emotional clarity was entered as the independent variable and sex (dichotomous) as the moderating variable. Third, relational peer victimization served as the outcome variable.

Consistent with hypotheses, analyses indicated that there was not a main effect of emotional clarity on peer victimization. However, there was a significant interaction

Table 1 Bivariate correlations between primary study variables

Measure	1	2	3	4	5	6	7
1 Sex	–	–.06	.09	.11*	.13*	.11*	.11*
2 T1 EC		–	–.36***	–.25***	–.13*	–.23***	–.08
3 T1 CDI			–	.34***	.23***	.56***	.04
4 T1 MASC				–	.11*	.22***	.34***
5 T2 PV					–	.38***	.30***
6 T2 CDI						–	.15**
7 T2 MASC							–

T1 baseline, T2 follow-up, EC emotional clarity, CDI children’s depression inventory, MASC Multidimensional Anxiety Scale for Children, PV peer victimization

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 2 Descriptive statistics and sex differences in study variables

Measure	Overall sample		Boys		Girls		Sex difference		Cohen's <i>d</i>
	<i>M</i>	SD	<i>M</i>	SD	<i>M</i>	SD	<i>t</i>		
<i>Baseline</i>									
EC	24.83	4.19	25.11	4.08	24.59	4.28	1.16		.12
CDI	6.99	6.18	6.38	5.17	7.53	6.93	1.79		.19
MASC	40.42	14.41	38.72	13.50	41.92	15.04	2.10*		.22
<i>Follow-up</i>									
PV	1.88	3.37	1.40	2.83	2.30	3.73	2.56*		.27
CDI	6.04	5.86	5.38	5.08	6.62	6.43	2.03*		.21
MASC	31.07	17.43	28.98	16.43	32.91	18.10	2.14*		.23

EC emotional clarity, CDI children's depression inventory, MASC Multidimensional

Anxiety Scale for Children, PV peer victimization

* $p < .05$; ** $p < .01$;

*** $p < .001$

between emotional clarity and sex predicting peer victimization ($t = -2.40$, $p = .02$). We also probed the conditional effect of emotional clarity on peer victimization at each level of the moderator (i.e., simple slopes) using the PROCESS macro, which also provided data for visualizing the interaction. Our results indicated that lower levels of emotional clarity predicted greater peer victimization among adolescent girls ($t = -2.31$, $p = .02$), but not boys ($t = 1.01$, $p = .31$; Fig. 1). Thus, deficits in emotional clarity predicted greater relational peer victimization among adolescent girls, but there was no relationship between emotional clarity and peer victimization among adolescent boys.

Mediated Moderation Analyses

Our next hypothesis was to extend the findings of our first hypothesis to determine whether the interaction between sex and deficits in emotional clarity would predict prospective levels of depressive and anxiety symptoms via peer victimization, when controlling for initial depressive and anxiety symptoms. To test these hypotheses, we employed mediated moderation analyses with bootstrapping

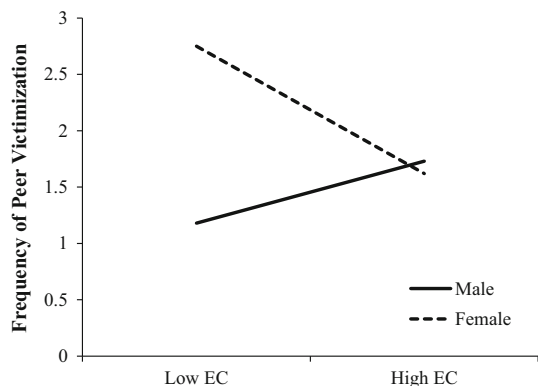


Fig. 1 Low emotional clarity predicts peer victimization among adolescent girls. * $p < .05$; ** $p < .01$; *** $p < .001$; EC emotional clarity

using the PROCESS macro in SPSS (Hayes 2012; Preacher and Hayes 2008). Specifically, PROCESS was used to determine whether the significance of the indirect effects of emotional clarity on internalizing symptoms via peer victimization would differ for girls versus boys. We also included bootstrapping, in which sampling distributions of indirect effects are created by taking a sample (with replacement) of size *N* from the full data set and calculating the indirect effects in the resamples, with a 95 % confidence interval and *N* = 5000 bootstrap resamples (Preacher and Hayes 2008). Baseline depressive and anxiety symptoms were covaried when predicting to peer victimization and follow-up depressive and anxiety symptoms, respectively.

