The authors explored preadolescents' attributions for negative interactions with peers and tested whether their attributions are linked to depressive symptoms. A sample of 532 fourth- and fifth-grade boys and girls completed self-report measures of attributions and depressive symptoms, as well as peer nominations of peer rejection. Controlling for peer rejection, children’s depressive symptoms were positively associated with internal-stable attributions and negatively associated with external-unstable attributions. Implications for counseling are briefly discussed.

**Keywords**: attributions, depressive symptoms, peer rejection

A rich history of theory and research has emerged on individuals’ explanations for their personal experiences (Weiner, 2008). These explanations are known as attributions (Heider, 1958), and certain patterns of attributions (i.e., attributional styles) have been connected to adaptive and maladaptive functioning (Anderson, Miller, Riger, Dill, & Sedikides, 1994; Mezulis, Abramson, Hyde, & Hankin, 2004). In the past three decades, research has revealed that children’s attributions for their experiences with peers are linked to psychological adjustment, with certain attributions positively correlating with loneliness, social anxiety, and depressive symptoms (Graham & Juvonen, 1998; Prinstein, Cheah, & Guyer, 2005; Schacter & Juvonen, 2017). The current study expands upon this work by examining whether the specific attributions that children make to explain their negative peer interactions (e.g., being ignored, rejected, or victimized) are associated with depressive symptomology.

The current study is grounded in Weiner’s (1986) classic model positing that attributions reflect several causal dimensions, including locus and stability. Locus refers to whether an event is attributed to internal or external causes. Stability captures whether an event is ascribed to enduring or fleeting causes. Based on these two dimensions, children could attribute their negative experiences with peers to four types of attributions: internal-stable (e.g., my personality), internal-unstable (e.g., my mood that day), external-stable (e.g., the peer’s disposition), and external-unstable (e.g., bad luck that day). In this study, we assessed children’s tendency to make these types of attributions when explaining negative encounters with peers.

Theorists suggest that individuals are typically motivated to explain situations in ways that protect their self-esteem (Heider, 1958; Weiner, 1986). For instance, when explaining negative events, theorists posit that it is more adaptive to make external than internal attributions (Graham & Bellmore, 2007; Metalsky, Abramson, Seligman, Semmel, & Peterson, 1982). That is, aversive experiences are thought to have less impact on individuals’ self-views when they attribute those events to situational factors rather than blame themselves. Thus, children may be more likely to ascribe negative peer experiences to external than internal causes, which could protect their self-perceptions and reduce their subsequent risk for depressive symptoms.

A robust research literature has emerged on children’s internal attributions and internalizing symptoms. While many of these studies focus on different attributional dimensions, they largely reveal that children’s internal-stable attributions for negative experiences are linked to a variety of internalizing challenges, such as social anxiety, loneliness, and depressive symptoms (e.g., Graham & Juvonen, 1998; Graham, Bellmore, Nishina, & Juvonen, 2009; Metalsky et al., 1982; Prinstein et al., 2005; Schacter & Juvonen, 2017).

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For example, Graham, Juvonen, and colleagues have found that children’s characterological (internal-stable-uncontrollable) attributions for peer victimization are associated with concurrent and future depressive symptoms (Graham et al., 2009; Schacter & Juvonen, 2017). Other studies indicate that internal-stable-global attributions are associated with higher levels of depressive symptomology (Metalsky et al., 1982). Notably, global attributions reflect causes that span all situations versus specific ones. Collectively, these studies point to internal-stable attributions as a robust correlate of childhood depressive symptoms.

In contrast with internal attributions, research is quite limited on the links between children’s external attributions and depressive symptoms. In one exception, Metalsky and colleagues (1982) found that children’s external attributions for failing a midterm did not increase (nor decrease) their risk for depression. With regard to interpersonal experiences, Graham and Bellmore (2007) speculated that external attributions for negative peer interactions may be more adaptive than blaming oneself. However, it appears that researchers have yet to directly test this hypothesis. Therefore, the current study is aimed to fill this gap by examining the relations of children’s depressive symptoms with their internal and external attributions for negative peer interactions (e.g., being ignored, rejected, or victimized). More specifically, we first assessed the bivariate relations of each attribution with depressive symptoms. We then tested their relative associations by including all attributions as simultaneous predictors of depressive symptoms within a single regression model. This approach allowed us to identify the attributions that are uniquely tied to children’s depressive symptomology.

