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Relational Aggression, Victimization, and Language Development

Implications for Practice

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This review explores the development of relational aggression and relational victimization among peers, with specific emphasis on clinical implications for speech–language pathologists. Developmental manifestations of relational aggression and victimization are reviewed from early childhood through emerging adulthood. The concurrent and prospective associations between relational aggression and language development are examined specifically. Best practices in the assessment and evaluation of relational aggression and victimization are introduced and the current empirically based interventions for relational aggression and victimization are highlighted. Finally, a developmental psychopathology framework is introduced to guide future clinical practice and scholarship in the study of children and adolescents with comorbid language and peer relationship problems.
Key words: *developmental psychopathology*, *language development*, *peer relationships*, *relational aggression*, *relational victimization*

PEER RELATIONSHIPS serve as a salient context for social–emotional, cognitive, and behavioral development (Hartup, 1996), beginning in early childhood and continuing throughout the lifespan (Rubin, Bukowski, & Parker, 2006). Meaningful and sustained peer relationships become prominent around 30 months of age and continue to exert a powerful influence on children throughout the early and middle childhood period (Parker, Rubin, Erath, Wojslawowicz, & Buskirk, 2006). The developmental psychology literature indicates that skills acquired within peer relationships during early childhood (e.g., conflict resolution, emotion regulation, perspective taking, friendship formation capacity, and prosocial skills) are carried forward into peer interactions in middle childhood and adolescence (see Ostrov & Weinberg, 2004; Sroufe, Egeland, & Carlson, 1999).

Peer relationship problems may manifest in a number of ways, including aggression, victimization, social withdrawal, and peer rejection (Bierman, 2004; Parker et al., 2006). They also can be exacerbated by co-occurring language problems (Conti-Ramsden & Botting, 2004; Gallagher, 1991; Redmond & Timler, in press). The present review addresses the development of relational aggression and relational victimization, as well as techniques for school-based assessment and intervention for relational aggression among peers. This article also introduces a developmental psychopathology framework

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for research and practice that may facilitate interdisciplinary collaboration among psychologists, mental health providers, and speech–language pathologists (SLPs).

RELATIONAL AGGRESSION AND VICTIMIZATION: DEFINITIONS AND DEVELOPMENTAL MANIFESTATIONS

Aggression is defined as the intent to hurt, harm, or injure another person (Dodge, Coie, & Lynam, 2006). Traditionally, *physical aggression* (e.g., hitting, kicking, punching, pushing) has been defined as the intent to harm another person via physical force or the threat of physical harm (Dodge et al., 2006). An additional subtype of aggressive behavior, relational aggression, is apparent during early childhood and continues throughout development. It is defined as using the removal or the threat of the removal of relationships as the means of harm (e.g., directly excluding a child from play by saying "you can't play with me," or "you can't be my friend"; Crick & Grotpeter, 1995). Relational aggression may be displayed in both verbal (e.g., "You can't come to my birthday party") and nonverbal ways (e.g., placing hands on a chair so a child may not sit at the snack table) and may be delivered in these direct ways or more covertly (e.g., spreading malicious rumors about others) during later developmental periods.

Whereas relational aggression focuses on the child acting as the aggressor, relational victimization focuses on the child who is the recipient of this aggression. Peer victimization has been characterized as frequent or chronic receipt of aggressive behaviors from one or more peers over time (Olweus, 1995; Schwartz, Dodge, Pettit, & Bates, 1997). Recently, this definition has been expanded to include exposure to direct confrontation (e.g., physical, verbal, or nonverbal aggression) or being threatened with the removal of the relationships as the means of harm (e.g., relational aggression; Crick & Grotpeter, 1995; Juvonen & Graham, 2001). Less research has focused on the study of subtypes of peer victimization, but in recent years, researchers and clinicians have been directing more attention to the development of physical and relational victimization (Juvonen & Graham, 2001). Within the scope of the present review, we focus only on relational aggression and the chronic or frequent receiving of relational aggression, which has been defined as relational victimization (Crick & Grotpeter, 1996) and not other conceptually related constructs (Bjorkqvist, 1994; Cairns, Cairns, Neckerman, Ferguson, & Gariepy, 1989; Galen & Underwood, 1997).

Developmental researchers have focused on exploring the developmental manifestations of relational aggression and victimization (Crick et al., 2001; Crick, Ostrov, & Kawabata, 2007). During early childhood, relational aggression is often direct, and the identity of the perpetrator is known (Crick, Ostrov, Appleyard, Jansen, & Casas, 2004). Even in contexts that involve malicious secret spreading, the behaviors have been observed to be overt (i.e., within earshot and view of the victim) (Ostrov, Woods, Jansen, Casas, & Crick, 2004). Finally, during early childhood, the behaviors are often in response to a specific situation or event that occurred in the present moment and not in response to past events (Crick, Werner, et al., 1999). In later developmental periods, the behaviors become more covert, involving more sophisticated means of harm (Crick, Werner, et al., 1999).

The role of gender in the development of relational aggression has often been explored in past research. In general, during early childhood and within peer contexts, girls are more relationally aggressive than boys, and they direct more relational aggression to female peers than they do to male peers (Bonica, Yeshova, Arnold, Fisher, & Zeljo, 2003; Crick, Casas, & Mosher, 1997; Crick, Ostrov, Burr, et al., 2006; Hawley, 2003; Nelson, Robinson, & Hart, 2005; Ostrov, 2006; Ostrov et al., 2004; Ostrov & Keating, 2004; Russell, Hart, Robinson, & Olsen, 2003; Sebanc, 2003) although not all authors find these effects (Estrem, 2005; Hart, Nelson, Robinson, Olsen, & McNeilly-Choque, 1998; Johnson & Foster, 2005). One study conducted during the early

school years indicated that 7- and 8-year-olds inferred relationally aggressive story characters as being female and physically aggressive characters as being male (Giles & Heyman, 2005). The findings are more mixed at subsequent developmental periods and seem to be a function of the type of methods used and the culture studied. However, the evidence seems to indicate that girls continue to be more relationally aggressive than boys during middle childhood (Crick, 1996; Crick & Grotpeter, 1995; Crick, Ostrov, & Werner, 2006; French, Jansen, & Pidada, 2002; Murray-Close, Ostrov, & Crick, 2007; Rys & Bear, 1997) but not all authors find this effect (David & Kistner, 2000; Tomada & Schneider, 1997).

