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It Gets Better: Future Orientation Buffers the Development of Hopelessness and Depressive Symptoms following Emotional Victimization during Early Adolescence

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Abstract Research consistently has linked hopelessness to a range of negative outcomes, including depression, during adolescence. Although interpersonal stressors such as familial and peer emotional victimization have been found to contribute to hopelessness, less research has examined whether adolescents with a greater tendency to think about and plan for the future (i.e., future orientation) are protected against the development of hopelessness, particularly in the context of negative events. Thus, the current study evaluated whether peer and familial emotional victimization predicted increases in hopelessness more strongly among adolescents with a weaker future orientation than those with a stronger orientation towards the future, and whether hopelessness in turn predicted increases in depression. In a diverse sample of 259 early adolescents (54 % female; 51 % African American; M_{age}= 12.86 years), both peer and familial emotional victimization predicted increases in hopelessness more strongly among adolescents with weaker future orientations than among those with stronger future orientations. Further, moderated mediation analyses revealed that hopelessness significantly mediated the relationship between emotional victimization and increases in depressive symptoms more strongly among adolescents with weaker orientations towards the future compared to those with stronger future orientations. These findings indicate that adolescents' tendency to think about the future may impact whether emotional victimization induces hopelessness and ultimately depressive symptoms during early adolescence. Results have important implications regarding intervention and prevention of depression during the critical developmental period of adolescence.

Keywords Depression · Adolescence · Hopelessness · Future orientation · Victimization

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Adolescence is a critical period during which individuals are at increased risk for the onset of depression and increases in depressive symptoms (Hankin et al. 1998), which is considered to be one of the most debilitating mental disorders among adolescents and adults (Kessler et al. 2005). Cognitive theories of the etiology of depression have focused on the role of hopelessness, which is defined as the expectation that negative events will happen in the future and the belief in one's helplessness to affect these outcomes (Abramson et al. 1989). Consistent with theory, empirical research has documented that hopelessness is associated with depressive disorders (Young et al. 1996), and prospectively predicts increases in depressive symptoms (Hamilton et al. 2013; Joiner et al. 2005). Understanding factors that heighten the risk of hopelessness is important for identifying individuals at risk and targeting these maladaptive cognitions during adolescence.

Emotional Victimization

Negative life events have long been theorized to contribute to hopelessness among youth (Rose and Abramson 1992). The developmental extension of the hopelessness theory (Rose and Abramson 1992) proposes that individuals make benign attributions following the occurrence of negative events, but

the repeated occurrence of negative events make these attributions difficult to maintain. Consequently, individuals may develop negative attributional styles, which over time result in greater levels of hopelessness. Further, it was theorized that events that threaten an individual's self-esteem or self-worth or directly provide an individual with negative attributions, such as teasing, bullying, or rejection, would be the most likely to contribute to the development of hopelessness (Rose and Abramson 1992). A number of studies have supported this theory, indicating that emotional victimization by peers or family predicts more negative attributional styles (Gibb 2002; Gibb et al. 2006) and greater levels of hopelessness (Hanley and Gibb 2011) among children.

During the adolescent years, individuals are particularly vulnerable to the effects of emotional victimization by peers. Peer relationships assume a newfound importance during adolescence, as individuals rely more on social comparisons and feedback from peers for self-esteem and identity development (Brown and Larson 2009; Furman and Buhrmester 1992). Thus, being the victim of social exclusion, gossip, or a threatened reputation (i.e., peer emotional victimization) may be particularly damaging among adolescents (Prinstein and Cillessen 2003). Numerous studies have documented that peer emotional victimization prospectively predicts increases in negative attributional styles (Gibb and Abela 2008; Gibb et al. 2012) and depressive symptoms among children and early adolescents (e.g., Desjardins and Leadbeater 2011; Prinstein et al. 2001). Less research has focused on peer emotional victimization as a predictor of hopelessness. A recent study by Siyahhan et al. (2012) found that adolescents who were victimized by peers experienced higher levels of hopelessness than those who were not.

Although peer emotional victimization may confer significant risk for the development of hopelessness among adolescents, familial emotional victimization also has been found to predict maladaptive outcomes among youth. Most research to date has focused on familial emotional maltreatment during childhood (e.g., Courtney et al. 2008; Gibb et al. 2006, 2007; Hankin 2005); however, several recent studies documented that familial emotional victimization (i.e., emotional abuse) has negative consequences during adolescence (Hamilton et al. 2013; Liu et al. 2009). Given that familial relationships continue to exert an influence on adolescents' lives during these vulnerable years (for a review, see Collins and Steinberg 2006), it is no surprise that emotional victimization by family members contributes to increases in depressive symptoms among early adolescents (Hamilton et al. 2013). To date, only one known study has examined the effects of verbal victimization by family and peers on hopelessness, finding that children who are subject to such verbal victimization experience greater increases in hopelessness than those who are not (Hanley and Gibb 2011).

Future Orientation

Although research is beginning to evaluate contextual predictors of hopelessness among youth, less research has focused on the role of executive functions in the development of hopelessness. During the adolescent years, the prefrontal cortex continues to mature, strengthening adolescents' tendencies to engage in complex, abstract thought (Anderson 2002; Luna et al. 2004; Paus 2005). Of particular relevance to the concept of hopelessness is future orientation, defined as the extent to which an individual thinks about the future, anticipates future consequences, and plans ahead before acting (Steinberg et al. 2009). Although future orientation generally increases across adolescence, there are significant variations in individuals' abilities to orient towards the future (Steinberg et al. 2009). Consequently, it remains unclear what effect the strength of an adolescent's future orientation may have on the development of hopelessness, particularly in the context of stressful events such as verbal victimization and relational peer victimization that are known to contribute to hopelessness.