All results were consistent with our hypotheses. Peer victimization mediated the moderated effect of emotional clarity and sex on prospective levels of depressive symptoms (indirect effect = -0.09 , 95 % CI -0.19 to -0.02) and anxiety symptoms (indirect effect = -0.29 , 95 % CI -0.56 to -0.08). Specifically, adolescent girls with deficits in emotional clarity experienced greater levels of peer victimization, which, in turn, contributed to greater prospective levels of depressive and anxiety symptoms. However, this relationship was not significant for adolescent boys. Tables 3 and 4 present the direct effects and conditional indirect effects by sex from the models for depression symptoms and anxiety symptoms, respectively.

Discussion

Adolescence is a crucial transitional period characterized by dramatic changes in physical, cognitive, and emotional development (Steinberg 2005), as well as an increasing reliance on peer relationships (Brown and Larson 2009). Given the importance of understanding one's emotions in the successful navigation of social relationships (Salovey et al. 2002), the goal of the present study was to examine whether adolescents with deficits in emotional clarity were

Table 3 Mediated moderation testing peer victimization as a mediator of the relationship between the emotional clarity × sex interaction on depressive symptoms

Measure	DV: follow-up peer victimization		DV: follow-up depressive symptoms	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Baseline EC	0.06	0.06	0.04	0.09
Sex (0 = male)	5.67**	2.09	2.84	3.04
EC × sex	−0.20*	0.08	−0.10	0.12
Baseline depression	0.11***	0.03	0.46***	0.04
Follow-up PV			0.47***	0.04

Conditional effect of emotional clarity on depressive symptoms through peer victimization by sex				
Level of moderator	<i>B</i>	<i>SE</i>	<i>Lower CI</i>	<i>Upper CI</i>
Girls	−0.06	0.03	−0.14	−0.01*
Boys	0.03	0.03	−0.01	0.10

Confidence intervals that do not contain 0 are significant

DV dependent variable, EC emotional clarity, PV peer victimization

* $p < .05$; ** $p < .01$; *** $p < .001$; R^2 for follow-up peer victimization = .08, $p < .001$; R^2 for Follow-up depression symptoms = .38, $p < .001$

Table 4 Mediated moderation testing peer victimization as a mediator of the relationship between the emotional clarity × sex interaction on anxiety symptoms

Measure	DV: follow-up peer victimization		DV: follow-up anxiety symptoms	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Baseline EC	0.03	0.07	0.13	0.23
Sex (0 = male)	5.43**	2.18	5.06	7.84
EC × Sex	−0.19*	0.08	−0.14	0.31
Baseline anxiety	0.02	0.01	0.53***	0.05
SES (0 = not eligible)	−0.20	0.01	−2.00	.04
Follow-up PV			0.65***	0.19

Conditional effect of emotional clarity on anxiety symptoms through peer victimization by sex				
Level of moderator	<i>B</i>	<i>SE</i>	<i>Lower CI</i>	<i>Upper CI</i>
Girls	−0.10	0.05	−0.24	−0.03*
Boys	0.02	0.04	−0.04	0.11

Confidence intervals that do not contain 0 are significant

DV dependent variable, EC emotional clarity; SES socioeconomic status, PV peer victimization

* $p < .05$; ** $p < .01$; *** $p < .001$; R^2 for follow-up peer victimization = .05, $p < .001$; R^2 for Follow-up anxiety symptoms = .35, $p < .001$

particularly vulnerable to experiencing relational peer victimization and its psychological consequences. In particular, we hypothesized that emotional clarity deficits would predict relational peer victimization among girls more strongly than among boys. In addition, our second hypothesis was that the effects of emotional clarity, especially for girls, on peer victimization would result in greater prospective levels of depressive symptoms and anxiety symptoms.

Overall, our results supported all of our hypotheses, such that emotional clarity deficits predicted greater levels of relational peer victimization among adolescent girls, but not boys, which, in turn, predicted greater prospective levels of internalizing symptomatology. Specifically, our findings suggest that adolescent girls may be particularly vulnerable to being the target of relational peer victimization if they have difficulty understanding their emotional experiences. However, our results indicate that adolescent

boys with such deficits may not be at heightened risk for relational peer victimization, which suggests that such deficits may create unique difficulties for adolescent girls. Although self-awareness and understanding of emotions may be important for all adolescents to cope with stress (Flynn and Rudolph 2014) and successfully manage negative emotions (Ciarrochi et al. 2001), this may be especially important for girls during the adolescent period. In particular, it is possible that adolescent girls who have greater difficulty understanding their emotions have greater trouble navigating the complex social environment characteristic of adolescence. For instance, given the focus of female friendships on emotional intimacy and expression (Chaplin and Aldao 2013), girls with deficits in emotional clarity may have fewer female friendships and spend more time with male peers (Roswell et al. 2014). Consequently, these girls may be socially excluded or gossiped about by peers, particularly if viewed as competition or a threat for fraternizing with boys. On the other hand, emotional clarity may not be as crucial for male relationships because of the reduced reliance and expectation about emotional communication for boys (Legerski et al. 2015). Therefore, deficits in emotional clarity among boys may have limited influences on male friendships (Roswell et al. 2014) and on being the target of relational victimization as indicated by the present study. However, it will be important for future research to evaluate *why* emotional clarity is particularly important for adolescent girls and the processes through which deficits in emotional clarity disrupt normative adolescent social development and adjustment.

