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Relations Among Chronic Peer Group Rejection, Maladaptive Behavioral Dispositions, and Early Adolescents' Peer Perceptions

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Adolescents' perceptions of peers' relational characteristics (e.g., support, trustworthiness) were examined for subtypes of youth who evidenced chronic maladaptive behavior, chronic peer group rejection, or combinations of these risk factors. Growth mixture modeling was used to identify subgroups of participants within a normative sample of youth (N = 477; 50% female) for whom data had been gathered from fifth grade (M_{age} = 10.61) through eighth grade (M_{age} = 13.93). Results revealed that both enduring individual vulnerability (i.e., chronic withdrawn or chronic aggressive behavioral dispositions) and interpersonal adversity (i.e., chronic peer group rejection) were linked with either differences or changes in adolescents' perceptions of their peers' supportiveness and trustworthiness across the early adolescent age period.

At present, more is known about the consequences of peer group rejection (see Ladd, 2005; Rubin, Bukowski, & Parker, 2006) than about *how* peer group rejection affects children's development. Only a handful of researchers have actually examined potential processes that might transmit rejection's effects across development (Boivin & Hymel, 1997; Buhs, Ladd, & Herald, 2006; Ladd, 2006; Rudolph, Hammen, & Burge, 1995). One compelling hypothesis is that, from their experiences in peer groups, children build cognitive representations of peers (i.e., peers' characteristics and behavioral propensities) that shape their future interactions and relationships with agemates (Dweck & London, 2004). In this investigation, children's perceptions of peers' relational characteristics (e.g., support, trustworthiness) were examined for subtypes of youth who evidenced chronic maladaptive behavior, chronic peer group rejection, or combinations of these risk factors.

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Cognitive Representations as Carriers of Socialization Experiences

Several lines of theory and research implicate cognitive representations of social interactions and relationships as carriers of socialization experiences. For example, attachment theory suggests that early relationship experiences are internalized in the form of working models (Main, Kaplan, & Cassidy, 1985). These models are thought to influence expectations and interpretations of future relationships, such that children who receive warmth and support from others form positive working models, whereas children subjected to chronic maltreatment, rejection, or neglect develop negative perceptions of their social worlds (Crittenden & Ainsworth, 1989). Similarly, social information processing (SIP) models (Crick & Dodge, 1994) propose that from one's history of interactions with peers, children draw inferences about others that are integrated into a "database" that guides future interpersonal

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interactions. These two research traditions view cognitive representations of relationships and interactions as mechanisms through which early social experiences are transmitted across development (e.g., Gifford-Smith & Rabiner, 2004).

Despite the growing consensus that children construct internalized representations of others (Dweck & London, 2004), it has been more common for researchers to study SIP patterns (e.g., hostile attribution biases) and to assess inferences children make about another's motives or intentions in the context of *self-relevant* situations (i.e., ambiguous situations in which the threat or provocation is targeted at the self; e.g., Dodge & Frame, 1982; Orobio de Castro, Veerman, Koops, Bosch, & Monshouwer, 2002). Alternatively, consistent with attachment theory's emphasis on internal working models (Main et al., 1985), other researchers have argued that peer experiences may color other aspects of children's relational representations, such as their generalized perceptions of peers' characteristics (e.g., trustworthiness; Rotenberg et al., 2005) or behavioral proclivities (e.g., propensity to act in a prosocial or antisocial manner; Ladd & Troop-Gordon, 2003; Salmivalli, Ojanen, Haanpää, & Peets, 2005). On the one hand, these generalized perceptions can be viewed as an amalgam of multiple dimensions of beliefs about peers. As an illustration, children might hold a generalized perception that peers frequently act in a trustworthy and supportive manner rather than in an untrustworthy or nonsupportive manner (i.e., Ladd & Troop-Gordon, 2003; MacKinnon-Lewis, Rabiner, & Starnes, 1999; Rudolph et al., 1995). On the other hand, children might hold distinct beliefs about different aspects of peer characteristics and behaviors, perhaps varying across individuals or development (e.g., children may view peers as supportive but not trustworthy, or trustworthy but not supportive). Overall, it is likely that children's views of different aspects of peers are related yet distinct.

In this investigation, two aspects of children's generalized peer perceptions were examined —perceived peer support and trust. Peer support was defined as children's perceptions of the extent to which agemates, in general, are willing to assist them personally with emotional or instrumental problems (e.g., cheer you up if you feel sad, explain the directions to an assignment, etc.). Peer trust was conceptualized as children's views of the extent to which agemates, in general, are trustworthy and honest toward peers in general (e.g., peers can be trusted to keep secrets, return borrowed items, tell the truth, etc.; Ladd & Troop-Gordon, 2003; Rotenberg et al., 2005). Thus, as conceptualized here, perceived support and trust were viewed as related but partially distinct aspects of children's generalized peer perceptions. Whereas peer support was construed as children's perceptions of how supportive agemates, in general, are toward themselves as persons (self-referent attribution; perceived responsiveness of peers to personal needs), peer trust was conceptualized as children's perceptions of the trustworthiness of agemates, in general (i.e., generalized trait attribution; an indicator of peers' trustworthiness as an interpersonal trait or social orientation). Perceived support and perceived trust were expected to correlate positively because children's perceptions of peers' supportiveness toward themselves as persons (children's perceptions about how they are treated by peers) likely serve as a basis for formulating more generalized attributions about others (e.g., perceptions of what peers are like as persons). However, because these dimensions may be distinct in some youth and may develop independently over time, we examined them as separate dimensions.

Changes in peer perception trajectories were examined during the transition to adolescence. As children enter and progress through adolescence, they develop a greater reliance on peers for social support and become increasingly attuned to treatment by their peers (Brown, Dolcini, & Leventhal, 1997). During this period, they may begin to refine their generalized perceptions of peers based on consistent patterns of treatment during early and middle childhood, making this an opportune stage to study the development of generalized peer perceptions.

Peer Rejection as a Context for the Development of Maladaptive Peer Perceptions

In view of theory and accumulating evidence indicating that interpersonal perceptions develop from recurrent or salient social experiences (e.g., Crick & Dodge, 1994; Gifford-Smith & Rabiner, 2004), it seems reasonable to infer that chronic rejection (i.e., consensual disliking) and experiences associated with peer rejection (e.g., being ignored, excluded, teased, aggressed upon; see Asher, Rose, & Gabriel, 2001) might foster overgeneralized maladaptive perceptions of peers. For example, being consistently relegated to low-status positions in peer groups and subjected to experiences that accompany rejected status (e.g., being ignored, excluded, abused) might cause children to perceive peers, in general, as unsupportive and untrustworthy.

Consistent with the idea that rejection is associated with children's peer perceptions, rejected children report more generalized negative perceptions of their peers than do nonrejected children (Ladd & Troop-Gordon, 2003; MacKinnon-Lewis et al., 1999; Rabiner, Keane, & MacKinnon-Lewis, 1993; Rudolph & Clark, 2001; Rudolph et al., 1995). In one short-term longitudinal study, MacKinnon-Lewis et al. (1999) found that less accepted boys held more negative views of peers 6–9 months later than did well-accepted boys. Moreover, researchers have found that aspects of youth's cognitive representations of others mediate the effects of socialization experiences (e.g., peer rejection, parent–child interactions) on subsequent adjustment (e.g., Heidgerken, Hughes, Cavell, & Willson, 2004; Troop-Gordon & Ladd, 2005). However, because most prior research relies on concurrent designs, little is known about how peer rejection is associated with peer perceptions over extended time periods or across specific developmental periods. To address this gap, this investigation aimed to examine the development of early adolescents' perceptions of peer trust and support in the context of interpersonal adversity (i.e., low peer acceptance) across 4 years. Adolescents' perceptions of their peers might be especially susceptible to peer group rejection during this stage (Ladd & Troop-Gordon, 2003) as they increasingly focus on their status in the peer group (Brown et al., 1997).