Across development, sanctions for physical aggression become increasingly costly; thus, it may not be surprising that males are reported as being high in relational aggression during adolescence and emerging adulthood (Crick et al., 2007), perhaps as they learn to avoid penalties for physical aggression. Even in developmental periods when clear gender differences are no longer present, however, relational aggression predicts social–psychological adjustment problems more for girls and women than for boys and men (Werner & Crick, 1999).

OUTCOMES ASSOCIATED WITH RELATIONAL AGGRESSION AND VICTIMIZATION

Across development, both relational aggression and relational victimization have been associated with poor social–psychological adjustment. Aggressors and victims both face serious developmental risks.

For aggressors, relational aggression has been associated with concurrent and prospective peer rejection, loneliness, student–teacher conflict, deception, impulsivity–hyperactivity, and a lack of prosocial behavior in early childhood (Crick et al., 1997; Crick, Ostrov, Burr, et al., 2006; Ostrov, 2006; Ostrov et al., 2004; Ostrov & Crick, 2007; Ostrov & Godleski, 2006). In middle childhood, relational aggression has been associated with more severe forms of psychopathology including ADHD (Blachman & Hinshaw, 2002; Zalecki & Hinshaw, 2004), borderline personality disorder features (Crick, Murray-Close, & Woods, 2005), internalizing (e.g., loneliness, social isolation, withdrawal, depressive symptoms), and externalizing problems (e.g., delinquency; Crick & Grotpeter, 1995; Crick, Ostrov, & Werner, 2006; Murray-Close et al., 2007). In adolescence, relational aggression is predictive of eating disorders and personality disorders (Werner & Crick, 1999), alcohol use (Storch, Werner, & Storch, 2003), symptoms of disruptive behavior disorders (Prinstein, Boergers, & Vernberg, 2001), as well as jealousy and poor relationship quality within romantic relationships (Linder, Crick, & Collins, 2002).

For victims, similar developmental associations have been identified. For example, during early childhood, relational victimization has been associated with peer rejection, loneliness, internalizing problems, and a lack of prosocial behavior (Bonica et al., 2003; Crick, Casas, & Ku, 1999; Ostrov et al., 2004). In middle childhood, relational victimization is associated with problems such as peer rejection, social anxiety, social avoidance, loneliness, externalizing and internalizing symptoms (Crick & Grotpeter, 1996; Crick & Nelson, 2002; Cullerton-Sen & Crick, 2005) as well as alcohol, tobacco, and marijuana use (Sullivan, Farrell, & Kliewer, 2006). For adolescents, relational victimization is predictive of social phobia (Storch, Masia-Warner, Crisp, & Klein, 2005), social anxiety (La Greca & Harrison, 2005), loneliness (Storch & Masia-Warner, 2004), and internalizing problems (Prinstein et al., 2001). In sum, both relational aggression and victimization are associated with maladaptive outcomes.

LANGUAGE AND RELATIONAL AGGRESSION AND VICTIMIZATION

Researchers have demonstrated that some children with language impairment (LI) are

at higher risk for impairments in social competence (e.g., assertiveness, frustration, tolerance) and internalizing problems. For example, some children with LI display social withdrawal (i.e., reticence, spend more time in solitary-passive or solitary-active play than in interactive collaborative play) and less prosocial behavior (Fujiki, Brinton, Morgan, & Hart, 1999; Hart, Fujiki, Brinton, & Hart, 2004). Furthermore, subgroups of young children with LI and behavior problems develop future conduct and antisocial behavioral problems including externalizing disorders (Brownlie et al., 2004; Conti-Ramsden & Botting, 2004; Stoneham, 2001; Van Cleave & Davis, 2006).

Studies have shown that children with LI often have social withdrawal problems, which appear as reticence, solitary-passive, and solitary-active withdrawal (Fujiki et al., 1999; Hart et al., 2004). Such children may be at risk for additional peer problems, as are children whose social withdrawal stems from being fearful, anxious, depressed, or victimized (Asher, Parker, & Walker, 1996; Katz & Buchholz, 1999). Socially withdrawn children often are less accepted by their peers, less assertive, less socially skilled, and display more negative affect than typically developing peers (Dumas & LaFreniere, 1993; Hart et al., 2000; Rubin, Chen, & Hymel, 1993). Such difficulties interfere with their formation of meaningful peer relationships. Doctoroff, Greer, and Arnold (2006) also found that emergent literacy problems were associated with a higher frequency of observed solitary play in a large diverse sample of boys and girls during early childhood.

To date, researchers have not closely examined the development of relational aggression or victimization in children with LI. Longitudinal research has revealed associations between specific language impairment (SLI) and peer victimization. Specifically, Conti-Ramsden and Botting (2004) followed a group of children ($n = 242$) with specific LI in England from middle childhood (i.e., 7-year-olds) and found that at age 11, they were significantly more likely than a comparison group to be a regular target of peer physical and verbal victimization (measured by the My Life in School Questionnaire). Deficient expressive language skills (measured with the Expressive Vocabulary Test [EVT]) at age 7 seemed to be most associated with peer physical victimization 4 years later (e.g., "During this week, another child in school tried to kick me"; Conti-Ramsden & Botting, 2004; Knox & Conti-Ramsden, 2003). Researchers also have found that children with SLI had difficulty making friends and were not accepted by their peers (Conti-Ramsden & Botting, 2004; Fujiki et al., 1999).