Although it has been theorized that adolescents may not be able to feel hopeless about a future which they do not think about, anticipate, or plan ahead (Alloy and Abramson 2007; Alloy et al. 2006), recent research indicates that greater orientation towards the future may be a protective factor against depression and suicide-related behaviors (Chang et al. 2013; Chin and Holden 2013; Hirsch et al. 2007). Specifically, several studies have found that individuals with greater future orientation, especially in conjunction with optimism, experience decreases in hopelessness, depressive symptoms, and suicidal ideation (Chang et al. 2013; Hirsch et al. 2007). Further, Chin and Holden (2013) found that greater future thinking and planning buffered against the effects of hopelessness and depressive symptoms on suicidal motivation and preparation. Interestingly, individuals' tendencies for future thinking and planning were significantly associated with optimism in this study (Chin and Holden 2013), which suggests that those who tend to think about the future also may be optimistic and more likely to envision a better future. In the context of stressful life events, it may be that individuals who tend to think about the future are able to see past the current environment of emotional victimization by family or peers and disengage from thinking or ruminating about the present circumstances. In contrast, adolescents with weaker future orientations might not think about the future and therefore might not tend to envision a future that could be different from the present. In this sense, adolescents who tend not able to think about or plan for the future might not imagine a future in which they are not being victimized, thus contributing to beliefs of hopelessness and subsequent depressive symptoms.

The Present Study

To date, no known study has examined the relationship between future orientation and hopelessness and depressive symptoms in the context of the occurrence of stressful events. Thus, the current study examined whether weaker orientation towards the future would increase the risk of hopelessness following emotional victimization, and whether greater hopelessness prospectively predicted increases in depressive symptoms. Given that stronger future orientation has been found to be a protective factor against hopelessness and depression (Chin and Holden 2013), we hypothesized that weaker orientation towards the future would amplify the effects of emotional victimization in increasing hopelessness, and that hopelessness, in turn, would contribute to increases in depressive symptoms among adolescents.

Method

Participants

The study sample was drawn from the Adolescent Cognition and Emotion (ACE) Project, an ongoing prospective, longitudinal study of risk factors for the emergence of depression in adolescence. Caucasian and African American early adolescents (i.e., ages 12 to 13) and their mothers or primary female caregivers were recruited from Philadelphia-area public and private middle schools. Recruitment was conducted through two methods: (i) school mailings and follow-up phone calls inviting the mother/primary female caregiver and her adolescent child to participate (accounting for approximately 68 % of the sample); and (ii) through advertisements in Philadelphia-area newspapers (approximately 32 % of the sample). The eligibility criteria included: (i) the adolescent child was 12 or 13 years old, (ii) the adolescent child self-identified as Caucasian/White, African American/Black, or Biracial, and (iii) the mother/primary female caregiver also agreed to participate in the study. One of the larger goals of this longitudinal study was to examine potential racial differences in the emergence of depression during adolescence; thus, adolescents who self-identified as Hispanic or non-Hispanic were only eligible if they also self-identified as White or Black. Exclusion criteria consisted of: (i) the absence of a mother/primary female caregiver, (ii) either the adolescent's or mother/primary female caregiver's English reading or speaking level was insufficient to complete study assessments, and (iii) either the adolescent or mother/primary female caregiver was psychotic, mentally retarded, or had a pervasive developmental disorder or severe learning disability (for further details, see Alloy et al. 2012).

The sample in the current study consisted of 259 early adolescents (M_{age}=12.86, SD=0.60) who completed the baseline assessment (Time 1) and two consecutive follow-up assessments (Times 2 and 3). In the current sample, 54 % of the adolescents were female, 51 % were African American, and 42 % were eligible for subsidized lunch, which is an indicator of socioeconomic status (SES). Overall, 22.30 % of participants had less than $30,000 annual family income, 33.20 % fell between $30,000–$59,999, 19.90 % fell between $60,000–$89,999, and 24.60 % had above $90,000 in annual family income.

Procedures

Participants were assessed at three time-points separated by approximately 9 months (M=275.76 days; SD=76.09). Nine-month interval assessments were designed to provide sufficient time to capture negative life events, as well as changes in levels of hopelessness and depressive symptoms during the early adolescent years (Hankin 2012). At Time 1, adolescents completed a measure of depressive symptoms, hopelessness, and future orientation. At Time 2, they again reported on beliefs of hopelessness, peer emotional victimization, and familial emotional victimization. Finally, at Time 3, participants again filled out a measure of depressive symptoms.

Measures

Depressive Symptoms

The Children's Depression Inventory (CDI; Kovacs 1985) was used to assess current depressive symptoms in adolescents. This self-report measure consisted of 27 items, each scored on a scale ranging from 0 to 2. Items were summed, with higher scores indicative of greater symptom severity. There was a wide range of depressive symptoms in the current sample (CDI scores ranged from 0 to 44); 13.8 % of early adolescents had clinically significant depressive symptoms (greater than 13 on the CDI) at Time 1 and 9.6 % at Time 3. Cronbach's α for Time 1 and Time 3 was 0.85 and 0.88, respectively.

Future Orientation

The Future Orientation Scale (FOS; Steinberg et al. 2009) served as a measure of the degree to which adolescents tended to perceive, anticipate, and plan for the future. This instrument was structured following a format developed by Harter (1982) so as to minimize socially desirable responding. Specifically, adolescents were presented with a series of pairs of contrasting statements with the word "BUT" between them, and were asked to select the statement that best described them. After selecting the best self-describing statement, they were then asked to indicate whether the selected descriptor was *really true* or *sort of true* Responses for each pair of statements were

then coded on a 4-point Likert scale, ranging from *really true* for one descriptor to *really true* for the contrasting descriptor (e.g., "Some people like to think about all the possible good and bad things that can happen before making a decision BUT Other people don't think it's necessary to think about every little possibility before making a decision"). Items were scored in such a way that higher summary scores indicated greater future orientation. The internal consistency of this measure in the current sample was adequate (Cronbach's α=0.74), and the FOS has been found to have adequate validity (Steinberg et al. 2009).

