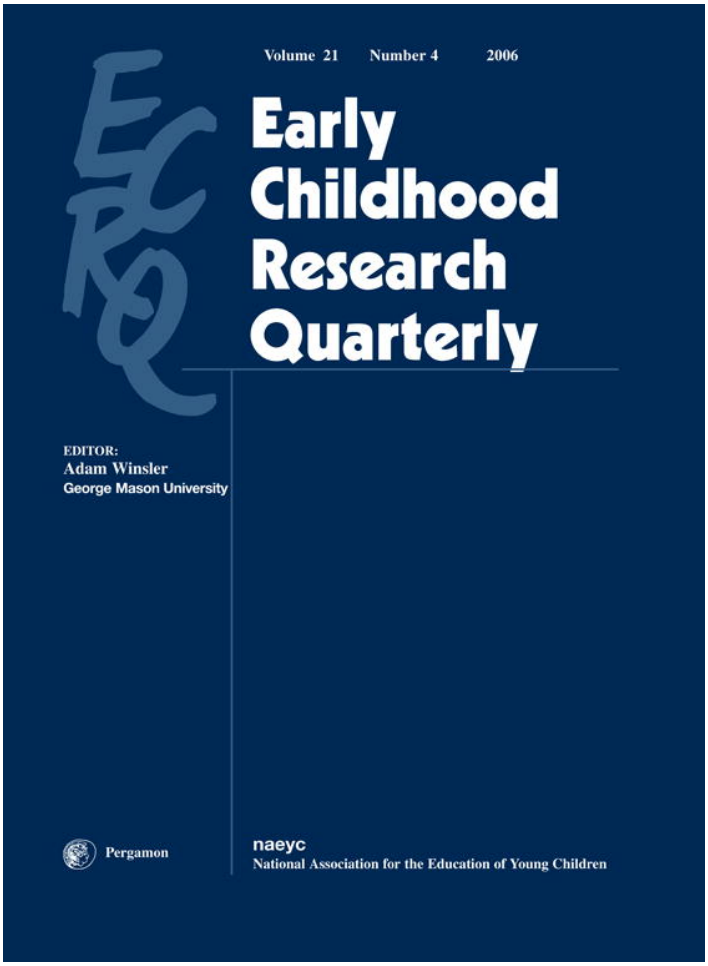

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Assertion strategies and aggression during early childhood: A short-term longitudinal study

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Abstract

Although research on assertion has made important advances in our understanding of young children's behavior within their peer group, there has been a significant limitation in that prior studies have generally not given attention to the gender specific social goals of girls. To advance the literature, this short-term longitudinal study uses a naturalistic observational measure of assertion, which includes assessments of *relationally assertive* behaviors. This multi-method study uses naturalistic observations of aggression and assertion (i.e., over 8, 860 min or 148 h of total observation) and teacher reports of assertion and sociometric status. Findings from the preschool sample ($M = 49.68$ months old; S.D. = 7.66) indicate that aggression subtypes and assertion strategies are related but conceptually unique constructs with differential predictions to indices of sociometric status. Ways in which these findings extend the developmental and early childhood literature are discussed.

Keywords: Assertion; Aggression; Gender; Early childhood

1. Introduction

Recent research has illustrated the necessity of taking the social goals of both boys and girls into consideration if we are to better understand children's behavior (Crick & Grotpeter, 1995). Particularly, researchers have focused on assessing aggressive and prosocial behaviors characteristic of both genders in peer groups in early childhood (Bonica, Yeshova, Arnold, Fisher, & Zeljo, 2003; Crick, Casas, & Mosher, 1997; Hart, Nelson, Robinson, Olsen, & McNeilly-Choque, 1998; Nelson, Hart, Yang, Olsen, & Jin, 2006; Ostrov, Woods, Jansen, Casas, & Crick, 2004; Sebanc, 2003). However, as called for in recent reviews (see Hawley, 1999), the same gender-balanced attention ought to be given to non-aggressive assertive strategies used within peer groups. Perhaps, when considering more gender-balanced social behavior among children, traditionally held views of boys' more frequent display of physical assertion relative to girls will diminish (Hawley, 1999).