Although LI and development of relational aggression have not been closely examined, researchers have studied associations of receptive and expressive language in aggression for typically developing children with a range of language abilities. The first study of this type reported that receptive vocabulary scores were positively associated with concurrent relational aggression (Crick, Werner, et al., 1999). Bonica et al. (2003) also documented a positive association between expressive language and teacher-reported relational aggression. A third study partially replicated this finding, as Hawley (2003) found that teacher-reported relational aggression was positively associated with concurrent receptive language for preschool-aged girls but not for boys. However, a fourth study diverged from those findings and indicated that as teacher-reported relational and physical aggression increased, expressive and receptive language scores decreased (Estrem, 2005). Finally, Park et al. (2005) found that children's receptive language abilities during early childhood were negatively predictive of both future relational aggression and physical aggression during middle childhood. Park et al. also found that expressive language skills in early childhood were positively associated with relational aggression in middle childhood. Unfortunately, these authors were not able to test and control for initial levels of relational aggression. In sum, across the five studies the findings are mixed. We echo the call for further prospective

longitudinal research to carefully address these questions in samples of children with typical and atypical development (Heim & Benasich, 2006).

PSYCHOLOGICAL ASSESSMENT TECHNIQUES

The changing developmental manifestations of relational aggression require different assessments (i.e., observations, teacher and parent report, peer sociometrics, and self-report) at each developmental period. Most assessment techniques for relational aggression are designed for use in school settings, but in some cases they may be used in other settings (e.g., laboratory, clinic) as well. The measures described here were developed for psychologists to use with typically functioning children. SLPs and communication scholars may help move the developmental field forward by investigating adaptations of these measures for clinical use among samples of children with LI (see Gallagher, 1991; Redmond, 2002).

Naturalistic observations

During early childhood, when aggressive behaviors are most direct and immediate, naturalistic observations are an efficient means to document these behaviors. Under the proper conditions, however, observations may be used throughout development. Naturalistic observation schemes exist to assess children's relational aggression conducted during free play using an adaptation of procedures (Crick, Ostrov, Burr, et al., 2006) developed by Ostrov and Keating (2004) and reviewed by Leff and Latkin (2005). In the Early Childhood Observation System (Ostrov & Keating, 2004), a focal child approach can be used, with each child being observed for 10 min per session by a trained observer (for specific codes, see Table 1). Typically this method involves the focal child being observed eight times (a total of 80 min per child at each assessment), although Ostrov and Keating found that reliable and valid observations may be conducted with as few as five sessions (i.e., 50 min total per child). Observers always conduct observations close enough to the focal child to hear and see the full peer interaction.

Assessments of reliability are conducted throughout the study to avoid observer drift, which occurs when an observer deviates from the way in which behaviors were operationalized during training to a personal view of the behavior. Intra-Class Correlations (a standard means of assessing interobserver agreement) must be assessed on 15% to 30% of the observations and found to be consistently above .70 to provide evidence for favorable interrater reliability (Crick, Ostrov, Burr, et al., 2006; Ostrov, 2006; Ostrov & Keating, 2004). This observational method has been found to have acceptable convergent validity (see Table 1), with moderate correlations between teachers and observers for relational and physical aggression (Crick, Ostrov, Burr, et al., 2006; Ostrov, 2006; Ostrov & Keating, 2004). These levels of correspondence are consistent with validity coefficients for other observations of physical aggression and are deemed acceptable by current convention (Leff & Latkin, 2005). In their review of the Early Childhood Observation System, Leff and Latkin (2005) concluded that "...strengths... include that it can be used across multiple school settings, the codes are well-defined, training procedures are well-articulated in the manual, and initial reliability and validity data are promising" (p. 484). Other classroom-wide observation schemes for studying relational aggression have been proposed by McEvoy, Estrem, Rodriguez, and Olson (2003) and by McNeilly-Choque, Hart, Robinson, Nelson, and Olsen (1996).

Analogue observations

Semistructured observations, involving analogue situations designed to mimic typical classroom activities, may also be used to observe relational aggression in young children. Ostrov and Keating (2004) created a brief analogue situation to test various aggressive and

Table 1. Naturalistic observation coding scheme (early childhood observation system)

	Exemplars of behavior	Interrater reliability	Convergent validity (Teacher report and observation correlations)
Physical aggression	Hit, slap, push, kick, taking objects, and threats of physical aggression: "I'll pinch you if you don't give me that. . ."	ICCs from .75 to .96	r = from .40 to .45
Relational aggression	Exclusion (verbal: "You can't play with me/us," nonverbal: Holding hands out so child can't enter play area), Friendship Withdrawal: "I will not be your friend anymore unless. . ."	ICCs from .81 to .82	r = from .40 to .55
Verbal aggression	Mean names and verbal insults. Other teasing and taunting not involving the relationship or physical force	ICCs from .64 to .81	r = .40
Prosocial behavior	Sharing, helping, and inclusion in a game or activity	ICCs from .73 to .90	Not published

Note. Reliability and validity coefficients as reported in Crick, Ostrov, Burr, et al. (2006), Ostrov (2006), Ostrov et al., (2004), Ostrov, Gentile, and Crick (2006), and Ostrov and Keating (2004). Additional codes for received behavior (e.g., received prosocial behavior; physical and relational victimization) are part of the observation system. The full coding manual and observation forms for research purposes are available upon request from the first author. The observation measure was originally published in Ostrov and Keating (2004). ICC = Intra-Class Correlation Coefficient.