Person × Environment Models

Insight into the link between children's peer group status and their peer perceptions also has been hindered by researchers' reliance on main effects models (for similar argument, see Ladd, 2003). Rarely have investigators considered how children's enduring behavioral propensities *and* chronic peer rejection are linked with changes in their interpersonal perceptions. According to Person × Environment (P × E) models, characteristics of the child (e.g., the propensity to engage in aggressive or withdrawn behaviors) in conjunction with environmental factors (e.g., chronic rejected status) jointly affect developmental trajectories (Ladd, 2003; Magnusson & Stattin, 1998).

Theory and research indicate significant heterogeneity in the behavior of rejected youth. For example, whereas some rejected youth frequently are aggressive, others are withdrawn (see Cillessen & Mayeux, 2004). Peer rejection might differentially affect children with different behavioral propensities because of the unique manner in which subgroups of rejected children interpret social experiences (Coie, 1990; Ladd, 2003). In this study, we examined the individual and combined contributions of stable behavioral (i.e., aggression and withdrawal) and enduring relational (i.e., rejected status) risk factors.

Withdrawn youth are overly sensitive, fearful, and anxious (e.g., Rubin, Burgess, Kennedy, & Stewart, 2003)—attributes that likely increase their susceptibility to negative peer feedback. In the context of peer group rejection, withdrawn children tend to be more attentive to social cues and aware of their own social difficulties than are aggressive children (e.g., Dodge, 1993; Zakriski & Coie, 1996). It also appears that withdrawn-rejected youth receive little social support from peers, as evidenced by their high levels of loneliness (e.g., Parkhurst & Asher, 1992), and might be more likely than aggressive-rejected children to view peers' actions as unsupportive and untrustworthy. Thus, prolonged rejected status, and the adverse social experiences associated with rejection, might be particularly salient to withdrawn children.

Compared to withdrawn children, many aggressive children tend to be less sensitive to social cues and overly optimistic about their social competencies and peer group status. To be specific, aggressive youth distort or disregard self-directed negative feedback and seem unaware of their negative status (Rudolph & Clark, 2001; Zakriski & Coie, 1996). Although aggressive youth make hostile attributions about others' intentions, these biases appear limited to situations in which they are the targets of ambiguous peer provocations (Dodge & Frame, 1982), suggesting that they are not generally predisposed to see others in a negative light. Perhaps these self-enhancing biases extend to aggressive-rejected children's perceptions of their peers, such that these children endorse rather positive views of rejecting others so as to make their own behavior seem more normative or acceptable (see Asher, Parkhurst, Hymel, & Williams, 1990).

Supporting the need to examine both behavioral (i.e., aggression and withdrawal) and relational (i.e., peer group rejection) risk factors, Rabiner et al. (1993) found that submissive-rejected, but not aggressive-rejected, youth held less positive peer perceptions than youth with a single risk. Similarly, Rudolph and Clark (2001) found that depressed-unpopular, but not aggressive-unpopular, youth held more negative views of peers than single-risk youth. However, neither of these research teams investigated the development of peer perceptions over time.

Stable Maladaptive Behavior and Chronic Peer Group Rejection

A final limitation of existing studies is that relational and behavioral risks tend to be studied as temporally situated antecedents (occurring at one point in time) rather than enduring forms of vulnerability or stress. Evidence suggests that the continuity of risky behavior (Caspi, Elder, & Bem, 1987) and the stability of negative social positions (Ladd, Herald-Brown, & Reiser, 2008; Ladd & Troop-Gordon, 2003) increase youth's risk for maladjustment. Thus, greater research attention should be devoted to enduring behavioral and relational risks.

Overview of the Present Research

This investigation's specific aims were to: (a) determine whether it is possible to identify distinct subtypes of children who manifested chronic behavioral, relational, or combined (behavioral + relational) risks during early adolescence (i.e., Grades 5–8), and (b) compare the peer perception (i.e., trust and support) trajectories of the *persons* who were members of these differing stable risk subtypes. Therefore, analytically, we sought to identify children who exhibited risk continuity (person-oriented approach) and to map changes in their peer perceptions.

Accordingly, growth mixture modeling was used to identify (a) subtypes of children who exhibited stable patterns of risk on one or more of the investigated risk factors (i.e., aggressive or withdrawn behaviors, peer group rejection), and (b) children who were not identified as exhibiting these behavioral or relational risks over the course of the study (i.e., risk-free children). Group membership was used to predict the initial status of children's perceptions of peer support (PPS) and trust (PPT), as well as changes over time. A prospective longitudinal design was employed to provide a comprehensive picture of the development of children's peer perception trajectories, specifically, the extent to which they viewed peers as prone to act in a supportive or trustworthy way toward agemates.

Consistent with a P × E model, it was hypothesized that the development of children's peer perceptions would be linked with both their behavioral and their relational status. To be specific, the trajectories of children's peer perceptions were expected to differ depending on the nature of their stable behavioral dispositions and the chronicity of their rejected status.

Because withdrawn youth appear sensitive to social cues, such as peers' rejecting sentiments or behaviors, those who maintain this disposition (stably withdrawn) and who also are chronically rejected (CR), but not their nonrejected counterparts, were expected to have initial peer perceptions that were more negative than children with no behavioral or relational risks. For the same reasons, these children's peer perceptions were expected to become increasingly negative over time. Based on evidence suggesting that aggressive youth are less sensitive to social cues, it was expected that neither aggressive-rejected nor their nonrejected counterparts would exhibit changes in peer perceptions (trajectories) that differed significantly from those of children with no behavioral or relational risks.

Although continuity in the predicted group differences and trajectories was expected across peer perceptions (i.e., support, trust), somewhat stronger associations were anticipated for perceived peer support as compared to perceived peer trust. Self-referent attributions—in this case, children's perceptions of peers' supportiveness toward themselves—likely have a stronger foundation in personal experience (i.e., actual rejection experiences) than do generalized attributions—in this case peers' trustworthiness as a social trait or orientation—which additionally may be influenced by adolescents' perceptions of peers' behavior toward persons other than themselves. Furthermore, in response to chronic peer rejection, perceptions formed from personal experiences (repeatedly being rejected by peers) might be expected to change sooner or more rapidly than generalized perceptions because the latter attributions incorporate additional sources of information and, thus, may take longer to form and may be more resistant to change (stable). Nonetheless, parallels were expected in the findings for perceived support and perceived trust because personal experience likely plays an important role in shaping broader, more generalized views of others.

The possibility of gender differences in the linkage between risk status and peer perceptions also was considered. During early adolescence, gender differences emerge and intensify in a variety of peer-oriented processes, including behavioral and social-cognitive styles related to peer status, perceptions of self and others, and responses to peer stressors (Rose & Rudolph, 2006). Although theory and prior research did not provide a firm basis for specific hypotheses about gender differences, exploratory analyses were conducted to examine whether patterns differed across girls and boys.

Method

Participants

The sample for this study consisted of 477 adolescents (238 females) who, as part of a larger longitudinal project, were followed from fifth grade (M_{age} = 10.61) through eighth grade (M_{age} = 13.93). Participants were recruited from urban and rural schools in the Midwestern United States. Written informed parental consent was obtained for all participants. Many (but not all) participants made a transition from elementary to middle school during this investigation: 65% transitioned in sixth grade, 11% in seventh grade, and 23% did not experience a transition.