Hopelessness

The Hopelessness Scale for Children (HSC; Kazdin et al. 1986) was used to measure current beliefs of hopelessness. For this measure, adolescents completed 17 true or false questions ("When things are going badly, I know that they won't be bad all of the time"; "I never get what I want, so it's dumb to want anything."). Higher total summary scores on this scale were reflective of greater beliefs of hopelessness. The HSC has demonstrated adequate validity and internal consistency (Spirito et al. 1988). In the current sample, Cronbach's α at Time 1 and Time 3 was α=0.70 and 0.73, respectively.

Familial Emotional Victimization

The emotional abuse subscale of the Childhood Trauma Questionnaire (CTQ; Bernstein et al. 2003) was used to assess adolescents' experience of emotional abuse. Item response options for this measure fell on a 5-point Likert scale (from 1=*Never true* to 5=*Very often true*). Items included "People in my family called me things like 'stupid,' 'lazy,' or 'ugly'" for familial emotional victimization. This questionnaire assessed levels of emotional abuse since the Time 1 assessment. Higher scores for each subscale reflect greater severity. Internal consistency in the current study was adequate (Cronbach's α=0.74).

Peer Emotional Victimization

The Social Experiences Questionnaire-Self-Report (SEQ-S; Crick and Grotpeter 1996) is a measure of adolescents' experiences of being the target of aggressive acts by peers. For the purposes of the current study, the relational peer victimization subscale was used, and included items reflecting both relational (e.g., "others left you out") and reputational (e.g., "other teens told lies about you to make other teens not like you anymore") victimization experienced since the Time 1 assessment. Item responses were on a 6-point Likert scale (from 0=*Never* to 5=*Daily or almost daily*). In the current study, Cronbach's α=0.71.

Results

Descriptive Analyses

Descriptive statistics and bivariate correlations for the overall sample are presented in Table 1. Analyses were conducted to determine if primary outcome variables were associated with sex, race, and SES. At Time 1, sex differences were evident on depressive symptoms (t=2.03, p<0.05), with adolescent girls reporting more depressive symptoms than boys, but there were no sex differences in levels of future orientation (t=0.26, p=0.80) or hopelessness (t=0.51, p=0.61). However, there were racial differences in levels of future orientation (t=2.08, p<0.05), with African American adolescents reporting higher levels than Caucasians. At Time 2, adolescent girls reported significantly more peer emotional victimization (t=2.48, p<0.05), familial emotional victimization (t=2.00, p<0.05), and hopelessness (t=2.59, p<0.01) than boys. Caucasian adolescents also reported more peer emotional victimization than African American adolescents (t=2.45, p<0.05), but not more familial emotional victimization, hopelessness, or depressive symptoms. Additionally, at Time 3, there were sex differences in levels of depressive symptoms (t=2.92, p<0.01). There were no

Table 1 Descriptives and bivariate correlations between primary study variables

	Measure	1	2	3	4	5	6	7
1	T 1 HSC	–	0.33***	−0.14*	0.11	0.06	0.28***	0.15*
2	T 1 CDI		–	−0.13*	0.34***	0.20**	0.20*	0.39***
3	T 1 FOS			–	−0.13*	−0.15*	−0.17**	−0.05
4	T 2 FEV				–	0.36***	0.22***	0.39***
5	T 2 PEV					–	0.16**	0.34***
6	T 2 HSC						–	0.32***
7	T 3 CDI							–
	Mean (SD)	3.06 (2.17)	6.78 (5.83)	2.72 (0.44)	7.77 (3.46)	1.96 (3.41)	2.74 (2.11)	6.01 (6.06)

T1 Time 1; *T2* Time 2; *T3* Time 3; *HSC* Hopelessness Scale for Children; *CDI* Children's Depression Inventory; *FOS* Future Orientation Scale; *FEV* Familial Emotional Victimization; *PEV* Peer Emotional Victimization

*p<0.05, **p<0.01, ***p<0.001

significant differences on any study variables between individuals with lower and higher socioeconomic status (eligibility for subsidized school lunch).

As expected, Time 1 and Time 3 depressive symptoms were positively correlated with each other, and both were positively correlated with Time 2 familial and peer emotional victimization, and hopelessness at Times 1 and 2. Additionally, familial and peer victimization were positively correlated with each other, Time 2 hopelessness, and negatively correlated with future orientation. Further, Time 1 hopelessness was correlated with Time 2 hopelessness and negatively associated with future orientation.

Prospective Analyses

To examine whether future orientation moderated the effects of emotional victimization by family and peers on prospective increases in hopelessness, two hierarchical multiple linear regressions were conducted. In these analyses, sex, age, and initial levels of hopelessness were covaried in Step 1. The main effects of future orientation and peer emotional victimization or familial emotional victimization were entered in Step 2, and the interaction term between future orientation and peer or familial emotional victimization was entered in Step 3 of the regression analysis. Both measures of emotional victimization and future orientation were centered at their means prior to analyses. To probe the form of significant interactions, we tested for lower-order effects of peer or familial emotional victimization at one standard deviation above and below the mean of future orientation (Aiken and West 1991).