prosocial behaviors (i.e., within dyads or triads) in early childhood. The situation involved a coloring task involving limited availability of the preferred colorful crayon. Either mixed or same-gender dyads or triads can be invited to participate in the assessment. Each assessment includes three trials of 3 min each (total time = 9 min). For each trial, the children are given the same developmentally appropriate picture to color (e.g., Elmo). For triads, three crayons are placed on the table equidistant from all children. One crayon is the functional tool (e.g., red crayon for Elmo picture) and two are functionally useless white crayons. The children are instructed on how to use a 3-min hourglass to indicate how much time remains for each picture. At the end of the 3-min trial, the experimenter collects the 3 pictures and crayons and distributes the new picture and new crayons. At the end of the assessment, the children are each given access to a box of crayons to diminish any distress that was experienced during the session. With this technique, the children may be videotaped

Table 2. Semistructured observation system (coloring task) procedures

Procedure	Ostrov et al. (2004)	Ostrov and Keating (2004)
Sample characteristics	Sample size = 60	Sample size = 48
	Age: $M = 54$ months, $SD = 6.06$	Age: $M = 64$ months, $SD = 6.77$
Group	Triad	Dyad
Sessions	3 developmentally appropriate pictures	3 developmentally appropriate pictures
Time	3 min per session (9 total)	3 min per session (9 total)
Materials	9 total pictures (pictures were digitally scanned, and most dark images were removed to make white crayon functionally useless)	6 total pictures
	9 total crayons (2 white crayons per session)	6 total crayons (1 white crayon per session)
	3-min hourglass	Three 1-min hourglasses
	Small digital video camera (positioned in corner of the room)	Large video camera (positioned in front of children)
Specific procedures	Male and female experimenters	Male experimenter
	Experimenter partially hidden	Same and mixed gender groups
	Same gender groups	Children given sticker for participation
	Children given full box of crayons to color with at the end of the session	
Coding	Coders unaware of hypotheses	Coders unaware of hypotheses
	Reliability assessed for 30%	Reliability assessed for 58%
	Behaviors are summed within category (Ostrov & Keating, 2004)	Behaviors are summed within category

and aggressive and prosocial behaviors can later be reliably coded using the same naturalistic observational codes from the Early Childhood Observation System. This brief analogue system has been found to predict children's behavior according to concurrent naturalistic observations (with r's ranging from .45 to .48 for relational, verbal, and physical aggression for girls and a significant correlation of .64 for boys and physical aggression) and to predict future (12 months later) relational aggression in naturalistic interactions ($r = .53$) and peer-reported relational aggression ($r = .68$; Ostrov et al., 2004; Ostrov & Keating, 2004).

To date the coloring task has been used only in developmental research in early childhood and has not been used as part of a clinical assessment. SLPs and other school-based professionals may find that this brief analogue procedure, if implemented in a systematic and ethical manner, is helpful to evaluate children's social competence skills (e.g., negotiation, prosocial behavior, assertiveness) as well as suggesting some points of intervention regarding externalizing behavior (e.g., physical and relational aggression). Although not tested and not developed for this purpose, the coloring task or similar procedures could also be useful within the context of in vivo peer-based intervention to facilitate appropriate interactions between peers in their natural environment and to improve frustration tolerance and pragmatic communication skills among children. Despite the required time to code the videotapes, we argue that the rich qualitative and quantitative data that are revealed with this direct observation procedure is unlike the nature of reported data obtained

from teacher, parent, or peer informants. Future research is needed to determine the appropriate norms for both typical and atypical samples.

Teacher and parent report

Assessment strategies, with paper and pencil instruments for instance, may be similar for both teachers and parents, but each set of informants is privy to different information. Despite the benefits of assessing multiple contexts, few studies have included parent reports of relational aggression (Crick et al., 2004). Yet it may be particularly important to include parent report, as it appears that the early parent–child relationship has a role in the etiology of relationally aggressive behavior (Casas et al., 2006).

A time efficient measure of relational aggression is the Children's Social Behavior Scale–Teacher Report (CSBS-TR; Crick, 1996; Crick, Bigbee, & Howes, 1996), which has been used as both a parent and a teacher report of relational aggression in children (ranging in age from 8 to 12 years). This measure contains six items, such as "telling friends that s/he will not like them if they don't do what s/he says." Respondents are asked to rate these items regarding the focal child's behavior with a 5-point response scale (Crick, 1996). Crick and colleagues demonstrated appropriate internal consistency for the relational aggression items (Casas et al., 2006; Crick et al., 1996, 1997). This measure has also demonstrated appropriate factor structure (Crick & Grotpeter, 1995). Furthermore, test–retest reliability for relational aggression, as measured by the CSBS-TR, has been high over 6 months (Collett, Ohan, & Myers, 2003; Crick, 1996). In addition, this measure has demonstrated moderate correlation with peer report of relational aggression in both boys and girls (Crick, 1996). In the preschool teacher report version of this measure (i.e., PSBS-TF; Crick et al., 1997), scores also correlate with observed aggression (Ostrov & Keating, 2004). Some of the traditional items on this measure may not be appropriate for children with LI, as many of the items require verbal communication, but the responses may reveal helpful information nevertheless. In such cases, SLPs should use observational assessments that also consider nonverbal manifestations of behavior, although nonverbal communication could also be impaired.

Self-report

Self-report of aggressive behavior may be more valid for older children because relational aggression becomes more covert, subtle, and complex over time (Crick, Casas, & Nelson, 2002). An example of a measure of self-reported relational aggression can be found in Linder et al. (2002). Items may be adapted to include varying conceptualizations of relational aggression such as "My friends know that I will think less of them if they do not do what I want them to do," which are assessed on a Likert scale from 1 (*not at all true*) to 7 (*very true*). This measure has demonstrated internal consistency in college students (Linder et al., 2002). Again, SLPs should consider whether the linguistic complexity of items on self-report methods may influence the ability of children with LI to understand the items. Appropriate modifications might include adapting self-report methods to an interview format with a concrete response scale anchored by pictures to which the child may point to indicate her response.