To properly examine the connections between children’s attributions for negative peer events, it is necessary to consider their actual experiences with peers. That is, children’s unique peer relations may influence the ways in which they explain aversive exchanges with other children. For instance, youth who have experienced more frequent mistreatment by peers have been found to make more internal-stable and external-stable attributions for their harassment (Graham & Juvonen, 1998; Morrow, Hubbard, & Sharp, 2017). Conversely, children with more reciprocal friendships have been found to endorse fewer internal-stable and external-stable attributions for negative peer experiences (Morrow et al., 2017). Thus, to carefully assess the links between children’s attributions and depressive symptoms, it is imperative to account for their actual peer experiences. To accomplish this, children’s peer rejection was assessed and controlled for when testing the relations between attributions and depressive symptoms.

In the current study, we focused on two causal dimensions of children’s attributions, locus and stability. Children were presented with four hypothetical vignettes of negative peer encounters and asked to rate the degree to which they would endorse four types of attributions: internal-stable, internal-unstable, external-stable, and external-unstable. Children also completed peer nominations to assess peer rejection. It was hypothesized that children’s internal attributions, particularly their internal-stable attributions, would positively correlate with their depressive symptoms, whereas their external attributions would negatively correlate with their depressive symptoms. This hypothesis is consistent with the notion that internal attributions for personal failures are more maladaptive than external explanations (Mezulis, et al., 2004). We tested these predictions while controlling for children’s peer rejection in their analyses. Moreover, all attributions were entered simultaneously into a single predictive model to assess each one’s relative association with depressive symptoms.

Method

Participants

Participants were recruited from 37 fourth- and fifth-grade classrooms across four public schools in one Mid-Atlantic school district. Parental consent forms were distributed to 901 children, and 581 children (64%) returned their forms with parental permission. During the data collection, 19 children declined to participate and 7 were absent. Consequently, data were collected for 555 boys and girls. Children were given the option to skip items that they did not wish to complete, and 23 skipped data for at least one full measure; they were removed from the dataset, leaving a final sample of 532 children (243 boys and 289 girls; 248 fourth-graders and 284 fifth-graders). Consenting parents completed a brief demographic questionnaire attached to the consent form. Parents reported an average age of 10 years and the following racial/ethnic groups: 37% White, 32% Black, 15% Hispanic, 7% mixed race, and 2% Asian. Parents declined to report race/ethnicity for roughly 7% of the children.

Procedure

A graduate research assistant administered child assent forms and paper-and-pencil measures to all consented and assenting children in each class. Several undergraduate research assistants circulated within the classrooms to answer children’s questions or read
measures aloud to small groups of children identified by their teachers as having reading difficulties. For this study, children completed self-report scales of depressive symptoms and attributions for negative peer experiences, as well as peer nominations for peer rejection. These measures took roughly 20 minutes to complete. All students, regardless of study participation, were compensated with brief classroom parties featuring healthy snacks and fun activities. Shortly after each data collection, the principal investigator (PI) screened the child-report depression measures to identify children who scored in the clinically significant range. Several children reported significant elevation in depressive symptoms; the PI then contacted their parents by phone to share the findings and discuss options for mental health services.

Measures

Attributions. Children’s attributions for negative peer events were measured with a scale based on Hoza, Bukowski, and Pelham’s (1990) Peer Social Attribution Questionnaire (PSAQ). The original measure presents eight vignettes of peer interactions (four positive and four negative). For each vignette, children rate eight explanations reflecting internal (ability, own personal qualities, effort, own mood) and external causes (task difficulty, other’s personal qualities, luck, and other’s mood). Per Hoza and colleagues (1990), these attributions can be further divided in terms of stability. We borrowed the format of the PSAQ, along with the eight attributional categories. However, four new vignettes were developed to reflect more concrete and vivid negative experiences with peers (see Table 1).

As seen in Table 1, attributions were categorized into four types: internal-stable (ability and own personal quality), internal-unstable (effort and own mood), external-stable (task difficulty and other’s personal quality), and external-unstable (other’s mood and luck). Children rated each explanation on a 5-point scale (1 Not true at all to 5 Really true). Scores were computed by averaging the two ratings for each explanation and then aggregating across vignettes. Higher scores reflect greater endorsement of that attribution; internal consistency was satisfactory for every attribution: internal-stable (α = .86), internal-unstable (α = .79), external-stable (α = .77), and external-unstable (α = .78).