As hypothesized, future orientation significantly interacted with both familial and peer victimization to prospectively predict increases in hopelessness (Tables 2 and 3). The nature of this interaction was such that peer emotional victimization predicted increases in hopelessness among individuals with weaker future orientations (t=2.54, p=0.02), but not among adolescents with stronger future orientations (t=−1.12, p=0.26; Fig. 1). Similarly, familial emotional victimization predicted increases in hopelessness among adolescents with weaker future orientations (t=3.76, p<0.001), but not in those with stronger future orientations (t=0.29, p=0.77; Fig. 1).[1]

Given our diverse sample, we also tested whether any demographic variables (sex, race, SES) moderated the interactions between future orientation and emotional victimization by parents and peers in predicting hopelessness using three-way interaction terms. There were no significant moderating effects of sex, race, or socioeconomic status in predicting increases in hopelessness among early adolescents (results available upon request). Because there were no significant three-way interactions between demographic variables, future orientation, and emotional victimization predicting increases in hopelessness, we did not examine three-way interactions in our subsequent mediational analyses (Baron and Kenny 1986).

Table 2 Peer emotional victimization and future orientation interact to predict increases in hopelessness

Time 2 hopelessness						
Step	Variable	B	*SE*	*t*	ΔR^2	f^2
Step 1	T1 HSC	0.26	0.06	4.58***	0.11	0.12***
	Sex	0.64	0.25	2.62**		
	Age	0.24	0.20	1.20		
Step 2	FOS	−0.08	0.32	−0.26	0.02*	0.03*
	PEV	0.52	0.16	3.15**		
Step 3	PEV × FOS	−0.18	−0.06	−2.85**	0.03**	0.03**

Step 3 coefficients are displayed in the regression analyses

T1 Time 1; *T2* Time 2; *HSC* Hopelessness Scale for Children; *FOS* Future Orientation Scale; *PEV* Peer Emotional Victimization

*p<0.05, **p<0.01, ***p<0.001

Moderated Mediation Analyses

To examine the hypothesis that adolescents who experienced familial or peer emotional victimization and have lower levels of future orientation would experience increases in depressive symptoms via hopelessness, we employed moderated mediation analyses with bootstrapping using the PROCESS macro in SPSS (Preacher and Hayes 2008). This allowed us to test whether hopelessness would mediate the relationship between peer and familial emotional victimization and depressive symptoms more strongly among adolescents with lower levels of future orientation than among those with greater future orientation.

Consistent with our hypotheses, hopelessness significantly mediated the relationship between both familial and peer emotional victimization and prospective increases in depressive symptoms, but only among adolescents with lower levels of future orientation (Tables 4 and 5). Thus, adolescents who had lower levels of future orientation were significantly more likely to become hopeless about their future following experiences of emotional victimization by family or peers, which, in turn, predicted increases in depressive symptoms.

Discussion

Given that hopelessness is a known risk factor for depression and suicide (Thompson et al. 2005; Young et al. 1996), which

[1] To examine the unique effects of familial and peer victimization, we simultaneously examined the effects of familial and peer victimization in interaction with future orientation predicting increases in hopelessness. When examined simultaneously in the model, these interactions were not independently significant.

Table 3 Familial emotional victimization and future orientation interact to predict increases in hopelessness

Step	Variable	B	*SE*	*t*	ΔR^2	f^2
Step 1	T1 HSC	0.24	0.06	4.31***	0.11***	0.12***
	Sex	0.63	0.24	2.59*		
	Age	0.25	0.20	1.25		
Step 2	FOS	0.91	0.55	1.65	0.04**	0.04**
	FEV	0.53	0.15	3.45***		
Step 3	FEV × FOS	−0.16	0.06	−2.92**	0.03**	0.03**

Step 3 coefficients are displayed in the regression analyses

T1 Time 1; *T2* Time 2; *HSC* Hopelessness Scale for Children; *FOS* Future Orientation Scale; *FEV* Familial Emotional Victimization

*$p<0.05$, **$p<0.01$, ***$p<0.001$

dramatically increase during adolescence (Hankin et al. 1998; Hill et al. 2011), it is vital to isolate factors that contribute to hopelessness among adolescents. Adolescence is a time in which the negative effects of emotional victimization by family and peers are particularly strong (Hamilton et al. 2013; Prinstein and Cillessen 2003), and cognitive functions, such as the tendency to think abstractly and orient towards the future,

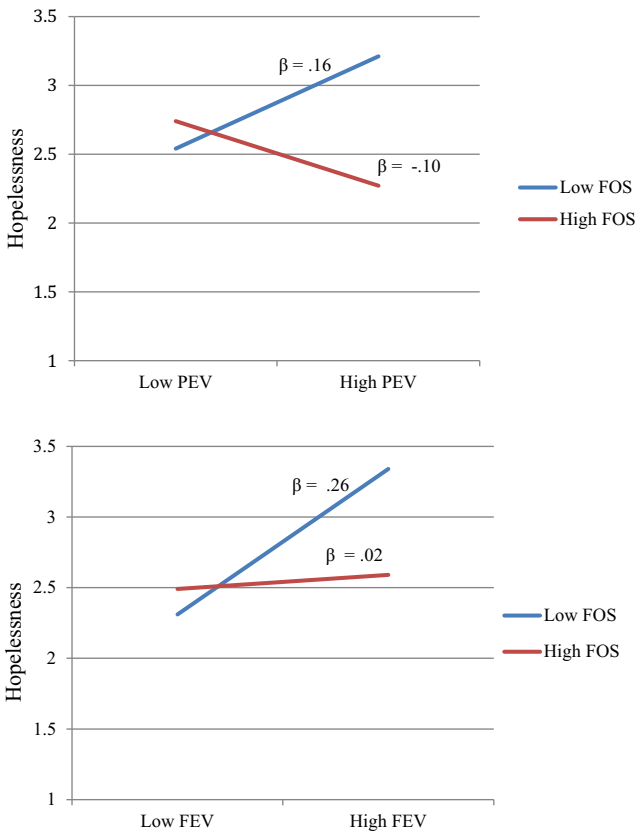

Fig. 1 Emotional victimization predicts increases in hopelessness more strongly among adolescents with weaker future orientation. *FOS* Future Orientation Scale; *FEV* Familial Emotional Victimization; *PEV* Peer Emotional Victimization

are still developing (Paus 2005; Steinberg et al. 2009). Considering this information, it is surprising that few studies have evaluated the impact of future orientation on the effect of emotional victimization by peers and family on the development of hopelessness. The present study is one of the first to demonstrate that early adolescents with a less-developed tendency to think towards the future may experience increases in hopelessness following emotional victimization, which, in turn, may place them at greater risk for increases in depressive symptoms.