Hypothetical tasks

Since some children with LI may have particular problems with social–cognitive or pragmatic language skills (see review by Redmond & Timler, in press), it is increasingly important to explore the social–cognitive problems that both typically and atypically developing children display (Crick & Dodge, 1994). Relationally aggressive children may have specific patterns of social–cognitive functioning that may be apparent to SLPs and provide further indication for the need for intervention. Specifically, relationally aggressive children often have a hostile attribution bias (HAB) for ambiguous provocation situations (Crick, 1995). That is, when placed in an ambiguous

hypothetical situation (e.g., a child overhears others discussing a party and wonders why she has not been invited), relationally aggressive children will often interpret the intent as hostile rather than benign and, in turn, they respond with reactive aggressive behavior (Crick, 1995; Crick, Grotpeter, & Bigbee, 2002). Intervening for HAB may be effective for decreasing school-based relational aggression (Leff, Goldstein, Angelucci, Cardaciotto, & Grossman, in press) and also may be an important component of language treatment for children identified with pragmatic communication disorders.

Aspects of social cognition, such as HAB, can be assessed by asking children to self-report on relational intent attributions and feelings of distress in response to socially ambiguous situations. One measure, involving hypothetical-situation vignettes of socially ambiguous relational provocation situations, developed by Crick (1995), has been used with third to sixth graders. Hypothetical stories depict relational provocation by focusing on potential rejection (e.g., discovering that a friend is playing with someone else). For each story, the child indicates a reason for the provocation with two options indicating hostile intent, such as "Your friend was mad at you," and two indicating benign intent, such as "Your friend didn't see you on the playground." The next question asked the child whether the provocative behavior was intended to be mean or not.

In three independent samples, Crick, Grotpeter, et al. (2002), Crick (1995), and Leff et al. (2006) demonstrated acceptable internal consistency for measures of HAB for relational provocations for children without LI. More research is needed to explore the usefulness of hypothetical tasks and situation vignette methods with children with LI and comorbid learning disability, for whom appropriate accommodations may be required. For example, these children may have diminished abstract reasoning and cognitive processing skills and standard paper-and-pencil versions of the hypothetical tasks may need to be adapted to a cartoon (see Leff et al., 2006) or video format with a concrete response scale anchored by pictures to which the child may point to indicate her response.

Peer report

Sociometric evaluations in the form of peer nominations and ratings may offer important information about peer relationships across development. Such techniques have been used with children ranging from early childhood through early adolescence. These techniques may be particularly important for SLPs in their work with children with SLI, who have been found to be less well accepted than typically developing peers (Fujiki, Brinton, Hart, & Fitzgerald, 1999). With preschool children or others who are not able to read, sorting pictures of classmates into limited nominations (usually the top three children) of those liked most ("like to play with a lot") and least ("don't like to play with") may be useful (Harrist & Bradley, 2003; McNeilly-Choque et al., 1996). Sociometric ratings in which children sort every classmate have been found to be valid and reliable during early childhood (ages 3 to 8 years; Burr, Ostrov, Jansen, Cullerton-Sen, & Crick, 2005). Prior to age 3, children may have difficulty understanding the task (Hymel, 1983). From either ratings or nominations, one can categorize children as rejected or accepted (Harrist & Bradley, 2003) and get a sense of their peers' perceptions of their general behavior.

In studies with children ranging from third to ninth grades, ratings and nominations can also involve selecting individuals, who fit item descriptions, such as a "peer who tries to make another classmate not like others by spreading rumors about them" (Crick 1997; Rose, Swenson, & Waller, 2004). Peer ratings of aggression correspond with observations (Crick, Ostrov, Burr, et al., 2006;) and teachers' evaluations in early childhood (Wu, Hart, Draper, & Olsen, 2001). Because formal sociometric assessments may be time-consuming, anonymous surveys could be used in middle childhood and adolescence to assess perceptions of school climate and peer relationships (Yoon, Barton, & Taiariol, 2004). Peer

relationship researchers should partner with SLPs to modify peer sociometric assessments so that children with LI may also participate in these procedures. A challenge for the use of peer sociometrics is that typically 70% of children in a classroom must participate for valid assessments (Crick & Ladd, 1989) and ethically, SLPs should obtain permission from parents for all the children in the room to participate in the procedure. As an alternative, teachers in early childhood classrooms have demonstrated themselves to be competent informants on similar information (McEvoy et al., 2003; Wu et al. 2001).

Implications for collaboration in assessment (between SLPs and psychologists)

Assessment of social skills and social competence can be conducted by interdisciplinary teams, including psychologists, SLPs, and social workers. Casas et al. (2006) and McEvoy et al. (2003) suggested that multiple informants across contexts may be important for relational aggression and may be particularly important for children with LI (Redmond, 2002). In addition, as children develop, modifying assessment measures is important to measure relational aggression accurately at different ages.

Those assessments that would be most helpful to school-based SLPs would be ones that can be carried out with ease within the usual context of speech and language assessment; thus, parent and teacher reports may be particularly relevant. Varied members of the team might collect the interview data, which could then be interpreted through interdisciplinary discussion. With older clients, self-report may also be a viable option. With the client's consent, structured interviews could be recorded by a psychologist and analyzed for multiple language features by an SLP. Observations, although more time-consuming, could provide information for the SLP regarding both aggressive behavior and language/communication skills in vivo. Placing the peer and language behavior in context via observations might offer insight into domains to target during intervention. As a reminder, however, norms for social development measures often are not created using samples including children with LI (Redmond, 2002). Furthermore, externalizing or internalizing symptomatology assessments that contain language-oriented items may put children with LI at a disadvantage when receptive and expressive language problems are possibly misconstrued as psychopathology (Redmond, 2002). Interpretation of results by interdisciplinary teams is suggested as a means for avoiding such problems.