Depressive Symptoms. Children completed Kovacs’s (2001) 10-item short version of the Children’s Depression Inventory (CDI-S). For each item, children are asked to choose one of three statements (e.g., I am sad once in a while. I am sad many times. I am sad all the time) associated with a numeric value (1, 2, or 3). The CDI-S has evidenced acceptable test-retest reliability (Smucker, Craighead, Craighead, & Green, 1986) and is highly correlated with the well-validated full inventory (Kovacs, 1992). Depressive symptoms scores were calculated for each child as the average of the 10 items, with higher scores indicating greater levels of depressive symptomology. Internal consistency was satisfactory (α = .83).

Peer Rejection. Two peer nomination items were used to assess peer rejection. One item asked participants to nominate classmates whom they liked (Who do you really like?), and the other item asked them to nominate classmates whom they disliked (Who do you not like very much?). These items appeared at the top of separate pages with class rosters below including their classmates’ names. Children were allowed to nominate an unlimited number of peers; however, only data for consented and assenting children were analyzed. A class participation rate of at least 40% is needed to collect accurate unlimited peer nomination data (Terry, 1999). The average classroom participation rate in this study was 61% (range of 40% to 88%).

Peer rejection scores were calculated in three steps. First, the number of liking and disliking nominations received by each child were tallied. Second, these scores were divided by the total number of participating children in each classroom. This step was necessary in order to standardize liking and disliking scores across classrooms with varying numbers of participants. Third, children’s liking scores were subtracted from their disliking scores to yield a final peer rejection score; higher scores indicate greater levels of peer rejection. These nominations for peer rejection are well validated in many previous studies (e.g., Parker & Asher, 1993).

Results

Descriptive Statistics and Preliminary Tests

Table 2 presents descriptive statistics. Paired t tests were conducted to explore differences between children’s endorsements of each pair of attributions. Every comparison was significant (all ps < .01); children endorsed external-stable attributions to the greatest extent, followed by external-unstable, then internal-stable, and lastly internal-unstable attributions.

Independent t tests were conducted to examine gender (boys = 0; girls = 1) and grade (fourth = 0; fifth = 1) differences. Regarding gender, girls endorsed external-stable attributions more than boys (boys = 2.65; girls = 2.80), t = -2.12, p = .04. Boys scored higher than girls in peer rejection (boys = .11; girls = .24), t = 4.30, p < .001. There were no difference
between fourth- and fifth-graders on any of the variables ($p$s = .16 - .85). Given that the primary analyses involved regression, racial/ethnic differences were explored by dichotomizing this variable into two groups, the most prevalent group (White) and all others combined (Others = 0; White = 1). Independent $t$ tests were then computed for this binary variable. One difference emerged; compared to all other racial/ethnic groups, White children endorsed internal-stable attributions to a greater extent (Other = 2.00; White = 2.17), $t$ = -2.09, $p$ = .04.

**Bivariate Correlations**

Bivariate correlations are presented in Table 3. All four attributions positively correlated with one another and also with depressive symptoms. Peer rejection positively correlated with one attribution (internal-stable) and with depressive symptoms.

**Multiple Regression**

To test the relations of children’s attributions with their depressive symptoms, a regression model was estimated. Because children’s depressive symptoms scores were significantly skewed (see Table 2), the regression model was tested using maximum likelihood estimation with robust standard errors (MLR). Per Huber (1981), this procedure permits estimation of parameters and standard errors that are resilient to non-normality.

It is important to acknowledge that the current child-level data are nested in classrooms. Nested data are interdependent, such that data from the same unit (e.g., one classroom) tend to correlate more strongly than data from different units (e.g., between classrooms). Failure to account for interdependence inflates risk of Type I error (Raudenbush & Bryk, 2002). We made an effort to account for classroom interdependence by using “complex” estimation in Mplus 7 (Muthén & Muthén, 2012). This approach accounts for interdependence by using a sandwich estimator to calculate standard errors and sampling weights to estimate parameters with a weighted loglikelihood function (see Asparouhov, 2006).