Recent research has found that peer and familial emotional victimization are linked to beliefs of hopelessness during adolescence (Hanley and Gibb 2011; Siyahhan et al. 2012), and that individuals with stronger future orientation display decreased levels of depression, hopelessness, and suicidality (Chang et al. 2013; Chin and Holden 2013; Hirsch et al. 2007). However, to our knowledge, no study has attempted to integrate these theories, testing whether weaker future orientation, in combination with the experience of peer and familial emotional victimization, leads to increased hopelessness and subsequent depressive symptoms among adolescents. The current research expanded upon prior literature by testing this integrated theory using a prospective design, examining 1) the hypothesized interaction between weak future orientation and the experience of peer and familial emotional victimization in predicting increased levels of hopelessness and 2) the subsequent role of hopelessness as a mechanism through which adolescents experiencing the aforementioned vulnerabilities develop depressive symptoms. Indeed, support was found for both of these hypotheses. Specifically, the effects of peer and familial emotional victimization on subsequent levels of hopelessness were exacerbated among early adolescents with weaker future orientations compared to those with stronger orientations. Furthermore, hopelessness was found to account for increases in subsequent depressive symptoms among adolescents experiencing peer and familial emotional victimization among those who also demonstrated weak future orientations, but not those with strong future orientations. These findings provide support for the hypothesis that adolescents with less tendency to project into the future may become stuck within their current experience of victimization, leading them to become hopeless about their futures and, in turn, depressed.

Although emotional victimization previously has been demonstrated to confer risk for hopelessness and depression (Hamilton et al. 2013; Hanley and Gibb 2011), the current research advances the literature by identifying adolescents who may be particularly at risk for the hopelessness-inducing effects of emotional victimization; namely, early adolescents with a weaker future orientation. Our results have important implications from a vulnerability-stress perspective on depression development. Future orientation, formally defined as the degree to which adolescents think about the

Table 4 Hopelessness as a mediator between peer emotional victimization and depressive symptoms as moderated by future orientation

Interaction between peer emotional victimization and future orientation			
Predicting T2 Hopelessness (*a′ path*)			
Predictor	Effect	*SE*	*t*
T1 CDI	0.04	0.02	1.53
T1 HSC	0.23	0.06	3.85***
Age	0.29	0.20	1.40
Sex (female)	0.60	0.25	2.43*
T1 FOS	−0.04	0.32	−0.11
T2 PEV	0.53	0.16	3.22***
PEV × FOS	−0.19	0.06	−2.97**
R^2=0.17, F=7.25, p<0.001			
Interaction between peer emotional victimization and future orientation and hopelessness predicting CDI at T3 (*b′ path*)			
Predictor	Effect	*SE*	*t*
T1 CDI	0.33	0.06	5.43***
T1 HSC	−0.06	0.16	−0.39
Age	0.62	0.54	1.14
Sex (female)	0.93	0.66	1.41
T1 FOS	1.84	0.84	2.20*
T2 PEV	1.63	0.44	3.66***
PEV × FOS	−0.48	0.17	−2.75**
T2 HSC	0.59	0.17	3.54***
R^2=0.31, F =13.74, p<0.001			
Hopelessness as a mediator of peer victimization and depressive symptoms at low and high levels of future orientation (*ab′ path*)			
	Indirect effect	SE	95 % CI
			Lower Upper
Low FOS	0.05	0.04	0.0002 0.1620
High FOS	−0.05	0.05	−0.1999 0.0237

CDI Children's Depression Inventory; *FOS* Future Orientation Scale; *PEV* Peer Emotional Victimization; *HSC* Hopelessness Scale for Children; *T1* Time 1; *T2* Time 2; *T3* Time 3; *CI* confidence interval

*p<0.05, **p<0.01, ***p<0.001

Table 5 Hopelessness as a mediator between familial emotional victimization and depressive symptoms as moderated by future orientation

Interaction between familial emotional victimization and future orientation			
Predicting time 2 hopelessness (*a′ path*)			
Predictor	Effect	*SE*	*t*
T1 CDI	0.02	0.02	0.66
T1 HSC	0.23	0.06	3.89***
Age	0.26	0.20	1.31
Sex (female)	0.61	0.24	2.45*
T1 FOS	0.90	0.55	1.63
T2 FEV	0.52	0.15	3.34***
FEV × FOS	−0.16	0.06	−2.87**
R^2=0.18, F=7.66, p<0.001			
Interaction between familial emotional victimization and future orientation and hopelessness predicting CDI at T3 (*b′ path*)			
Predictor	Effect	*SE*	*t*
T1 CDI	0.26	0.06	4.26***
T1 HSC	−0.05	0.16	−0.33
Age	0.64	0.53	1.21
Sex (female)	1.13	0.65	1.74
T1 FOS	5.09	1.46	3.49***
T2 FEV	1.89	0.42	4.55***
FEV × FOS	−0.53	0.15	−3.23***
T2 HSC	0.53	0.17	3.20**
R^2=0.32, F =14.87, p<0.001			
Hopelessness as a mediator of familial victimization and depressive symptoms at low and high levels of future orientation (*ab′ path*)			
	Indirect effect	SE	95 % CI
			Lower Upper
Low FOS	0.08	0.05	0.0033 0.2042
High FOS	<0.01	0.03	−0.0582 0.0535