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1.1. Aggression during early childhood

The field has generally agreed that aggressive behavior within a social context is defined as the intent to hurt, harm or injure another person (Coie, Dodge, & Lynam, 2006). Most typologies of aggression (i.e., proactive and reactive functions or physical and relational forms) have adopted this standard view of aggressive behavior (e.g., Crick & Grotpeter, 1995; Dodge & Coie, 1987; Little, Jones, Henrich, & Hawley, 2003). Recent studies on aggression have recognized that gender-specific social goals serve as motivation for particular aggressive behaviors. Boys, whose social goals are typically more instrumental in nature and who value hierarchical distinctions between group members, tend to be more physically aggressive than girls. Conversely, the social goals of girls are typically centered on intimacy and dyadic affiliation, tending to lead to a greater demonstration of relationally aggressive rather than physically aggressive behavior (Benenson, 1993; Block, 1983; Bugental, 2000; Crick & Grotpeter, 1995; Crick & Zahn-Waxler, 2003; Cross & Madson, 1997). These two typologies of aggressive behavior manifest themselves differently in their attempt to inflict harm on others; physical aggression by means of physical force or threatening physical harm (e.g., pushing, kicking, taking a toy, threatening physical violence) and relational aggression by means of damaging, manipulating a relationship or causing social harm to another (e.g., malicious ignoring or giving the silent treatment, verbal or non-verbal exclusion, spreading malicious gossip or secrets; Crick & Grotpeter, 1995; Crick et al., 1997). Both forms of aggression are recognized and used by school-aged (e.g., Crick & Grotpeter, 1995; Pellegrini & Long, 2003) and preschool-aged children (e.g., Crick et al., 1997; McNeilly-Choque, Hart, Robinson, Nelson, & Olsen, 1996; Ostrov, 2006; Ostrov & Keating, 2004; Ostrov et al., 2004; Russell, Hart, Robinson, & Olsen, 2003; Sebanc, 2003). Relational aggression focuses only on relationship harm and includes both direct as well as indirect behaviors, which distinguishes it from conceptually related constructs, such as indirect aggression (Bjorkqvist, 1994) and social aggression (Underwood, 2003).

1.2. Aggression and assertion

Social dominance, a concept related to but distinct from aggressive behavior, has been defined as "social ordering, from toughest to least tough . . . where the most dominant gets the first priority to resources" (Pellegrini, 2003, p. 1523). Aggressive behavior may often be used to achieve social dominance within groups and relationships, but once dominance relationships or hierarchies are set, aggressive behavior typically drops until new transitions emerge (Pellegrini, 2003). Similar to the processes by which aggressive behaviors may lead to resource control and social influence (i.e., social dominance), non-aggressive assertive behaviors may also serve as effective strategies for social dominance outcomes or obtaining resources and social influence. Thus, we adopt a past view of assertion that delineates assertive from aggressive tactics (cf. Fagot, Hagan, Leinbach, & Kronsberg, 1985; Sgan & Pickert, 1980): "Assertions are attempts to direct another person's activity . . .. They are intended to influence or control but are not intended to injure." (Barrett & Radke-Yarrow, 1977, p. 475). That is, according to factor analyses, assertive behavior (e.g., standing one's ground in an argument without aggression, making requests for behavior in a non-hostile manner) is a distinct behavioral construct from aggressive behavior (Deluty, 1985). This definition does not exclude the possibility that assertive behaviors may lead to aggressive/aversive behaviors. In fact, past research has documented how assertive behaviors may contain an "implied threat of highly aversive behavior contingent upon noncompliance" (Patterson, Littman, & Bricker, 1967, p. 4).

The development of assertive behavior in early childhood deserves particular attention as this knowledge may provide a better understanding of the social development of the young child. Research on social dominance among peers has been largely defined by agonism (Bramblett, 1981; Keating & Heltman, 1994; Sluckin & Smith, 1977; Strayer & Strayer, 1976). However, recent theory and research suggests that additional behavioral strategies (i.e., those that are based on relationship themes) may be effective in achieving dominance with peers during early childhood (Hawley, 1999, 2003), and may be employed by young girls in particular to assert power and control and to influence peers. In this paper, the term *relational assertion* is introduced as we argue it to be an assertive strategy that may have important developmental significance for all children, but particularly for girls. Relational assertion is defined as the use of the relationship as a means to control, influence and/or manipulate another to acquire social status or resources without hostility, anger or other signs of malicious actions (i.e., intent to injure or harm). Relationally assertive behaviors are similar to other behaviors that are not injurious (e.g., prosocial strategies of resource control, Hawley, 2002, 2003), but relational assertion is specific to relationship contexts and is arguably less positive in nature than prosocial behaviors.