The sample was composed of adolescents with European American (80%), African American (16%), and Asian, Hispanic, multiethnic, or other backgrounds (4%), and came from families with diverse socioeconomic backgrounds (as reported in fifth grade: 31.2% were lower income [$0–$30,000], 27.8% were middle income [$30,001–$50,000], and 41.1% were middle to upper income [above $50,000]). Socioeconomic index scores (SEI; Entwisle & Astone, 1994) at Grade 5 ranged from 21.21 to 97.16 (M = 54.54, SD = 19.47; 50 on the SEI is assigned to sales personnel, bank tellers, etc.).

Procedures

Seven waves of data were gathered across 4 years: fall and spring of fifth, sixth, and seventh grades (G5, G6, and G7, respectively), and spring of eighth grade (G8). However, not all measures were administered at each time of assessment; specifically, measures of perceived peer support were obtained during six of the seven waves (all but spring of G7), whereas measures of perceived peer trust were available only for the first five waves. Group-administered measures of peer acceptance and social behaviors were collected from participants and their classmates (i.e., those with informed consent) during all seven waves, using a rating or unlimited nomination format. Participants and classmates received a small honorarium.

In elementary school classrooms, sociometric procedures were administered in self-contained classrooms. At higher levels of schooling, permission was obtained to review participants' class schedules, and grade-mates who shared a minimum of one class with the participant (referred to hereafter as *classmates*) were identified. Following Parkhurst and Asher (1992), informed consent was obtained for classmates (permission rates averaged 89.2%; range = 71–100%), and a pool of raters or nominators (ranging from 25 to 40, depending on school size) was randomly selected (i.e., the n of classmates providing ratings or nominations was greatest in larger schools). To help ensure that respondents knew the persons they were rating or nominating, adolescents were instructed to rate or nominate only those classmates they knew well, and all items were scaled so as to include a response category labeled "don't know this person."

Measures

Peer Group Acceptance and Rejection

This construct was assessed with a rating scale sociometric (Parker & Asher, 1993). After being trained to use a 5-point rating scale (1 = *not much*, 5 = *a lot*), adolescents were given a class roster and asked to rate how much they liked to "hang out" with each classmate at school (Ladd et al., 2008). The ratings adolescents received were averaged and standardized by classroom to create a peer group acceptance score. Previous research has shown that low ratings on roster-and-rating sociometric instruments tend to identify children who are rejected by peers (Asher & Dodge, 1986).

Aggression

Adolescents were asked to nominate classmates who were physically aggressive (i.e., kids who hit, push, or kick others), verbally aggressive (i.e., kids who talk meanly to others), and relationally aggressive (i.e., kids who gossip or say bad things behind others' backs). Aggression scores correlated moderately at each time point (rs > .40); thus, aggressive nominations for each criterion were standardized within classrooms and then averaged to create a composite score. Composite scores were found to be reliable at each wave (see Table 1 for all αs).

Withdrawal

Adolescents were asked to nominate classmates who were reticent (i.e., very shy), quiet (i.e., do not talk much or who talk quietly), and loners (i.e., alone a lot). Withdrawal scores correlated moderately at each time point (rs > .49); thus, withdrawn nominations for each criterion were standardized within classrooms and then averaged to create a composite score. Composite scores were found to be reliable at each wave (see Table 1 for all αs).

Table 1
Stability Coefficients, Bivariate Correlations Between Peer Group Acceptance/Rejection, Aggression, and Withdrawal, and Scale Reliabilities

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Peer group acceptance/rejection																					
1. G5 (F)	—																				
2. G5 (S)	0.80	—																			
3. G6 (F)	0.63	0.66	—																		
4. G6 (S)	0.66	0.70	0.84	—																	
5. G7 (F)	0.62	0.63	0.68	0.73	—																
6. G7 (S)	0.59	0.59	0.65	0.70	0.84	—															
7. G8 (S)	0.59	0.54	0.58	0.64	0.68	0.76	—														
Aggression																					
8. G5 (F)	−0.36	−0.25	−0.19	−0.16	−0.11	−0.09	−0.11	—													
9. G5 (S)	−0.22	−0.21	−0.15	−0.15	−0.10	−0.06	−0.10	0.83	—												
10. G6 (F)	−0.26	−0.20	−0.24	−0.20	−0.14	−0.11	−0.11	0.68	0.67	—											
11. G6 (S)	−0.22	−0.18	−0.20	−0.20	−0.12	−0.12	−0.13	0.67	0.71	0.88	—										
12. G7 (F)	−0.21	−0.15	−0.20	−0.19	−0.19	−0.17	−0.14	0.63	0.71	0.74	0.77	—									
13. G7 (S)	−0.18	−0.13	−0.19	−0.15	−0.15	−0.17	−0.13	0.61	0.69	0.74	0.75	0.84	—								
14. G8 (S)	−0.21	−0.14	−0.18	−0.14	−0.14	−0.15	−0.13	0.63	0.65	0.66	0.72	0.73	0.80	—							
Withdrawal																					
15. G5 (F)	−0.36	−0.35	−0.32	−0.36	−0.43	−0.45	−0.38	−0.21	−0.29	−0.22	−0.27	−0.23	−0.26	−0.26	—						
16. G5 (S)	−0.38	−0.40	−0.31	−0.39	−0.45	−0.44	−0.36	−0.22	−0.29	−0.23	−0.27	−0.25	−0.27	−0.25	0.89	—					
17. G6 (F)	−0.27	−0.31	−0.34	−0.37	−0.41	−0.41	−0.33	−0.25	−0.30	−0.24	−0.29	−0.24	−0.25	−0.25	0.79	0.78	—				
18. G6 (S)	−0.30	−0.34	−0.35	−0.41	−0.46	−0.46	−0.37	−0.24	−0.31	−0.24	−0.29	−0.27	−0.27	−0.28	0.79	0.78	0.92	—			
19. G7 (F)	−0.32	−0.37	−0.38	−0.43	−0.51	−0.52	−0.44	−0.22	−0.28	−0.24	−0.27	−0.24	−0.24	−0.27	0.75	0.74	0.76	0.90	—		
20. G7 (S)	−0.34	−0.37	−0.39	−0.44	−0.51	−0.53	−0.44	−0.21	−0.28	−0.23	−0.25	−0.24	−0.26	−0.27	0.77	0.75	0.78	0.83	0.93	—	
21. G8 (S)	−0.31	−0.33	−0.31	−0.38	−0.47	−0.47	−0.47	−0.25	−0.28	−0.25	−0.29	−0.25	−0.29	−0.31	0.73	0.75	0.71	0.79	0.82	0.84	—
α								0.85	0.82	0.83	0.83	0.83	0.83	0.82	0.80	0.83	0.83	0.86	0.90	0.91	0.91

Note. F = fall; S = spring; G5 = fifth grade; G6 = sixth grade; G7 = seventh grade; G8 = eighth grade. Correlations above .09 are significant at $p < .05$.

Perceptions of Peer Support

Adolescents rated the extent to which they perceived school peers as supportive and willing to help with emotional or instrumental problems (e.g., "How often do the kids in your class cheer you up if you feel sad," or "explain the directions to an assignment if you don't understand them?"). Adolescents rated on a 5-point scale the degree to which each of six items described their schoolmates. A confirmatory factor analysis (CFA) in which the six PPS items served as indicators of a single latent variable was conducted at each of the six time points. Model fit was adequate at each wave (comparative fit index [CFIs] $\geq$ .96, root mean square error of approximation [RMSEAs] $\leq$ .08, standardized root mean square residual [SRMRs] $\leq$ .04; standardized factor loadings $\geq$ .56). Subscale scores were computed by averaging item ratings, and were found to be reliable at each wave (see Table 2 for all αs). Higher scores indicate more positive, supportive peer perceptions.