CDI Children's Depression Inventory; *FOS* Future Orientation Scale; *FEV* Familial Emotional Victimization; *HSC* Hopelessness Scale for Children; *T1* Time 1; *T2* Time 2; *T3* Time 3; *CI* confidence interval

*p<0.05, **p<0.01, ***p<0.001

future, anticipate future consequences, and plan their actions (Steinberg et al. 2009), has received relatively little attention in the depression literature among adolescents. Although future orientation may protect against the development of depressive symptoms, hopelessness, and suicidality (Chang et al. 2013; Chin and Holden 2013; Hirsch et al. 2007), it has yet to be tested in interaction with the experience of stressful experiences as a predictor of depression. Consistent with vulnerability-stress models of depression, the effects of a weak future orientation may be most deleterious when adolescents are confronted with negative experiences such as peer and familial emotional victimization, as was found in the current study. These findings suggest that adolescents who are less oriented towards the future may be less likely to envision the future as being different from the present and thus, may become more hopeless and depressed.

Findings of the detrimental effects of weak future orientation on adolescents' mental health have important clinical implications. For instance, fostering stronger future orientation may serve as an intervention among adolescents experiencing peer and familial emotional victimization or other life stressors. Prior studies have demonstrated that future orientation may be modifiable with interventions that target cognitive abilities, such as forming goals, devising future plans, and increasing time perspective (Brody et al. 2004; Carten 1996; Hall and Fong 2003). Although no known randomized controlled trials have been conducted to evaluate future orientation training as an intervention for adolescent depression, it seems plausible that targeting these cognitive abilities may similarly improve future orientation among adolescents following the occurrence of stressors. Thus, increasing adolescents' tendency to think about the future may help

to protect against hopelessness and depression following emotional victimization, for which individuals are at a heightened risk during the adolescent years.

Of note, demographic characteristics did not moderate the relationship between future orientation and hopelessness following emotional victimization by parents or peers. These findings suggest that weaker future orientation may lead to hopelessness and depression following emotional victimization for early adolescents regardless of their sex, race, and socioeconomic status. Thus, interventions aimed at improving orientation towards the future may benefit most early adolescents experiencing emotional victimization. Further, given the positive correlation between familial and peer emotional victimization observed in the current study and prior research demonstrating that individuals who experience familial victimization also are more likely to experience peer victimization (e.g., Duncan 1999; Espelage et al. 2012), stronger future orientation may serve as a protective factor for early adolescents who experience polyvictimization. However, future studies are needed to evaluate the possible efficacy of strengthening future orientation to prevent hopelessness and depression following life stressors, particularly emotional victimization, among early adolescents.

The current study had several strengths. First, it included a large, diverse community sample of early adolescents, targeting an age at which cognitive functions are still under development, peer and familial emotional victimization have a strong negative impact, and levels of hopelessness and depression are on the rise. Second, the present study utilized a three time-point prospective design to explore the relationships between emotional victimization in interaction with future orientation, increases in hopelessness, and subsequent increases in depressive symptoms. Furthermore, it examined weaker future orientation as a vulnerability factor for adolescent depression from a vulnerability-stress perspective, testing its interaction with negative life events, which to our knowledge has not yet been explored.

Several other limitations and directions for future research also should be acknowledged. The current study measured hopelessness, depressive symptoms, and the experience of peer and familial emotional victimization through self-report questionnaires instead of diagnostician-administered interviews, which would have provided more complete and objective assessments. The use of diagnostic interviews also may provide more information about whether these findings apply to clinically significant outcomes, such as depressive episodes or symptoms associated with functional impairment. Additionally, the present study only examined emotional victimization by family and peers, which limits the generalizability of our findings to other types of negative events and normative stressors. Future research should evaluate whether weaker future orientation also increases the risk of hopelessness and depression following other types of negative life events. Another limitation of the present study is that every study measure was not collected at each time point. This precluded our ability to test our hypotheses using an idiographic or path analysis approach, which would have provided stronger tests of the temporal ordering among the study variables. For example, it is possible that there is a bidirectional relationship between future orientation and hopelessness, such that adolescents who are hopeless may actively avoid thinking and planning about the future, thereby contributing to lower future orientation. Thus, future studies able to use a more advanced statistical approach would be able to better parse out the directionality of these effects.

Further, suicidality was not examined as a potential outcome in the current study. Previous research has demonstrated a link between hopelessness and the development of suicidal ideation and behaviors (e.g., Thompson et al. 2005). Therefore, it is important for future studies to examine whether weaker future orientation in combination with life stress is also predictive of increases in suicidality, and whether this relationship is mediated by hopelessness. Such findings would further emphasize the importance of fostering strong future orientation in adolescents exposed to peer and familial emotional victimization. In addition to future studies examining current findings in relation to suicidality, it also would be informative to investigate factors that contribute to lower levels of future orientation among adolescents. For example, it is possible that victimization in childhood may alter brain development and impair the development of executive functions (e.g., Pechtel and Pizzagalli 2011), including future orientation. Thus, future research is needed to examine risk factors for lower future orientation, which may increase vulnerability to hopelessness and subsequent depressive symptoms during adolescence.

It also may be beneficial for future research to examine potential changes in adolescents' responses to peer and familial emotional victimization as their future orientation abilities mature over time. As future orientation has been hypothesized to still be in development during the adolescent years (Steinberg et al. 2009), it is possible that adolescents' abilities to cope with life stressors, including emotional victimization, may improve over time, resulting in less vulnerability to hopelessness and depression, as their future orientation strengthens. It would be of interest to examine this relationship, and to identify factors that may lead to the eventual development of strong future orientations in some adolescents, while others maintain a weak future orientation throughout development. In addition, the present study did not evaluate the context in which future orientation may be adaptive versus maladaptive. Although our results indicate that low future orientation following emotional victimization increases hopelessness and depressive symptoms, the effects of future orientation may be dependent upon other factors. For instance, stronger future orientation may be beneficial only for

individuals who have dispositional optimism, whereas higher levels of future orientation may be a risk factor for hopelessness and depression when coupled with worry, rumination, or a negative cognitive style. Thus, future research should evaluate whether stronger future orientation is always beneficial following emotional victimization, or whether other cognitive and affective factors influence its effect on hopelessness and depression. Overall, the construct of future orientation is understudied and in need of further examination to better understand its role in the development of psychopathology during adolescence.