EVIDENCE-BASED INTERVENTIONS FOR RELATIONAL AGGRESSION AND RELATIONAL VICTIMIZATION

As developmentally salient as relational aggression appears to be, interventions targeting relational aggression have been slow in coming. Peer interventions exist to assist children who are excluded by changing their behavior through social skills training aimed at increasing appropriate interaction (Fraser, Day, Galinksy, Hodges, & Smokowski, 2004; Nangle, Erdley, Carpenter, & Newman, 2002), social–cognitive training aimed at changing underlying maladaptive cognitions (Strayer, 1984), and the peer–mediator approach aimed at increasing appropriate communicative interaction and social integration with peers (Goldstein, & Schneider, & Thiemann, 2007).

Although these interventions may help children become more accepted, most neglect to deal with generalization of skills, exclusion for nonbehavioral reasons such as disabilities or physical appearance, or the global social environment and peer group (Harrist & Bradley, 2003). In addition, interventions rarely offer global classroom approaches for reducing relationally aggressive behaviors that incorporate work with relationally aggressive individuals as well as their victims. It has been suggested that the best interventions for relational aggression would take into account peer group dynamics (Rose et al., 2004;

Young, Boye, & Nelson, 2006), address both victims and aggressors (Yoon et al., 2004), and target positive change for the entire school climate (Yoon et al., 2004; Young et al., 2006).

One of the first preventive interventions for relational aggression, called Second Step, a Violence Prevention Program, was created by the Committee for Children (Grossman et al., 1997). This school-based program attempts to teach social and emotional skills in order to increase empathy, impulse-control, problem-solving, and anger-management skills (Committee for Children, 2006). These skills are taught through scripted lessons supplemented with pictures or videos followed by discussions, role plays, or other conceptual activities such as homework (Grossman et al., 1997; Taub, 2001). The length of lessons and choice of stimuli (e.g., puppets for younger children) were created to be developmentally appropriate (Committee for Children, 2006). Van Schoiack-Edstrom, Frey, and Beland (2002) used the Second Step approach with a group of early adolescents and found positive results, such as reduced tolerance for physical and relational aggression and increased perceptions of ease in using social skills (Van Schoiack-Edstrom et al., 2002). Although this study had no control group, such preliminary findings appear to justify future interdisciplinary work with the Second Step program.

Harrist and Bradley (2003) developed an intervention on the basis of the book *You Can't Say You Can't Play* by Vivian Paley (1992). This intervention is classroom-wide in kindergarten aimed at reducing social exclusion. First, the children listened to Paley's (1992) fairy tale addressing social exclusion and inclusion, discussed feeling excluded, and participated in role plays regarding group-entry issues. The rule "you can't say you can't play" was then introduced into classroom policy in the classrooms receiving the intervention by teachers and research assistants. The rule implementation was reinforced with references to the fairy tales, discussions, and role plays as well as with banners, coloring pages, and bookmarks. The children in the classrooms receiving the intervention reported liking to play with each other more. However, teacher and observational report did not indicate changes in classroom interactions. Furthermore, the children's reported feelings of social dissatisfaction significantly increased in the intervention group (Harrist & Bradley, 2003). Thus, this intervention could be considered only moderately successful. To add to the evidence base, we recommend that future interdisciplinary studies target a more extensive array of relationally aggressive behaviors and focus on increasing social competence and friendship formation skills to replace the relationally aggressive behavior. SLPs could be of great benefit in such studies by helping modify existing modules to focus on facilitating social communication, social competence, and social interaction skills.

In addition to existing interventions, some promising interventions regarding relational aggression are being empirically derived and piloted by Leff et al. (in press). These interventions help reduce relational aggression and increase prosocial behavior and may also lend themselves to being incorporated with other programs designed to increase functional communication. Furthermore, it seems that increases in communication skills can lead to decreases in inappropriate behavior (Wickstrom-Kane & Goldstein, 1999).

To date, the evidence-based literature on peer interventions for relational victimization is limited. An example of a new promising intervention, however, is the Walk away, Ignore, Talk, Seek help (WITS) program created by Leadbeater, Hoglund, and Woods (2003). This program attempts to reduce school and classroom levels of victimization through a book-based curriculum that allows teachers to implement the program through literature and activities within the preexisting curriculum. It also includes pamphlets for siblings, as well as activity books and other reminder items such as pens and pencils. Implementation of the program appears to moderately decrease victimization and increase social competence (Leadbeater et al., 2003).

This suggests empirical questions for SLPs to investigate. Does intervention for relational aggression have an impact on communication skills? Does functional communication training reduce relational aggression? Finally, might interventions reduce victimization among children with speech disorders and LI who perceive themselves as being victimized (Savage, 2005), given the evidence that they actually may be victimized at higher rates than typical peers (Conti-Ramsden & Botting, 2004; Van Cleave & Davis, 2006)? SLPs could partner with school psychologists in conducting this intervention research. Many psychologists have small group therapy components (e.g., Leff et al., in press) in their studies, in which SLPs could serve as cofacilitators. In addition, SLPs could work with psychologists to adapt the programs and accommodate children with LI who may have receptive language problems. The use of cartoons, videos, and other alternative formats for assessment (Leff et al., 2006) and service delivery may also be particularly effective for children with LI.

IMPLICATIONS FOR PRACTICE

How may developmental, school, and clinical-child psychologists collaborate with SLPs in the diagnosis and treatment of children with LI and aggressive behavioral or peer victimization problems? The treatment of language problems and co-occurring social difficulties should be framed in a collaborative, interdisciplinary process (Gallagher, 1991). It is argued that a developmental psychopathology framework (Cicchetti, 2006; Sroufe, 1997), which recognizes the interaction between multiple domains of functioning (i.e., social, cognitive, and biological), the role of developmental contexts, multiple levels of analysis, processes of resilience, and the importance of studying both typical and atypical development will be informative for the collaboration we are calling for between SLPs and other school-based professionals addressing peer relationship difficulties, co-occurring with LI and social–psychological adjustment problems. Developmental psychopathologists are working with an eye toward application (Ciccheitti, 2006). An interdisciplinary approach to an understanding of how risk and protective factors work together may influence the efficacy of particular types of interventions for children with peer relationship issues and LI.