Perceptions of Peers' Trustworthiness

This five-item measure assesses how much adolescents view their school peers as trustworthy and honest (e.g., "Some kids keep the secrets that you tell them; others don't. How much do the kids at your school keep secrets?" "Some kids return the things they borrow, but others don't. How much do the kids at your school give back the things they borrow?"). Using a 5-point scale, adolescents rated the extent to which each item described peers. CFAs in which the five PPT items served as indicators of a single latent variable showed that model fit was adequate at each wave (CFIs $\geq$ .97, RMSEAs $\leq$ .07, SRMRs $\leq$ .03, standardized factor loadings $\geq$ .32). Subscale scores were computed by averaging item ratings and were found to be reliable at each wave (see Table 2 for αs). Higher scores indicate more positive trusting peer perceptions.

Structure of Peer Perceptions

To determine whether the two types of peer perceptions represented distinct constructs, CFAs were conducted to compare a one-factor (all perception items) to a two-factor (support vs. trust items) model at each wave. The relative fit of the models was examined using several goodness-of-fit indices and chi-square difference tests to compare the nested models (see Hu & Bentler, 1999). Fit indices and chi-square difference tests at each wave revealed that the two-factor model (CFIs = .94–.98, RMSEAs = .04–.06, SRMRs = .03–.04) fit better than the one-factor model (CFIs = .90–.93, RMSEAs = .07–.09, SRMRs = .04–.06), $\Delta\chi^2$s (Δdfs = 1) = 21.54–101.58, all ps < .001. These results attested to the distinctive nature of the two perceptions and each was used as a separate criterion in subsequent analyses.

CFAs also were conducted to determine whether the peer perception measures exhibited longitudinal factorial invariance. To satisfy the condition of "stationarity" (i.e., Is the same construct being measured over time?; Pitts, West, & Tein, 1996), models

Table 2
Descriptive Statistics and Bivariate Correlations for Peer Trust and Peer Support Variables

Variable	1	2	3	4	5	6	7	8	9	10	11
1. F G5 trust	—	0.45	0.29	0.30	0.28	0.54	0.41	0.23	0.26	0.21	0.18
2. S G5 trust		—	0.36	0.30	0.27	0.36	0.50	0.32	0.28	0.25	0.20
3. F G6 trust			—	0.41	0.33	0.28	0.31	0.54	0.39	0.26	0.30
4. S G6 trust				—	0.41	0.33	0.30	0.42	0.61	0.43	0.37
5. F G7 trust					—	0.22	0.26	0.34	0.37	0.57	0.33
6. F G5 support						—	0.62	0.40	0.45	0.34	0.37
7. S G5 support							—	0.47	0.43	0.41	0.37
8. F G6 support								—	0.61	0.47	0.46
9. S G6 support									—	0.51	0.42
10. F G7 support										—	0.47
11. S G8 support											—
M	3.34	3.28	3.23	3.16	3.19	3.37	3.34	3.35	3.40	3.42	3.49
SD	0.77	0.70	0.70	0.68	0.71	0.92	0.90	0.88	0.85	0.88	0.97
α	0.72	0.66	0.70	0.65	0.71	0.86	0.84	0.83	0.81	0.82	0.89

Note. F = fall; S = spring; G5 = fifth grade; G6 = sixth grade; G7 = seventh grade; G8 = eighth grade. All correlations are statistically significant at $p < .05$.

were specified in which the factor loadings for the same indicator on a construct were equated over time (e.g., factor loading of $item_1$ on $factor_1$ at Time 1 = factor loading of $item_1$ on $factor_1$ at Time 2 = factor loading of $item_1$ on $factor_1$ at Time 3, etc.). For both PPS and PPT, longitudinal measurement models in which the factor loadings were constrained had adequate model fit (CFIs $\geq$ .94, RMSEAs < .05, SRMRs $\leq$ .05). To test for longitudinal factorial invariance (Meredith, 1993) these measurement models were then compared to models in which the factor loadings were unconstrained across time (CFIs $\geq$ .95, RMSEAs < .05, SRMRs < .05). These nested model comparisons indicated that model fit did not significantly change (i.e., ΔCFIs $\leq$ .01; Cheung & Rensvold, 2002) as a result of constraining the factor loadings to be equal across time. Thus, it can be inferred that the meaning of the underlying constructs was not changing over time. These results suggest that the peer support and trust constructs achieved invariance over time, a necessary condition to make meaningful inferences about the development or change in individuals' scores on these constructs (Conroy, Metzler, & Hofer, 2003).

Results

Preliminary analyses were conducted to examine proportions of missing data, distributional properties of measures, stabilities of the predictor and criterion measures, and potential instances of multicollinearity. Next, growth mixture modeling was used to identify subtypes of adolescents who exhibited stable patterns of risk on one or more of the investigated risk factors (i.e., aggressive or withdrawn behaviors and peer group rejection). After this, multiple-group growth curve models were calculated (using Mplus; Muthén & Muthén, 1998–2010) to explore whether differences in youth's stable maladaptive behavior and chronic peer group rejection were uniquely associated with their peer perception trajectories and whether these associations were moderated by gender.

These growth models also were calculated after incorporating a variable representing the grade at which participants made a school transition. Transition timing proved to be consistently nonsignificant when examined as a main effect and as an interaction term with youth's group membership. Furthermore, piecewise growth models were computed to examine trajectory differences in perceptions before versus after school transitions. Results showed no significant differences in elevation or slope during the transition from primary to secondary schools. These findings implied that transition timing was not significantly related to peer perception trajectories for the studied risk subtypes. Consequently, transition timing was not included in subsequent analyses.

Preliminary Analyses: Missing Data, Descriptive Statistics, and Bivariate Correlations

Missing data analyses indicated that for all study variables (across all time waves), 9.1% of the data were missing. Attrition rates were examined and about 95% of participants were retained until the completion of this study. Less than 1% of participating children (n = 4) were lost from the study in Grade 6, 1.0% (n = 5) in Grade 7, and 3.6% (n = 17) in Grade 8. Full-information maximum likelihood (FIML) estimation was used that allowed for all participating subjects to be retained in the study even if they were missing some data points across time. In order for FIML to provide accurate and unbiased parameter estimates, the cause of missing data must be either missing completely at random or missing at random (see Enders, 2010). To assess whether it was necessary to include any auxiliary variables to improve the missing data estimation, a series of independent t tests were performed to determine whether missingness on each of the observed variables was associated with children's gender, race, household income, and socioeconomic index. These independent t tests were not statistically significant, indicating that there were trivial differences between missing and complete cases on these demographic variables. Therefore, it was not necessary to include any of these demographic variables as auxiliary variables to better account for the potential causes of missing data.

Distributional properties of the criterion variables (i.e., skewness and kurtosis) were examined and all measures were found to be reasonably normally distributed. Bivariate correlations were computed for both the grouping (i.e., peer group rejection, aggression, and withdrawal; see Table 1) and peer perception measures (i.e., peer support, peer trust; see Table 2). Concurrent intercorrelations among the grouping measures were moderate, with a tendency for the modest relation between peer group rejection and aggression to decline over time, whereas the relation between peer group rejection and withdrawal strengthened over time. Consistent with the CFA results, the intercorrelations among the peer perception variables were positive and moderate in magnitude.

Chronicity of Peer Rejection and Stability of Aggressive and Withdrawn Behaviors

To identify subtypes of adolescents who exhibited stable patterns of risk on one or more of the investigated risk factors, growth mixture modeling was used. Because a principal study objective was to identify stable subtypes, the decision was made to conduct growth mixture models with as many data points as possible to ensure that the groups identified were, in fact, exhibiting highly stable patterns (continuity) across much of their development. Thus, data for the risk variables (aggression, withdrawal, rejection), which were obtained from fall of Grade 5 to spring of Grade 8, were utilized.