Within the regression model, depressive symptoms was entered as the dependent variable. Peer rejection was specified as a covariate. No demographic variables (gender, grade, or race/ethnicity) were included as covariates because none were associated with significant differences in depressive symptoms. Finally, all four attributions were entered as simultaneous predictors. This model allowed us to examine the relations of each individual attribution with depressive symptoms while controlling for children’s own experience of peer rejection, as well as the effects of all the other attributions. Table 4 presents unstandardized estimates for the model. Peer rejection and internal-stable attributions both positively predicted depressive symptoms, whereas external-unstable attributions negatively predicted depressive symptoms. No other attributions were linked to depressive symptoms.

**Discussion**

In the current study, we examined the attributions that preadolescents endorse for negative peer experiences and explored how these explanations related to their depressive symptoms while controlling for their actual rejection by peers. It was hypothesized that children’s internal attributions, especially internal-stable ones, would be positively associated with depressive symptoms, whereas their external attributions would negatively relate to depressive symptoms. Overall, these predictions were partially supported.

Bivariate correlations revealed that all four attributions were positively associated with depressive symptoms. Thus, children’s general tendency to endorse any attribution was associated with greater depressive symptomology. To some extent, this finding may be driven by variance in children’s general reporting styles, with some children endorsing most items and others endorsing very few. However, while controlling for the effects of all four types of attributions simultaneously, along with the effects of peer rejection, internal-stable attributions maintained its positive relation, whereas external-stable attributions appeared negatively related to depressive symptoms. Accordingly, only two specific attributions explained unique variance in children’s depressive symptoms while accounting for the others’ effects.

The first finding supports our hypothesis that internal-stable attributions (e.g., own ability or personal characteristics) function as a risk factor for depression. This result is consistent with theories suggesting that blaming personal failures on enduring personal characteristics is maladaptive to individuals’ socioemotional well-being (Anderson et al., 1994; Mezulis et al., 2004). The relation between internal-stable attributions and depression is well documented in previous research (Graham et al., 2009; Metalsky et al., 1982; Prinstein et al., 2005; Schacter & Juvonen, 2017); thus, this study adds to the existing literature by providing another replication of this link. Moreover, this study advances previous research by showing that the relation between children’s internal-stable attributions for negative peer interactions and depressive symptoms is not simply an artifact of their own rejection by peers.
Children's Attributions and Depressive Symptoms

Furthermore, the finding that internal-unstable attributions did not positively relate to depressive symptoms is consistent with a particular line of research. As noted earlier, Graham, Juvonen, and colleagues have thoughtfully studied the relations of children’s internal attributions with internalizing symptoms (Graham & Juvonen, 1998; Schacter & Juvonen, 2017). In their research, they have revealed that characterological attributions (internal-stable-uncontrollable) for peer victimization confer greater risk for internalizing difficulties than behavioral ones (internal-unstable-controllable). They have speculated that characterological attributions are likely to elicit shame and surrender to peers’ mistreatment, while behavioral attributions are likely to prompt guilt and motivation to rectify the mistreatment. Although we did not assess the controllability of attributions in this study, the present findings fall in line with this past work, such that internal-stable (but not internal-unstable) attributions for negative peer experiences were linked to preadolescents’ depressive symptomology.

Additionally, this study extends past research by revealing that external-unstable attributions are linked to lower levels of depressive symptoms. Notably, many past studies of children’s interpersonal attributions have neglected to assess external attributions (e.g., Graham & Juvonen, 1998; Prinstein et al., 2005). Consequently, the relation between external attributions and childhood depression has been largely unstudied, even though theorists have speculated that external explanations are more adaptive for negative interpersonal events (Graham & Bellmore, 2007). The current findings suggest that children’s external-unstable attributions for negative peer experiences could deflect risk for depression. That is, children who endorsed more passing aspects of the situation (e.g., peer’s mood or bad luck) to explain the negative peer interactions reported lower levels of depressive symptoms. Accordingly, this attributional style might reflect a cognitive resource that buffers youth from depression. In contrast, endorsing more stable aspects of the situation was not associated with depressive symptoms.