The results of the present study also suggest that adolescent girls with deficits in emotional clarity who are victimized by peers are at subsequent risk for symptoms of depression and anxiety. In this sense, deficits in emotional clarity could confer a double (or even triple) risk for these adolescents: first, by increasing the likelihood of experiencing peer victimization; second, by increasing engagement in maladaptive responses to peer victimization (Flynn and Rudolph 2014); and third, by increasing the experience of negative emotional experiences, such as depressive and anxiety symptoms, for which they then may have further difficulty understanding. Thus, adolescent girls with deficits in emotional clarity may experience a vicious cycle of risk for maladjustment during a vulnerable developmental period. Consequently, targeting emotional clarity during early adolescence may be important to prevent the occurrence or perception of relational victimization and its sequelae. Particularly given research on the long-term consequences of emotional awareness deficits in middle school on female friendships at the end of high school (Roswell et al. 2014), early adolescent girls with deficits in emotional clarity may continue to be the target of relational peer victimization throughout high school. This continued

victimization could yield even more detrimental consequences for maladjustment during mid-and late- adolescence (e.g., Boivin et al. 2010).

Despite the contribution of the present study to research on emotional clarity and risk for peer victimization and internalizing symptoms among girls, the present study could be extended to the examination of other possible mechanisms through which emotional clarity deficits contribute to relational peer victimization. For example, several studies have found that youth with deficits in emotional clarity experience more negative mood states (Fernandez-Berrocal et al. 2006), and engage in more rumination (Vine et al. 2014), which also increase the risk of relational peer victimization (Shapiro et al. 2013). Further, those who experience peer victimization have been found to use less effective coping methods (Troop-Gordon et al. 2014). Thus, it may be that emotional clarity (especially for girls) leads to relational peer victimization through other affective processes and important self-regulation skills (Buckley and Saarni 2009), such as emotion dysregulation or emotional reactivity. Although the present study only evaluated emotional clarity, it is very possible that youth with deficits in emotional clarity possess other vulnerabilities that heighten the risk of peer victimization, and subsequent levels of depressive and anxiety symptoms. Future research should evaluate these other affective processes, as well as known cognitive vulnerabilities that increase the risk of peer victimization (Hamilton et al. 2013b), to better understand the relationship between these vulnerabilities and explore potential mechanisms through which emotional clarity contributes to peer victimization and psychopathology.

Our findings also add to the extant literature on emotional clarity and stress generation in several ways. First, our findings show that emotional clarity is not only related to maladaptive responses to stress (Flynn and Rudolph 2014), but to experiencing relational peer victimization and its negative psychological sequelae. This is the first study to our knowledge to examine emotional clarity in the prospective occurrence of relational peer victimization, and to find that it may have damaging consequences specific to adolescent girls. Studying affective vulnerabilities such as emotional clarity as predictors of stress generation is important because affective vulnerabilities precede the onset of symptoms of psychopathology. However, it is also important to extend these findings to other affective vulnerabilities and processes that may be more proximally related to peer victimization. On the other hand, identifying a potentially more distal risk factor, such as deficits in emotional clarity, allows for a malleable target of early intervention programs. Second, by examining a mediated moderation model, we were able to demonstrate that stress generation (i.e., relational peer victimization in the present

study) mediated the prospective relationship between deficits in emotional clarity and internalizing symptoms. Third, this study highlights the importance of studying specific types of stress generation. Whereas the original research on stress generation examined self-generated stressors as a relatively broad category, this study joins a handful of others that examine risk factors for specific categories of stress generation, specifically the detrimental events of relational peer victimization (e.g., Hamilton et al. 2013a). Such models allow for the possibility that certain vulnerabilities may only contribute to certain types of stressors (Liu et al. 2014), which also help facilitate the development of specific prevention programs. This study also highlights the importance of examining sex differences in stress generation and affective vulnerability. Although levels of emotional clarity did not differ between girls and boys, emotional clarity deficits only led to relational peer victimization and subsequent depressive and anxiety symptoms among adolescent girls, which highlights the importance of emotional clarity in female adolescent development.