A series of models were specified (i.e., 1-, 2-, 3-, 4-, 5-class) separately for each of the three risk factors. Several model fit indices were used to compare models with varying numbers of classes in addition to examining whether the classes appeared substantively and conceptually meaningful and qualitatively unique from other classes in the model (see Nylund, Asparouhov, & Muthen, 2007; Tofighi & Enders, 2008). Specifically, Bayesian information criteria (BIC), Akaike's information criteria (AIC), entropy, class assignment probabilities, and the Lo–Mendell–Rubin likelihood ratio test (LMR-LRT; Lo, Mendell, & Rubin, 2001) were used such that smaller values on the BIC and AIC are indicative of a better fitting model and values closer to 1.0 for both entropy and class assignment probabilities indicate a higher likelihood that individuals are being correctly classified. Finally, a significant p value on the LMR-LRT indicates that a model with k classes had better fit to the data than a model with $k-1$ classes.

For each grouping variable, the 4-class solution was deemed to be the optimal solution based on both the empirical evidence (i.e., fit indices; see Table 3) and the identification of conceptually meaningful and interpretable classes (see Muthén, 2004). Specifically, in all cases, the 4-class solution had the second smallest BIC and AIC, high entropy, and average class assignment probabilities (ranging from .90 to .94 for the peer rejection model; .92 to .96 for the withdrawal model; and .88 to .96 for the aggression model). Moreover, for all three relational and behavioral risk variables, the 4-class solution evidenced a significant improvement over the 3-class model (see LMR-LRT results in Table 3) and, for peer rejection and aggressive behaviors, the addition of a fifth class did not improve model fit compared to the 4-class solution. For withdrawn behaviors, although the LMR-LRT suggested that the 5-class solution might have better model fit compared to the 4-class solution, the addition of a fifth class resulted in a class consisting of only 3.2% of the sample. Moreover, the other classes identified in these models were very similar; thus, the 4-class solution was deemed preferable over the model with five classes. Finally, although the 5-class solutions consistently had the smallest BIC and AIC values, the reductions in these indices were relatively small compared to the 4-class solution. Thus, four classes were identified for each risk factor.

Table 3
Model Fit Indices Examining Trajectories of Peer Rejection and Aggressive and Withdrawn Behaviors

Model	Log *L*	AIC	BIC	Entropy	LMR-LRT
Peer rejection					
1-class	−4,303.07	8,614.13	8,630.80	—	—
2-class	−3,505.85	7,029.70	7,067.21	0.92	1,544.35***
3-class	−3,302.08	6,632.15	6,690.50	0.87	394.75***
4-class	−3,229.94	6,497.88	6,577.06	0.85	139.75*
5-class	−3,193.68	6,435.36	6,535.38	0.86	70.24
Withdrawn behaviors					
1-class	−4,569.91	9,147.82	9,164.49	—	—
2-class	−2,680.47	5,378.93	5,416.44	0.96	3,660.19***
3-class	−2,298.48	4,624.95	4,683.30	0.93	739.99
4-class	−2,115.38	4,268.76	4,347.94	0.90	354.69***
5-class	−2,058.19	4,164.38	4,264.40	0.91	110.78***
Aggressive behaviors					
1-class	−4,350.28	8,708.55	8,725.22	—	—
2-class	−2,900.97	5,819.93	5,857.44	0.95	2,807.57***
3-class	−2,570.07	5,168.13	5,226.48	0.91	641.02***
4-class	−2,470.56	4,979.13	5,058.31	0.86	192.76**
5-class	−2,434.88	4,917.75	5,017.77	0.82	69.13

Note. AIC = Akaike's information criteria; BIC = Bayesian information criteria; LMR-LRT = Lo–Mendell–Rubin likelihood ratio test.
*$p < .05$. **$p < .01$. ***$p < .001$.

For peer rejection, the 4-class solution identified a chronically highly rejected trajectory (8.4% of sample), a chronically moderately to highly rejected trajectory class (26.8%), a stably average class (33.8%), and a stably well-accepted trajectory class (31.0%). For withdrawn behaviors, the 4-class solution identified a chronically highly withdrawn trajectory class (11.7%), a moderately withdrawn trajectory class (23.3%), a low withdrawn trajectory class (24.9%), and a very low (no) withdrawn behaviors trajectory class (40%). Finally, for aggressive behaviors, the 4-class solution identified a chronically highly aggressive trajectory class (16.8%), a low to moderately aggressive trajectory class (29.1%), a stably low aggressive trajectory class (25.4%), and a stably very low (no) aggressive behaviors trajectory class (28.7%).

Next, these individual class assignments were extracted from the growth mixture model results in Mplus, and SPSS was used to classify children into distinct mutually exclusive risk subtypes. Specifically, children in the high-rejection and moderate-high–rejection trajectory groups were classified as being CR across time, whereas those in the stable average and accepted trajectory groups were classified as being low risk. The decision to combine the chronically high and moderately high rejected groups was based on the rationale that both had trajectories that approximated or exceeded the standardized cutoffs investigators use to identify rejected subtypes (e.g., −1 *SD*; see Asher & Dodge, 1986). Children in the high-rejection group had a trajectory that was, on average, about −1.8 *SD* below the mean on peer acceptance and children in the stable moderate-high–rejection trajectory were, on average, about −.8 *SD* below the mean on peer acceptance. Then, children in the highly withdrawn and highly aggressive trajectory groups were classified as being chronically withdrawn (CW) or chronically aggressive (CA), whereas those in the low and very low withdrawn and aggressive trajectory groups were classified as being low risk. Children in the moderately withdrawn trajectory class and the low to moderately aggressive trajectory class were not included as part of the risk groups or the low-risk group (LR).

After identifying children who were in one of the two behavioral risk groups (chronically withdrawn or chronically aggressive) and children who were CR, we determined whether some children had co-occurring behavioral–relational risk group identifications (e.g., chronically aggressive-rejected or chronically withdrawn-rejected) and classified participants accordingly. These classifications enabled us to identify five mutually exclusive risk groups: CR (N = 82, 17.2%), CA (N = 34, 7.1%), CW (N = 15, 3.1%), CA rejected (CAR; N = 45, 9.4%), and CW rejected (CWR; N = 40, 8.4%). Only one child was identified as being chronically aggressive-withdrawn-rejected, and was excluded in subsequent analyses. In addition, an LR (N = 130, 27.3%) was identified, which served as the reference group in subsequent analyses. Each of these risk groups was dummy coded (0 = *not at risk*, 1 = *at risk*) and used to predict peer perception trajectories in subsequent analyses.

Peer Perception Trajectories by Risk Group and Gender

The next analytic step was to examine peer perception trajectories for each of the five risk groups identified in the prior step. In addition, gender was used as a moderator to assess whether these peer perception trajectories were similar or different for boys and girls. For each peer perception, a conditional multiple-group linear growth model was specified. This model included two latent factors: a latent intercept and slope. The latent intercept estimated starting levels of peer perceptions (in fall of Grade 5) and the latent slope estimated linear growth (i.e., changes across time). To examine differences in estimated peer perception trajectories (i.e., intercepts and slopes) for each of the risk groups, the latent intercept and slope factors were regressed on each of the five risk groups (dummy coded manifest indicators), which resulted in the LR serving as the reference group. Given that this was a multiple-group model, the 10 coefficients were estimated separately for boys and girls.