Although peer rejection was largely conceptualized as a control variable in this study, it is worth noting that peer rejection correlated with only one type of attribution. Specifically, children higher in peer rejection endorsed internal-stable attributions to a greater extent than children lower in peer rejection. These findings parallel research documenting that children who experience more peer victimization also tend to endorse higher levels of internal-stable attributions (Graham & Juvonen, 1998; Morrow et al., 2017). As children experience ongoing rejection by peers, they may develop stable cognitive patterns that are consistent with their mistreatment by others (Crick & Dodge, 1994), including an attributional style in which they blame their peer harassment on enduring personal characteristics, which could in turn, place them at risk for internalizing disorders. In support of this model, Graham and Juvonen (1998) found that children’s characterological attributions for negative peer experiences partially mediated the effect of their peer victimization experiences on their loneliness and social anxiety. That is, these specific attributions appear to partly explain the connection between children’s peer victimization and internalizing symptoms.

Future Directions

For this study, we examined two dimensions of children’s attributions, locus and stability. We considered including additional dimensions (e.g., controllability or globality), but declined to do so for several reasons. First, adding other dimensions would have considerably lengthened our attribution scale and in turn, the duration of the classroom data collection periods. In addition, we discovered, as others have noted (Anderson et al., 1994), that certain dimensions (e.g., controllability) are very difficult to cleanly represent in rating-scale items. Nonetheless, exploring additional dimensions in future research will provide a more fine-grained analysis of children’s attributions and their links to psychosocial adjustment. To accomplish this, it may be beneficial to employ Anderson and colleagues’ (1994) method of asking individuals to generate their own attributions and then rate their own responses along different causal dimensions.

It is also important to acknowledge that all data were concurrent in this study, and it is not possible to draw conclusions on the temporal relations among variables. By analyzing the attributions as predictors of depressive symptoms within our regression model, we implied that attributions precede depressive symptoms. However, it is just as plausible that depressive symptoms influence later attributions. Children’s attributions and depressive symptoms could also exhibit a bidirectional association, such that each contributes to the other over time. In future studies, longitudinal designs would allow researchers to evaluate various sequential relations between children’s attributions and depressive symptoms. It would also be possible to test whether attributions mediate the relation between peer rejection and depressive symptoms.

Limitations

Several limitations of this study warrant discussion. First, the sample was limited to children in fourth- and fifth-grade; thus, the findings should not be generalized outside of this developmental period. Second, children’s attributions and depressive symptoms were
both assessed via self-report. Consequently, the relations observed between these variables may be inflated due to shared method variance. Third, it is likely that the attribution scale did not capture the full range of preadolescents’ explanations for negative peer interactions. Fourth, it would have been useful to measure children’s attributions for positive events with peers, along with their negative peer interactions. It is possible that certain combinations of attributions for positive and negative peer interactions (e.g., internal-stable for negative and external-stable for positive peer experiences) could confer additive risk for depressive symptoms.

Implications for Interventions

The present study may have implications for counseling youth with depression and related internalizing difficulties. To reiterate, the current findings suggest that internal-stable attributions for negative peer experiences may confer risk for depression, whereas external-unstable attributions might offer protection from depression. Accordingly, helping children shift their attributions from self-blame toward less stable aspects of their environment could attenuate their depressive symptomology. This work could readily be integrated into well-established cognitive-behavior therapies for pediatric depression (David-Ferdon & Kaslow, 2008).

Within a cognitive-behavioral approach to counseling, children could learn to monitor, assess, and test their attributions for peer interactions. Thought records could be used to help youth track their negative peer experiences, along with their attributions for these situations. By reviewing thought records in session, counselors can guide children to recognize the potential errors in their attributions and related automatic thoughts. Throughout this process, children may gradually overwrite maladaptive attributional styles with more adaptive ones. For instance, a child might initially attribute all negative experiences with peers to her self-perceived social awkwardness. However, through repeated analysis of these incidents, the child may learn that other factors often contribute or even fully account for many of these events.

Nevertheless, some children’s attributions may reflect the reality of their situation (e.g., they are not skilled at interacting with peers or a majority of their peers do dislike them). In these situations, it is likely critical to first guide children in developing insight into their challenges with peers, along with the skills needed to improve their peer relations. Once they have developed greater social awareness and skills, these children may then benefit from cognitive training aimed to help them move toward more adaptive ways to explain their peer experiences.