Multiple domains of functioning

Although peer relationship researchers have attended to the importance of cognitive functioning (e.g., memory, perspective taking, and attention), they typically have neglected the importance of language development (for an exception, see Asher & Gazelle, 1999). Future research and clinical work should involve collaborative work between psychologists and SLPs to ameliorate this critical gap in understanding. Just as peer relationship and social development researchers must assess language and cognitive skills, SLPs and language scholars should continue to work to place children with LI in their appropriate social and developmental contexts.

Such research might result in new clinical tools for use in assessing multiple domains of functioning efficiently. For example, Bierman (2004) developed a model for assessing problematic peer relationships in which the researcher or clinician would evaluate the child's self-system (e.g., social cognitions or HABs and emotion regulation), child's social behaviors (e.g., aggressive, prosocial, anxious), peer context (e.g., reputation, social networks), and peer relations (e.g., peer rejection, friendship status, and association with delinquent peers). A comprehensive assessment of the child's social context, including these four domains of peer relations, would permit the SLPs to address these developmental issues within the context of therapy.

Role of context and multiple levels of analysis

In a practical sense, children are affected by a variety of ecological contexts (e.g.,

from home or microsystem influences to cultural or macrosystem factors). Interactions between these levels of systemic impact are crucial for understanding children's functioning (Bronfenbrenner, 1979). All school-based practitioners should work collaboratively with other professionals (e.g., SLPs, social workers, pediatricians, school nurses, and psychologists) to assess the role of the close familial relationships, home and neighborhood contexts, and to understand each child within his or her appropriate developmental and sociocultural niche. When addressing relational aggression or victimization and comorbid LI, psychologists and SLPs should work together to gather information concerning a child's home environment (e.g., level of stress, parent–child relationship, socioeconomic status, and parental education) as well as the degree of parental involvement in school as an index of contextual factors that may influence the prognosis of a child with LI. An appropriate understanding of the multiple levels of context and the various levels of analysis (e.g., individual, dyad or friendship, peer group, school, and community) is crucial for creating both individual and school-wide intervention and prevention efforts that are effective and that will generalize into other salient relationship contexts.

Two well-established predictors of future relational aggression are the parent–child relationship and specifically the presence of psychological control (e.g., love withdrawal) between a caregiver and a child (e.g., Nelson, Hart, Yang, Olsen, & Jin, 2006) and having an older relationally aggressive sibling (Stauffacher & Dehart, 2006a, 2006b). Thus, despite the financial and ethical challenges, clinicians should work with other service providers to attempt to assess all potential risk factors for relational aggression even if they are outside the school. This information could be obtained as part of a comprehensive team assessment as educators, psychologists, and school social workers are often privy to information concerning children's home, neighborhood, and cultural background. Given the appropriate clinical arrangements, such information may be shared among members of the same school-based service delivery team to inform treatment. All members of the service provider team should strive to further improve the connections between home and school, and interdisciplinary interventions may incorporate parents as part of the team in trying to address systemic factors that may have triggered or may be maintaining such problems.

Resilience

The developmental psychopathology principle of resilience underscores the principle that plasticity and change are possible in most circumstances, but are more difficult the longer individuals remain on a maladaptive developmental pathway (Sroufe, 1997). As defined by Luthar and Cicchetti (2000), resilience is not a trait or characteristic of a child, rather a balance between risk and protective factors in the presence of adversity. They defined it as a "dynamic process wherein individuals display positive adaptation despite experiences of significant adversity or trauma" (p. 858).

A comprehensive assessment of risk and protective factors includes an evaluation of positive and negative peer functioning (e.g., aggressive behavior, friendship status, and prosocial behaviors) as well as cognitive processes. Such an assessment will be helpful in understanding the various points of intervention for a school-based service provider team. Moreover, a comprehensive assessment at multiple time points is needed to both quantify initial indicators of adversity and document resilient outcomes. Thus, the principle of resilience suggests that chronically relationally victimized or aggressive individuals who have been on a maladaptive pathway across development will most likely show improvement in the face of this adversity when intervention is conducted early and when intervention builds on and enhances existing protective factors rather than simply focusing on diminishing risk factors.

Typical and atypical development

Finally, a developmental psychopathology framework underscores the importance of

studying both typical and atypical processes to inform the etiology and treatment of psychopathology. SLPs are well trained to identify typical and atypical developmental patterns. Certainly, knowledge of developmentally appropriate social interactions is necessary for an informed evaluation of children's peer relationships. Developmental milestones regarding peer relationships are well established and follow a typical sequence (Parker et al., 2006). For example, as the capacity for language and symbolic reasoning becomes refined around 31–36 months of age, children's play shifts from an almost exclusive emphasis on solitary activity to more collaborative and sociodramatic play (Parker et al., 2006) in which children work together to create joint play themes and assume social roles (e.g., teacher, caregiver) in their play. SLPs should be aware that an additional key developmental task during early childhood is that most children have at least one reciprocal friend and these relationships tend to be stable across time (Parker et al., 2006). Thus, with knowledge of these and other typical developmental manifestations, SLPs may be effective at documenting problems within the peer domain and for relational aggression or victimization more specifically.

CONCLUSIONS

This article has addressed a wide range of issues in the area of social development and peer functioning, with a primary focus on relational aggression and victimization. With regard to broader concerns, a number of authors have commented on the assessment and evaluation of children and adolescents who may have social–psychological adjustment and peer functioning problems (e.g., Asher & Gazelle, 1999; Bierman, 2004; Campbell, 2002; Gallagher, 1991).