First, a model was specified that constrained the coefficients to be equal for boys and girls (i.e., fully constrained model). To test for gender moderation, these constraints were removed for each risk group (i.e., only for one risk group at a time), and a nested model comparison (i.e., chi-square difference test) was used to assess whether unconstraining the estimates between boys and girls for a particular risk group resulted in an improvement in model fit (i.e., statistically significant chi-square difference test). If unconstraining the parameters for a specific risk group improved model fit, this would indicate that gender moderated these effects. If unconstraining these parameters did not improve model fit, then this indicated that there was no gender moderation for that particular risk group. When gender did not act as a moderator, the coefficients were left constrained between groups to maintain a more parsimonious model. This analytic strategy was used for the two peer perceptions and results follow.

Perceptions of Peer Support

For perceived support, the fully constrained model (in which the 10 coefficients were constrained to be equal for boys and girls) appeared to have adequate model fit (χ^2 = 148.60, df = 94, $p < .001$; RMSEA = .06, SRMR = .07). To test for gender moderation, a series of five nested model comparisons were made by unconstraining the two coefficients for each of the five risk groups, and comparing this partially constrained model to the fully constrained model (i.e., a chi-square difference test with 2 df). Only one of the nested model comparisons was statistically significant. For the CR group, unconstrain-

ing the intercept and slope parameters for boys and girls significantly improved the model fit ($\Delta\chi^2 = 6.04$, $df = 2$, $p = .05$), suggesting that the intercepts, slopes, or both differed for CR boys and girls. Comparisons with the LR showed that although both CR boys and CR girls initially perceived their peers as less supportive, CR boys' ($b = -.67$, $p < .001$) PPS were even lower than those of CR girls ($b = -.49$, $p < 001$). However, neither of these groups' slopes were significantly different from the growth rate of the LR (CR girls' $b = .07$, *ns* and CR boys' $b = .00$, *ns*).

For the four other risk groups, nonsignificant chi-square difference tests suggested that perceived support trajectories (intercepts and slopes) for these risk groups were similar for boys and girls; thus, these trajectories were left constrained between groups. Model fit indices indicated that this final model had adequate fit ($\chi^2 = 142.56$, $df = 92$, $p < .001$; RMSEA = .06, SRMR = .07; see Figure 1 and Table 4). The results for this model indicated that compared to the LR group, the CA group ($b = -.54$, $p < .001$), CAR group ($b = -.90$, $p < .001$), and CWR group ($b = -.75$, $p < .001$) all had significantly lower initial levels of perceived support. In addition to having lower initial levels of perceived support, the CWR group also had significant declines in perceived support across time ($b = -.11$, $p < .05$). Although the CW group did not have lower initial levels of perceived support ($b = .01$, *ns*), it had a significant decline ($b = -.20$, $p = .01$).

Additional analyses were conducted to examine whether differences in perceived support were sustained by the spring of Grade 8 (the final time wave in this study). The same model described above was reanalyzed after changing the intercept to represent children's perceived support scores at the end of the study (as opposed to their starting levels). This modification to the model did not affect model fit. The results indicated that compared to the LR group, the CW group ($b = -.69$, $p < .01$), the CAR group ($b = -.77$, $p < .001$), the CWR group ($b = -1.13$, $p < .001$), and the CR boys group ($b = -.68$, $p < .001$) all had significantly lower levels of perceived support by the spring of eighth grade. Although the CA group and the CR girls group had significantly lower starting levels of perceived support, their scores were not significantly different from the LR group at the end of study ($b = -.17$, *ns* and $b = -.24$, *ns*, respectively).

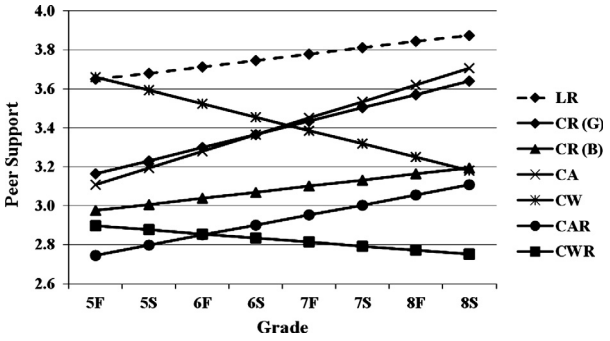

Figure 1. Estimated peer support trajectories by risk group. LR = low-risk group; CR = chronically rejected group; CA = chronically aggressive group; CW = chronically withdrawn group; CAR = CA-rejected group; CWR = CW-rejected group; G = girls; B = boys; F = fall; S = spring.

Table 4
Conditional Growth Models for the Peer Belief Variables

	Perceptions of peer support				Perceived peer trust			
	Intercept		Slope		Intercept		Slope	
Group	Estimate	*SE*	Estimate	*SE*	Estimate	*SE*	Estimate	*SE*
Low risk	3.65***	0.06	0.07*	0.03	3.47***	0.06	−0.03	0.04
Chronically rejected (G)	−0.49***	0.15	0.07	0.06	−0.56***	0.14	0.19*	0.09
Chronically rejected (B)	−0.67***	0.13	0.00	0.05	−0.17	0.11	−0.10	0.07
CA	−0.54***	0.15	0.11	0.06	−0.42***	0.13	0.08	0.09
CW	0.01	0.20	−0.20*	0.08	0.01	0.19	0.02	0.12
CA rejected	−0.90***	0.14	0.04	0.06	−0.50***	0.12	−0.02	0.08
CW rejected	−0.75***	0.14	−0.11*	0.05	−0.19	0.13	−0.19*	0.08

Note. G = girls; B = boys; CA = chronically aggressive; CW = chronically withdrawn. Except for the chronically rejected group, estimates for girls and boys were not statistically different from one another and therefore were constrained to be equal. Estimates and significance tests provided for each of the risk groups reflect mean differences in relation to the low-risk group.
*$p < .05$. ***$p < .001$.

Perceived Peer Trust

For perceived trust, the fully constrained model appeared to have adequate model fit ($\chi^2 = 93.68$, $df = 70$, $p = .03$; RMSEA = .04, SRMR = .09). Tests for gender moderation indicated that only one of the nested model comparisons was statistically significant. For the CR group, perceived trust trajectories were significantly different for boys and girls ($\Delta\chi^2 = 8.22$, $df = 2$, $p = .02$). To be specific, with these parameters unconstrained, compared to the LR, CR girls had significantly lower starting levels of perceived trust, but this was not the case for CR boys ($b = -.56$, $p < .001$ and $b = -.17$, *ns*, respectively). Moreover, whereas CR girls had a significant increase in perceived peer trustworthiness over time ($b = .19$, $p < .05$), CR boys appeared to have a declining perceived trust trajectory (albeit, their decreasing slope did not differ significantly from the LR, $b = -.10$, *ns*).

For the four other risk groups, nonsignificant chi-square difference tests suggested that perceived trust trajectories for these risk groups were similar for boys and girls, and these trajectories were left constrained between groups. Model fit indices indicated that this final model had adequate fit ($\chi^2 = 85.46$, $df = 68$, $p = .07$; RMSEA = .04, SRMR = .08; see Figure 2 and Table 4). The results for this model indicated that compared to the LR group, the CA group ($b = -.42$, $p < .001$) and CAR group ($b = -.50$, $p < .001$) had significantly lower initial levels of perceived trust. Although the CWR group did not have significantly lower initial levels of perceived trust ($b = -.19$, *ns*), it was the only group that had a significant decline in perceived trust across time ($b = -.19$, $p = .02$).