Conclusion

In sum, children’s explanations of their negative experiences with peers are linked to their own depressive symptomology. We sincerely hope that these findings advance future research in this area and provide helpful information to the counselors who work tirelessly to support and empower children struggling with depression and related challenges.

References


do:10.1037/10628-000

Children's Attributions and Depressive Symptoms


Developmental Psychology, 29, 611-621. doi:10.1037/0012-1649.29.4.611


### Table 1

**Attribution vignettes and items for negative peer experiences**

1. Imagine that one day on the playground you try to become friends with a kid in your class, but the boy or girl says they do not want to be friends with you. Why would this happen?
   - A Because I am not good at making friends.
   - B Because it is hard to make friends.
   - C Because I did not try hard enough that day to make friends with the kid.
   - D Because there is something about me that makes other kids not want to be my friend.
   - E Because the other kid was in a bad mood that day.
   - F Because the other kid is not a friendly person.
   - G Because I was in a bad mood that day.
   - H Because I had bad luck that day making friends.

2. Imagine that one day you are standing in line waiting to go into the gym, and another kid walks by and pushes you into the wall and laughs at you. Why would this happen?
   - A Because I am not good at keeping other kids from picking on me.
   - B Because it is hard to keep kids from picking on each other.
   - C Because I did not try hard enough that day to keep the kid from picking on me.
   - D Because there is something about me that makes other kids pick on me.
   - E Because the other kid was in a bad mood that day.
   - F Because the other kid is not a nice person.
   - G Because I was in a bad mood that day.
   - H Because I had bad luck that day keeping kids from picking on me.

3. Imagine that one day on the bus you ask another kid to hang out with you after school, but the boy or girl says that they do not want to hang out with you. Why would this happen?
   - A Because I am not good at getting other kids to hang out with me.
   - B Because it is hard to get kids to hang out.
   - C Because I did not try hard enough that day to get the kid to hang out with me.
   - D Because there is something about me that makes other kids not want to hang out with me.
   - E Because the other kid was in a bad mood that day.
   - F Because the other kid is not a friendly person.
   - G Because I was in a bad mood that day.
   - H Because I had bad luck that day getting kids to hang out with me.

4. Imagine that one day you are reading a book in the library, and another kid walks over to you, takes your book and calls you a mean name. Why would this happen?
   - A Because I am not good at keeping other kids from picking on me.
   - B Because it is hard to keep other kids from picking on each other.
   - C Because I did not try hard enough that day to keep the kid from picking on me.
   - D Because there is something about me that makes other kids pick on me.
   - E Because the other kid was in a bad mood that day.
   - F Because the other kid is not a nice person.
   - G Because I was in a bad mood that day.
   - H Because I had bad luck that day keeping kids from picking on me.
Table 2

Descriptive statistics

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<th>Minimum</th>
<th>Maximum</th>
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<td>-.90</td>
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<td>.46</td>
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<td>Depressive symptoms</td>
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<td>.34</td>
<td>1.00</td>
<td>3.00</td>
<td>1.72</td>
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</table>

Note. Peer rejection was calculated as: (# disliking nominations received/total # of class participants) – (# liking nominations received/total # of class participants). Liking and disliking scores were divided by the total number of classroom participants. This was necessary to standardize scores across classrooms with differing numbers of participants.
### Table 3

**Bivariate correlations**

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<td>1. Internal-stable</td>
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<td>2. Internal-unstable</td>
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<td></td>
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<td>3. External-stable</td>
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<td>.61**</td>
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<td>5. Peer rejection</td>
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<td>.03</td>
<td>.02</td>
<td>.01</td>
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<tr>
<td>6. Depressive symptoms</td>
<td>.45**</td>
<td>.19**</td>
<td>.25**</td>
<td>.09*</td>
<td>.22**</td>
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</table>

*Note. **p < .01, *p < .05.*
### Table 4

Regression of depressive symptoms on attributions

<table>
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<th></th>
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<th>SE</th>
<th>Est./SE</th>
<th>p</th>
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<td>-.193</td>
<td>.05</td>
</tr>
</tbody>
</table>

*Note. All estimates are unstandardized; “on” indicates “regressed on.” The nesting of data in classrooms was addressed using the “complex” function in Mplus 7 (Muthén & Muthén, 2012).*