In sum, the current study investigated the impact of cognitive and contextual factors in the development of hopelessness and depressive symptoms among a community sample of early adolescents, finding that peer and familial emotional victimization, in combination with weak future orientation, led to greater levels of hopelessness, and in turn, depressive symptoms. These findings support the role of weak future orientation as a vulnerability factor for the development of hopelessness and depression when combined with life stress, which has significant implications for prevention and intervention of adolescent depression.

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Conflict of Interest The authors declare that they have no conflict of interest.

References

Abramson, L. Y., Metalsky, G. I., & Alloy, L. B. (1989). Hopelessness depression: a theory-based subtype of depression. *Psychological Review, 96*, 358–372.

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks: Sage Publications, Inc.

Alloy, L. B., & Abramson, L. Y. (2007). The adolescent surge in depression and emergence of gender differences: A biocognitive vulnerability-stress model in developmental context. In E. Walker & D. Romer (Eds.), *Adolescent psychopathology and the developing brain: Integrating brain and prevention science* (pp. 284–312). New York: Oxford University Press.

Alloy, L. B., Abramson, L. Y., Walshaw, P. D., Keyser, J., & Gerstein, R. K. (2006). A cognitive vulnerability- stress perspective on bipolar spectrum disorders in a normative adolescent brain, cognitive, and emotional development context. *Development and Psychopathology, 18*, 1055–1103.

Alloy, L. B., Black, S. K., Young, M. E., Goldstein, K. E., Shapero, B. G., Stange, J. P., ... Abramson, L. Y. (2012). Cognitive vulnerabilities and depression versus other psychopathology symptoms and diagnoses in early adolescence. *Journal of Clinical Child & Adolescent Psychology, 41*, 539–560.

Anderson, P. (2002). Assessment and development of executive function during childhood. *Child Neuropsychology, 8*, 71–82.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173–1182.

Bernstein, D.P., Stein, J.A., Newcomb, M.D., Walker, E., Pogge, D., Ahluvalia, T., … Zule, W. (2003). Development and validation of a brief screening version of the Childhood Trauma Questionnaire. *Child Abuse & Neglect, 27,* 169–190.

Brody, G., Murray, V., Gerrard, M., Gibbons, F., Molgaard, V., McNair, L., …, Neubaum-Carlan, E. (2004). The Strong African American Families Program: translating research into prevention programming. *Child Development*, *75*, 900–917.

Brown, B.B., & Larson, J. (2009). Peer relationships in adolescence. *Handbook of Adolescent Psychology,* 2:I:3.

Carten, A. (1996). Mothers in recovery: rebuilding families in the aftermath of addiction. *Social Work, 41*, 312–323.

Chang, E. C., Yu, E. A., Lee, J. Y., Hirsch, J. K., Kupfermann, Y., & Kahle, E. R. (2013). An examination of optimism/pessimism and suicide risk in primary care patients: does belief in a changeable future make a difference? *Cognitive Therapy and Research, 37*, 796–804.

Chin, J., & Holden, R. R. (2013). Multidimensional future time perspective as moderators of the relationships between suicide motivation, preparation, and its predictors. *Suicide and Life-Threatening Behavior, 43*, 395–405.

Collins, W. A., & Steinberg, L. (2006). Adolescent development in interpersonal context. In W. Damon, R. Lerner, & N. Eisenberg (Eds.), *Social, emotional and personality development* (6th ed., Vol. 3, pp. 1003–1067). Hoboken: Wiley.

Courtney, E. A., Johnson, J. G., & Alloy, L. B. (2008). Associations of childhood maltreatment with hopelessness and depression among adolescent primary care patients. *International Journal of Cognitive Therapy, 1*, 4–17.

Crick, N. R., & Grotpeter, J. K. (1996). Children's treatment by peers: victims of relational and overt aggression. *Development and Psychopathology, 8*, 367–380.

Desjardins, T. L., & Leadbeater, B. J. (2011). Relational victimization and depressive symptoms in adolescence: moderating effects of mother, father, and peer emotional support. *Journal of Youth and Adolescence, 40*, 531–544.

Duncan, R. D. (1999). Maltreatment by parents and peers: the relationship between child abuse, bully victimization, and psychological distress. *Child Maltreatment, 4*, 45–55.

Espelage, D. L., Low, S., & De La Rue, L. (2012). Relations between peer victimization subtypes, family violence, and psychological outcomes during early adolescence. *Psychology of Violence, 2*, 313–324.

Furman, W., & Buhrmester, D. (1992). Age and sex differences in perceptions of networks of personal relationships. *Child Development, 63*, 103–115.

Gibb, B. E. (2002). Childhood maltreatment and negative cognitive styles: a quantitative and qualitative review. *Clinical Psychology Review, 22*, 223–246.

Gibb, B. E., & Abela, J. R. Z. (2008). Emotional abuse, verbal victimization, and the development of children's negative inferential styles and depressive symptoms. *Cognitive Therapy and Research, 32*, 161–176.

Gibb, B. E., Alloy, L. B., Walshaw, P. D., Comer, J. S., Shen, G. H., & Villari, A. G. (2006). Predictors of attributional style change in children. *Journal of Abnormal Child Psychology, 34*, 425–439.