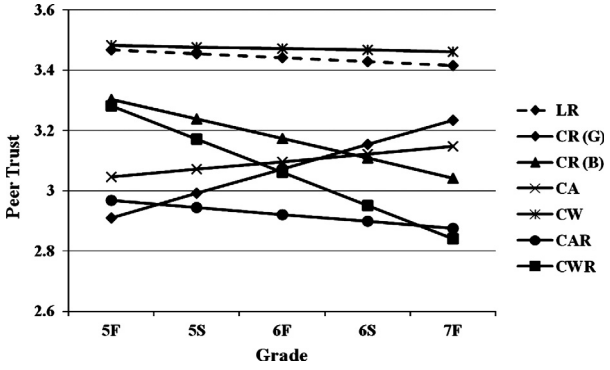

Figure 2. Estimated peer trust trajectories by risk group. LR = low-risk group; CR = chronically rejected group; CA = chronically aggressive group; CW = chronically withdrawn group; CAR = CA-rejected group; CWR = CW-rejected group; G = girls; B = boys; F = fall; S = spring.

Additional analyses assessed whether differences in perceived trust were sustained by the fall of Grade 7. The same model described above was reanalyzed after specifying the intercept to represent children's perceived peer trust for the last data wave. Results indicated that compared to the LR group, the CA group ($b = -.27$, $p < .05$), the CAR group ($b = -.54$, $p < .001$), the CWR group ($b = -.57$, $p < .001$), and the CR boys group ($b = -.37$, $p < .001$) all had significantly lower levels of perceived trust by the fall of seventh grade. Thus, whereas the CWR group was not significantly different from the LR group at the outset of the study, they had the lowest levels of perceived trust, compared to all other groups, by Grade 7. Although the CR girls group had significantly lower starting levels of perceived trust, their PPT was not significantly different from the LR group at the last measurement wave ($b = -.18$, *ns*).

Discussion

In this investigation, we examined how chronic maladaptive behavior and chronic peer group rejection were associated with young adolescents' peer perceptions. Results were consistent with a basic premise of P × E models of development (Ladd, 2003; Magnusson & Stattin, 1998) in that both individual vulnerability (i.e., withdrawn or aggressive behavior) and interpersonal adversity (i.e., peer group rejection) were linked with either differences or changes in adolescents' peer perceptions during the early adolescent age period.

One investigative aim was to determine whether it is possible to identify distinct groups of adolescents who manifest chronic behavioral, relational, or combined risks during early adolescence. Findings suggest that different types of chronic risk groups do exist during this age period, and include adolescents whose risk profiles are characterized by continuity on the targeted behavioral risk factors (i.e., aggression, withdrawal), a relational risk factor (i.e., peer group rejection), and combinations of these risk factors (i.e., CAR, CWR).

Another aim was to test the hypothesis that adolescents who did exhibit continuity on one or more of the targeted risk factors across Grades 5–8, as compared to those who did not manifest such risks, would evidence less favorable perceptions of peers during this same developmental period. Support for this hypothesis was obtained in that adolescents who manifested specific types of chronic risk, as compared to others who did not, were found to

have less positive views of peers. The nature of this association, however, varied depending on types and combinations of chronic risk factors, adolescents' gender, period of adolescence, and the forms of peer perceptions examined.

Chronic Withdrawal and Peer Perceptions

The findings obtained for CW adolescents corroborate those reported in prior studies (e.g., Rabiner et al., 1993; Rudolph & Clark, 2001) and extend current knowledge about the cognitive representations that may serve as carriers of socialization experiences for this risk group. Overall, the evidence lends support to the supposition that withdrawn adolescents are sensitive to social cues and incorporate negative feedback from the environment into their construals of agemates.

CWR Adolescents

In early adolescence (Grade 5), the peer perceptions of adolescents in this risk group—as compared to those in the LR—were lower for support but similar for trust. These findings imply that as CWR youth entered adolescence, they were inclined to see peers, in general, as unsupportive toward themselves, but not necessarily untrustworthy as persons. Although it was not possible to specify how long these adolescents had been rejected prior to Grade 5, it is conceivable that the duration of their rejection was such that it had negatively colored their perceptions of peers' supportiveness toward them (self-referent attributions) but had not, as of yet, diminished their view of agemates' trustworthiness (i.e., generalized trait attributions). This pattern of findings is consistent with the premise that self-referent perceptions (i.e., those based on rejection) develop before generalized perceptions, which are slower to emerge and change because they also are influenced by adolescents' perceptions of peers' behavior toward persons other than themselves.

However, across adolescence (i.e., the 4-year span of this investigation), our findings showed that CWR adolescents—unlike low-risk adolescents—developed more negative views of peers in both of the investigated perceptual domains. That is, the trends evidenced for these adolescents included an increasingly negative construal of peers' supportiveness and a declining appraisal of peers' trustworthiness. These findings suggest that when CW youth are also CR, they not only develop less positive views of peers' supportiveness (i.e., toward themselves) but also downgrade their PPT as persons (i.e., general traits or social orientations). This pattern of findings is consistent with the premise that initial self-referent perceptions eventually become the basis on which broader generalizations are formulated. In this case, it may be that when adolescents who are sensitive to social cues (i.e., CWR adolescents) are exposed to unrelenting rejection, they increasingly regard the emotions and actions that are directed toward them (lack of support) as indicators of agemates' interpersonal traits or social orientations, coming to see them as untrustworthy in general. This interpretation corresponds to attribution theories (see Weiner, 1986), which posit that individuals typically attribute consistent behavioral and emotional responses to others' internal, stable traits, rather than to external or situational factors.

CW Adolescents

Conversely, in the absence of chronic peer group rejection, CW youth *initially* held their peers in high regard, construing them as both supportive and trustworthy. Early in adolescence (i.e., Grade 5), therefore, CW adolescents' peer perceptions resembled those of low-risk youth. It is possible that nonrejected withdrawn preadolescents held these positive peer perceptions because they had low rates of interaction with peers and, thus, lacked the experiential basis from which to form accurate inferences about peers' supportiveness or trustworthiness. These findings suggest that in the absence of peer rejection, withdrawn youth are not, as previously theorized (Boivin & Hymel, 1997), cognitively predisposed to negatively evaluate their peers. More broadly, these findings indicate that as CW youth enter adolescence, they are generally more positive in their assessments of peers.

Across development, however, the *trajectories* of CW youth's peer perceptions differed for perceived support versus trust. Specifically, in contrast to the LR, CW adolescents' support perceptions eroded significantly as they matured, whereas their perceptions of peer trustworthiness continued to resemble low-risk adolescents (i.e., their trust trajectories remained high as they matured). Why CW youth's PPS declined as they matured, essentially following a trajectory resembling that observed for CWR adolescents, remains to be understood. Perhaps during early adolescence, when youth begin to separate from parents and rely on peers for emotional support, persistently withdrawn youth become more cognizant of the lack of support they receive from agemates. For example, withdrawn youth may not have formed quality peer relationships, such as

friendships, that offer the intimacy that makes it possible to share ones' needs with others and seek their support. In other words, withdrawn youth may find they lack peer confidantes to whom they can count on for support and, in turn, do not receive support from peers because agemates are unaware of their needs. Similarly, peers may be unsupportive of withdrawn youth because they are unaware of such classmates in general (e.g., neglected by peers) and may overlook such adolescents when forming cliques or crowds that offer support to their members. It also may be that as CW youth progress through adolescence, they become increasingly sensitive or reactive to social cues, or are increasingly susceptible to internalizing difficulties (e.g., depressogenic beliefs) that cause them to construe their social environment in negative ways. For these or other reasons, adolescence appears to be a time during which CW adolescents increasingly develop the view that they are not personally receiving support from their peers; however, changes in perceived peer support may not have developed in such a way as to alter their PPT in general.