Interdisciplinary approaches to assessment and intervention have been suggested, but what should SLPs do when they encounter problems of social development that seem to fall outside their scope of practice? A brief review of some general social development indicators that should be considered when questioning the need for referral to a mental health provider is listed in Table 3. With specific reference to relational aggression, although current literature is limited in this area, there are some potential warning signs. For example, children who are high relative to their peer group on relational aggression, relational victimization, or both (i.e., provocative victims) may demonstrate concurrent and future social–psychological problems (e.g., disruptive–behavioral disorders, internalizing problems, somatic complains; Crick, Ostrov, & Werner, 2006; Cullerton-Sen & Crick, 2005; Zalecki & Hinshaw, 2004) and consultation and/or referral may be warranted.

As hypothesized throughout this article, it is conceivable that children with LI and comorbid peer victimization problems may experience language improvements if they are able to have stable meaningful relationships with peers. SLPs who target social skills for improvement may find positive changes in expressive language. Alternatively, interventions for LI may result in improved peer relationships and a decrease in relational victimization, serving as an important marker for improvement in overall functioning. Importantly, it is not best practice simply to teach children to "use their words" to better express their feelings during conflict. This often results in the use of "negative" or relationally aggressive words. Instead, SLPs could work with children to teach appropriate expressive skills, as well as friendship formation, peer group entry, conflict resolution, and inclusion social skills (Brinton & Fujiki, 1999).

Bierman (2004) has identified several domains of social competence (e.g., social participation, prosocial behavior, self-control, communication skills) that we believe SLPs are well equipped to address in clinical practice. Clearly SLPs are experts in how children should appropriately express themselves and have extensive training in how to work with children developing typically and atypically with skills such as turn taking, listening skills, and verbally inviting a child to play (Bierman, 2004).

Child development researchers in psychology should be encouraged to work with SLPs

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Table 3. General social development indicators for referral to a mental health professional

Behavior displayed and received	Description	Developmental considerations	Sources
Friendship status and peer rejection	Children without any mutual friendships or nominated as disliked	Friendlessness and peer rejection are concerns during all developmental periods. Peer rejection may be buffered by friendship status.	Bierman (2004) Ladd and Troop-Gordon (2003) Parker et al. (2006)
Socially withdrawn anxious avoidant and shy	Withdrawn, quiet, shy, solitary play, avoids peers, appears upset, and cries easily	May be a concern during early childhood (from age 3 to 5) if avoids peer contact and only engages in solitary play. High levels of social withdrawal and social anxiety are increasingly problematic in middle childhood and adolescence.	Bierman (2004) Rubin, Chen, McDougall, Bowker, and McKinnon (1995)
Physical aggression and disruptive	Hitting, kicking, punching, pushing, bites, takes others' property, disruptive, and deception	Normative during first 3 years of childhood and steadily drops. If elevated relative to peers beyond age 5 it is of concern. Early onset and persistent aggressive behavior may be associated with serious conduct problems later in development. Those with comorbid attention-deficit/hyperactivity disorder, disruptive behavioral disorders, or learning disorders may be particularly vulnerable to maladaptive outcomes.	NICHD Early Child Care Research Network (2004) Cote, Vaillancourt, LeBlanc, Nagin, and Tremblay (2006) Waschbusch (2002)
Prosocial behavior and social skills	Sharing, helping, including, cooperative, self-control, and concern for others' feelings	Children should be capable of displaying active but simple prosocial behavior around 18 months and increasingly (18–24 months) complex comforting behaviors. Those that are high on aggression and low on prosocial behavior are at greater risk of problems in early and middle childhood.	Bierman (2004) Crick (1996) Zahn-Waxler, Radke-Yarrow, Wagner, and Chapman (1992)
Relational aggression	Friendship withdrawal threats, social exclusion, malicious rumor spreading, and silent treatment	During early childhood may be normative in low levels relative to peers. More problematic if elevated in middle childhood and adolescence. More of concern if also present with comorbid attention-deficit/hyperactivity disorder, borderline personality features (impulsive, stormy relationships, self-harm), depressive symptoms, delinquency, conduct problems, and/or somatic complaints.	Crick, Ostrov, and Werner (2006) Murray-Close et al. (2007) Zalecki and Hinshaw (2004) Hipwell et al. (2002)
Relational and physical victimization	Chronic and frequent receipt of relational and/or physical aggression	If associated with internalizing and externalizing problems, loneliness, negative peer reputations, victims of multiple subtypes, and/or co-occurring aggression subtypes may be most in need of intervention. Social support may buffer the harmful effects.	Cullerton-Sen and Crick (2005) Crick and Grotpeter (1996) Prinstein et al. (2001) Troop-Gordon and Ladd (2005)

during development, conceptualization, and implementation of intervention projects that address core social skills (Bierman, 2004). In particular, researchers should work with SLPs to modify intervention and assessment methods so that they are valid and effective for children with LI. In addition, mental health professionals and SLPs should work collaboratively as members of service provider teams.

Areas that are less clearly delineated along disciplinary boundaries are also likely points of successful interdisciplinary collaboration. For example, emotional understanding is a key domain of social functioning in children, and SLPs could help psychologists develop more effective procedures for helping children express their own feelings appropriately and identifying others' feelings accurately (Bierman, 2004, p. 195). Moreover, facilitating social problem-solving skills is another area of social competence in which SLPs have training and experience. They can help developmental psychopathologists and others understand under what conditions children with and without LI are able to identify and communicate possible solutions to negotiate peer conflict. Finally, developmental psychopathologists and SLPs should be encouraged to work together as integral members of the clinical and research team to design, implement, and test the efficacy of preventive interventions for relational aggression/victimization.

In summary, the study of peer relationships broadly defined and relational aggression/victimization more specifically are developmental topics of inquiry that would greatly benefit from the expertise of language scholars. Ultimately, working collaboratively with other school-based service providers is necessary to target the multiple domains of functioning and to design and implement appropriate intervention programs for individual children and larger peer groups. If the relatively disparate research and practice areas of developmental psychopathology and communicative disorders can become more integrated, then children experiencing comorbid psychological and language problems may be more likely to have resilient outcomes.

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