The present study had a number of important strengths, including the use of a community sample of racially-diverse adolescents, a semi-prospective design, and examined a potentially important process in the experience of relational peer victimization and internalizing symptoms during a unique period of development and risk for psychopathology. However, it is important to note that there were relatively low levels of depressive and anxiety symptoms in the current community sample. Despite the low base rate of these variables, the negative effects of peer victimization were evident and it is important to examine vulnerabilities for peer victimization among adolescents who have not yet developed more serious psychopathology. Nevertheless, despite the importance of examining these constructs in community samples, the generalizability of our findings is limited because they may not apply to other samples with higher rates of peer victimization or psychopathology.

There are several other limitations that should be noted. First, we utilized self-report measures of internalizing symptoms, emotional clarity, and peer victimization. Although adolescents may be the best reporters of their emotional experiences (Haefel and Howard 2010), adolescents with deficits in emotional clarity may have biased interpretations or perceptions of peer victimization influencing the reporting of these events. In addition, it may be problematic to have adolescents reporting their own emotional clarity during an emotionally turbulent time. However, most studies evaluating components of emotional intelligence have relied on self-report measures to tap these constructs (Ciarrochi et al. 2001), and research indicates that the perception of being victimized or of

lacking emotional clarity may be just as important in contributing to maladjustment as more objective indicators (Ciarrochi et al. 2001; Paul and Cillessen 2003). However, it will be important to replicate our findings using interview-based measures of emotional clarity, internalizing symptoms, and a multi-observer approach in the assessment of peer victimization. Second, we did not include the overt victimization subscale of the measure of peer victimization in the larger Adolescent Cognition and Emotion Project, so we were unable to determine whether the effects of emotional clarity are specific to relational victimization or generalize to overt victimization as well. Future studies are needed that evaluate these effects in relation to both relational and overt victimization to examine the specificity of the observed findings. Third, we did not control for prior levels of peer victimization that may have occurred prior to Time 1. This would be helpful in parsing out potential bidirectional effects of peer victimization and emotional clarity. In addition, our sample only included adolescents who were ages 12–13 at baseline; thus, we were unable to explore whether the effects of emotional clarity on peer victimization and internalizing symptoms varied as a function of age. These findings should be investigated in a sample with greater developmental variability.

Conclusions

Our findings indicate that deficits in emotional clarity contributed to greater levels of relational peer victimization among adolescent girls, but not boys. Further, adolescent girls with deficits in emotional clarity who are relationally victimized by peers are then at risk for subsequent depressive and anxiety symptoms. Overall, our findings highlight the importance of targeting emotional clarity for prevention and intervention of peer victimization and internalizing symptoms, particularly among adolescent girls. First, there are several broader approaches that can be taken to address widespread prevention. For example, the implementation of workshops for adolescents (particularly girls) to better identify and understand their emotions in school contexts may help to prevent relational peer victimization as well as subsequent anxiety and depression. Our findings suggest that existing programs that teach emotional intelligence to youth should consider the importance of focusing on emotional clarity among girls during the socially and emotionally challenging period of adolescence (Brackett and Katulak 2007). Helping facilitate the development of emotional clarity during this time and teaching girls how to supportively respond to others' emotions (even without having complete emotional clarity of their own) might promote greater emotional intimacy, understanding, and positive female friendships for

girls at risk (Legerski et al. 2015). It is important to note, however, that focusing on emotions without sufficient clarity could result in a ruminative thought process with the unintended effect of prolonging and intensifying dysphoric mood (Ramos et al. 2007). Thus, it is important not to focus on attention to emotions, without improving overall clarity of emotions. Further, another possibility is to target emotional clarity deficits with a mindfulness-based approach for individuals (Erisman and Roemer 2010) and groups (Broderick and Metz 2009; Creswell et al. 2007; Lieberman et al. 2007). A recent study indicated that incorporating mindfulness improves perspective-taking, empathy, and emotional control among youth (Schonert-Reichl et al. 2015), as well as emotional intelligence (Ciarrochi et al. 2007). Likewise, it is possible that mindfulness may help improve emotional clarity specifically as well. Thus, clinicians, educators, and parents should work collaboratively to teach emotional clarity to adolescent girls to prevent a vicious cycle of peer victimization and internalizing symptoms.

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Author contributions JLH conceived of the study, participated in its design and coordination, and drafted the manuscript; EMK participated in the interpretation of the data and helped draft the manuscript; LMR participated in drafting the manuscript; JPS assisted with the study conception and participated in the statistical analyses; MF performed a critical review of the manuscript and assisted with interpretation of the findings; LYA assisted with the design and coordination of the study; LBA participated in the design of the study, interpretation of the data, and helped to draft the manuscript. All authors read and approved the final manuscript.

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