Chronic Aggression and Peer Perceptions

The findings obtained also extend current knowledge about the cognitive representations that may serve as carriers of socialization experiences for CAR and CA adolescents. Overall, the evidence implied that not only chronic aggression but also the combination of chronic aggression and chronic rejection were negatively associated with adolescents' peer perceptions.

CAR Adolescents

Compared to low-risk youth, adolescents beset by these risk factors were less likely to see peers as supportive or trustworthy, and this mind-set was evident early in adolescence (from the study's inception at Grade 5) and sustained (as denoted by an absence of increasing or decreasing trajectories) across the study's time frame (Grades 5–8). Although it is unclear how long these adolescents had been rejected prior to Grade 5, past research indicates that it is common for aggressive children to be rejected, especially at younger ages (Coie, 1990; Ladd, 2006). In light of such findings, it is conceivable that the prior duration of CAR adolescents' rejection had been long enough to have degraded their perceptions of peers' supportiveness toward them (self-referent attributions) and their view of peers' trustworthiness as persons (i.e., generalized trait attributions). These findings lend support to the hypothesis that when CA adolescents are persistently rejected, rejection serves to sustain already existing negative peer perceptions across time.

CA Adolescents

Even though the support and trust perceptions of both CA and CAR adolescents were initially more negative (at Grade 5) and relatively unchanging (lacking significant shifts in trajectories) as compared to low-risk adolescents, follow-up analyses suggested that significant disparities between these two risk groups might have emerged over time. By Grade 8, the PPS no longer differed for CA versus low-risk adolescents, whereas those of CAR youth remained significantly lower. Perhaps when CA children are not CR, they might develop more favorable construals of peers over time.

Alternatively, CA adolescents' perceptions might reflect internalized representations of earlier peer maltreatment. Given that aggression correlates more highly with rejection at younger than older ages (see Coie, 1990; Ladd, 2006), it is likely that even the CA-nonrejected adolescents encountered some negative social experiences prior to fifth grade. Thus, CA-nonrejected adolescents might have incorporated earlier peer feedback into their perceptions, and these negative views were carried forward into adolescence even though they were no longer rejected. Aggressive-nonrejected adolescents may have moved out of rejection because their aggressive acts were more sophisticated and successful than their rejected counterparts who may have remained rejected because they were "ineffectual fighters" (Perry, Williard, & Perry, 1990) who likely faced continued dislike from their peers. Or, negative representations of peers might have been generalized from earlier aversive experiences within the family (e.g., MacKinnon-Lewis et al., 1999; Rudolph et al., 1995).

Overall, these findings differ from prior evidence indicating that aggressive adolescents' peer perceptions resemble those of average adolescents (Rabiner et al., 1993; Rudolph & Clark, 2001). This discrepancy likely reflects methodological differences. Specifically, the sample of aggressive adolescents identified and followed in this investigation had stable aggressive propensities (i.e., over a 3- to 4-year period), and a portion of these youth also experienced sustained social difficulties (i.e., chronic peer rejection). This is in contrast to past research

because it has been rare for investigators to identify aggressive adolescents based on the perseverance of their behavior patterns. Instead, data from a single time point have typically been used to identify aggressive children. Adolescents with stable aggressive tendencies may, because of inherent interpretational propensities (Crick & Dodge, 1994), prolong participation in coercive interaction cycles with agemates or family members (Caspi et al., 1987), or because of other yet-to-be identified factors, develop more negative perceptions about their peers than those with time-limited difficulties. For example, it may be that CA adolescents develop heightened depressive symptoms over time; the joint occurrence of aggression and depression may precipitate the development of more negative peer perceptions (Rudolph & Clark, 2001). Furthermore, current findings are in agreement with a large body of research demonstrating that aggressive adolescents are prone toward making hostile attributions about peers (Crick & Dodge, 1994; Dodge, 1993; Gifford-Smith & Rabiner, 2004; Orobio de Castro et al., 2002).

Further research is needed to disentangle these alternative explanations for the presence of negative peer perceptions in both CA-nonrejected and CAR adolescents and to identify the developmental stage at which aggressive youth form their negative peer perceptions. Aggressive adolescents appear less likely than withdrawn youth to base their assessments of peers on recent social encounters.

Rejection and Peer Perceptions

Finally, chronic rejection (i.e., alone, or distinct from chronic behavioral risks) was linked with adolescents' peer perceptions, but these associations varied by type of perception and gender. For perceived support, CR boys' initial perceptions were lower than those for CR girls. For perceived peer trust, CR girls' initial perceptions were lower than those for CR boys, but CR girls' trust perceptions increased significantly as they matured, whereas CR boys' trust perceptions remained relatively constant. Although this gender difference in trust trajectories was not predicted, it is interesting to consider in light of developmental changes in the nature of peer relationships during adolescence. During this stage, the dyadic friendships of girls become increasingly characterized by the provision of trust (Rose & Rudolph, 2006). It may be that early compromises in rejected girls' trust perceptions within the broader peer group are counteracted by emerging trust within close friendships, allowing even CR girls to develop a growing sense of trust in their agemates.

Limitations and Future Implications

Several limitations of past research were addressed by examining whether stable, maladaptive behavior and chronic peer group rejection were associated with the development of adolescents' peer perceptions during early adolescence. Notably, the prospective longitudinal design allowed for the tracking of divergent developmental pathways across different groups of chronically at-risk youth.

Despite these methodological strengths, the peer perception trajectories identified for adolescents in the different risk groups potentially could reflect confounding factors not assessed in the present investigation. It is possible that the risk groups differed in ways other than the measured behavioral and peer group rejection histories, such as the number or quality of adolescents' friendships, potential cognitive biases, or even early behavioral styles that helped to determine whether they were rejected or accepted; such factors also might have influenced youth's peer perceptions. In addition, the trajectories of peer perceptions might reflect, in part, changes in adolescents' school environment as most youth transition from a self-contained classroom in fifth grade (primary school) to a more varied school environment in sixth grade (secondary school). In these secondary school environments, adolescents might have more opportunities to recognize or become aware of their peer status (e.g., multiple classes with different peers, organized sports) and these realizations might influence their peer perception trajectories. Were this the case, however, it is not clear that influences of this type would have differed for the types of risk groups studied here. Findings from analyses that took transition timing into account failed to support this premise suggesting that the school transitions were not significantly related to peer perception trajectories for the risk subtypes studied here.

Finally, it is possible that certain risk groups (i.e., withdrawn-rejected adolescents) experienced increasingly aversive peer interactions over time, whereas others (i.e., the aggressive and aggressive-rejected groups) experienced less negative or even more positive peer interactions with time. Thus, the nature of youth's social experiences might have contributed to the development of peer perception trajectories beyond their peer group status.

Although this study furthered our understanding of the development of young adolescents' peer

perceptions in the context of chronic behavioral and relational risks, there is still a need to determine whether peer perceptions mediate the link between social experiences and later adjustment. Evidence from a few studies suggests that social cognitions do influence adolescents' later psychological adjustment (e.g., Ladd & Troop-Gordon, 2003; Troop-Gordon & Ladd, 2005). However, prior research typically has failed to examine whether mediational models hold for both aggressive and withdrawn youth at different developmental periods. This seems an important distinction to make, as the present findings suggest that peer group rejection influences the development of withdrawn, but not aggressive, youth's peer perceptions in early adolescence.

Conclusion

This study advances knowledge about the development of adolescents' peer perceptions in the context of chronic peer rejection and stable, maladaptive behaviors. Results demonstrate heterogeneity in the developmental trajectories of peer perceptions in withdrawn and aggressive adolescents in the presence versus absence of persistent peer rejection. Collectively, these findings highlight the interplay between youth and their social environments in shaping peer perceptions.

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