Gibb, B. E., Chelminski, I., & Zimmerman, M. (2007). Childhood emotional, physical, and sexual abuse, and diagnoses of depressive and anxiety disorders in adult psychiatric outpatients. *Depression and Anxiety, 24*, 256–263.

Gibb, B. E., Stone, L. B., & Crosset, S. E. (2012). Peer victimization and prospective changes in children's inferential styles. *Journal of Clinical Child and Adolescent Psychology, 41*, 561–569.

Hall, P., & Fong, G. (2003). The effect of a brief time intervention for increasing physical activity among young adults. *Psychology and Health, 18*, 685–706.

Hamilton, J. L., Shapero, B. G., Stange, J. P., Hamlat, E., Abramson, L. Y., & Alloy, L. B. (2013). Emotional maltreatment, peer victimization, and depressive versus anxiety symptoms during adolescence: hopelessness as a mediator. *Journal of Clinical Child and Adolescent Psychology, 42*, 332–347.

Hankin, B. L. (2005). Childhood maltreatment psychopathology: prospective tests of attachment, cognitive vulnerability, and stress as mediating processes. *Cognitive Therapy and Research, 29*, 645–671.

Hankin, B. L. (2012). Future directions in vulnerability to depression among youth: integrating risk factors and processes across multiple levels of analysis. *Journal of Clinical Child and Adolescent Psychology, 41*, 695–718.

Hankin, B. L., Abramson, L. Y., Moffitt, T. E., Silva, P. A., McGee, R., & Angell, K. E. (1998). Development of depression from preadolescence to young adulthood: emerging gender differences in a 10-year longitudinal study. *Journal of Abnormal Psychology, 107*, 128–140.

Hanley, A. J., & Gibb, B. E. (2011). Verbal victimization and changes in hopelessness among elementary school children. *Journal of Clinical Child & Adolescent Psychology, 40*, 772–776.

Harter, S. (1982). The perceived competence scale for children. *Child Development, 53*, 87–97.

Hill, R. M., Castellanos, D., & Pettit, J. W. (2011). Suicide-related behaviors and anxiety in children and adolescents: a review. *Clinical Psychology Review, 31*, 1133–1144.

Hirsch, J. K., Deberstein, P. R., Conner, K. R., Heisel, M. J., Beckman, A., Franus, N., & Conwell, Y. (2007). Future orientation moderates the relationship between functional status and suicide ideation in depressed adults. *Depression and Anxiety, 24*, 196–201.

Joiner, T. E., Jr., Wingate, L. R., & Otamendi, A. (2005). An interpersonal addendum to the hopelessness theory of depression: hopelessness as a stress and depression generator. *Journal of Social & Clinical Psychology, 24*, 649–664.

Kazdin, A. E., Rodgers, A., & Colbus, D. (1986). The hopelessness scale for children: psychometric characteristics and concurrent validity. *Journal of Consulting and Clinical Psychology, 54*, 241–245.

Kessler, R., Berglund, P., Demler, O., Jin, R., & Walters, E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry, 62*, 593–602.

Kovacs, M. (1985). The Children's Depression Inventory (CDI). *Psychopharmacology Bulletin, 21*, 995–998.

Luna, B., Garver, K. E., Urban, T. A., Lazar, N. A., & Sweeney, J. A. (2004). Maturation of cognitive processes from late childhood to adulthood. *Child Development, 75*, 1357–1372.

Liu, R. T., Alloy, L. B., Abramson, L. Y., Iacoviello, B. M., & Whitehouse, W. G. (2009). Emotional maltreatment and depression: prospective prediction of depressive episodes. *Depression and Anxiety, 26*, 174–181.

Paus, T. (2005). Mapping brain maturation and cognitive development during adolescence. *Trends in Cognitive Science, 9*, 60–68.

Pechtel, P., & Pizzagalli, D. A. (2011). Effects of early life stress on cognitive and affective function: an integrated review of human literature. *Psychopharmacology, 214*, 55–70.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40*, 879–891.

Prinstein, M. J., Boergers, J., & Vernberg, E. M. (2001). Overt and relational aggression in adolescents: social-psychological adjustment of aggressors and victims. *Journal of Clinical Child & Adolescent Psychology, 30*, 479–491.

Prinstein, M. J., & Cillessen, A. H. N. (2003). Forms and functions of adolescent peer aggression associated with high levels of peer status. *Merrill-Palmer Quarterly, 49*, 310–342.

Rose, D. T., & Abramson, L. Y. (1992). Developmental predictors of depressive cognitive style: Research and theory. In D. Cicchetti & S. Toth (Eds.), *Rochester symposium of developmental psychopathology* (Vol. IV, pp. 323–349). Rochester: University of Rochester Press.

Siyahhan, S., Aricak, T., & Cayirdag, N. (2012). The relation between bullying, victimization, and adolescents' level of hopelessness. *Journal of Adolescence, 35*, 1053–1059.

Spirito, A., Williams, C. A., Stark, L. J., & Hart, K. J. (1988). The hopelessness scale for children: psychometric properties with normal and emotionally disturbed adolescents. *Journal of Abnormal Child Psychology, 16*, 445–458.

Steinberg, L., Graham, S., O-Brien, L., Woolard, J., Cauffman, E., & Banich, M. (2009). Age differences in future orientation and delay discounting. *Child Development, 80*, 28–44.

Thompson, E. A., Mazza, J. J., Herting, J. R., Randell, B. P., & Eggert, L. L. (2005). The mediating roles of anxiety, depression, and hopelessness on adolescent suicidal behaviors. *Suicide and Life-Threatening Behavior, 35*, 14–34.

Young, M., Fogg, L., Sheftner, W., Fawcett, J., Akiskal, H., & Maser, J. (1996). Stable trait components of hopelessness: baseline and sensitivity to depression. *Journal of Abnormal Psychology, 105*, 155–165.