Physically assertive behaviors will also be explored for replication purposes. Physical assertion includes any physical act that is intended to control, influence and/or manipulate another to acquire social status or resources without hostility, anger or other signs of malicious actions. Since aggressive behaviors are harmful and predictive of problematic outcomes and assertive behaviors are associated with social competence (Coie et al., 2006; La Freniere & Sroufe, 1985; Vaughn & Waters, 1981), the main purpose of the current study is to demonstrate that relational aggression is predictive of adjustment problems, whereas, relational assertion is predictive of social competence during early childhood.

1.3. Current study objectives

The first objective of the present study is to generate a reliable and valid observational method for assessing relationally assertive behavior during early childhood. Observational methods are often viewed as an objective means of data collection (Ostrov, Crick, & Keating, 2005), but due to the time intensive and costly nature of the procedures, they are underutilized by developmental and early childhood researchers. For similar reasons, longitudinal designs have also been underutilized in this literature (see Pellegrini & Long, 2002), yet they are needed to better understand developmental processes of early childhood. Thus, the present study relies on multiple-informants (i.e., teachers and research assistants) and multiple methods (i.e., teacher reports and independent observers of aggression and assertion) across two time points to both validate the measure and to address key developmental questions.

Once we establish that relational assertion is a valid and reliable construct, the second objective of the study will be to test the inter-correlations between relational and physical aggression as well as between relational and physical assertion (in separate analyses). In addition, we will test the association between relational aggression and relational assertion as well as physical aggression and physical assertion (in separate analyses). Relational and physical aggression in preschool children has been shown in numerous studies to be conceptually related yet distinct constructs (Crick et al., 1997; McNeilly-Choque et al., 1996; Ostrov, 2006; Ostrov & Keating, 2004; Russell et al., 2003; Sebanc, 2003). Two studies to date have tested the association between relationally aggressive behaviors and social dominance outcomes. In the first, Hawley (2003) found that both teacher reported relational and physical aggression were associated (i.e., low to moderate correlations) with teacher reported resource control and social influence. The second study found a significant association between observed relational aggression to females peers during free play and teacher reported social dominance behaviors, but only among boys (Ostrov & Keating, 2004). In both cases, the studies did not include a specific assessment of non-aggressive, relationally oriented behaviors (i.e., relational assertion). Since past researchers have demonstrated the benefits of delineating physical aggression from physical assertion (e.g., Deluty, 1985; cf. Sgan & Pickert, 1980; Wall & Holden, 1994), the present study is designed to replicate these past effects as well as to test the utility of this distinction for relationally oriented behaviors during early childhood.

The third objective of the present study is to test for gender differences for multiple strategies of assertion during early childhood. Interestingly, past investigations that have explored gender differences in social dominance have reported mixed findings. Some have documented boys to be more physically assertive (e.g., Fagot et al., 1985; Sebanc, Pierce, Cheatham, & Gunnar, 2003; Wall & Holden, 1994; Weigel, 1985) and more socially dominant than girls during early childhood (e.g., Charlesworth & La Freniere, 1983; La Freniere & Charlesworth, 1987). Other researchers have found that for very young children, girls reportedly display more social dominance behaviors than boys (Hawley & Little, 1999). Despite these inconsistent findings, a key unanswered question is to whom do children display their assertive behavior and by what strategy. In keeping with this notion, recent attention has turned to the role of the gender of the recipient of the behavior (i.e., target or victim). From a gender segregation perspective, aggression and assertion are more likely to occur within same-gender peer constellations than within opposite-gender peer constellations during early childhood (Maccoby, 2002). Clearly, research is needed to investigate the potential for these occurrences with a particular need for the inclusion of strategies that target assertive behaviors likely to be salient for girls, as well as for boys.

The fourth and central objective of the present study is to test the discriminate validity of the constructs (i.e., relational aggression and relational assertion), so to help discriminate potentially harmful relationally aggressive behavior from more socially competent relational assertion strategies. Specifically, peer adjustment correlates of relational assertion and relational aggression during early childhood will be investigated. For girls, associations have been found between relational aggression and peer rejection (Crick et al., 1997; Ostrov et al., 2004); however, assertive children tend to be more prosocial and socially competent (Barrett & Radke-Yarrow, 1977; Sebanc et al., 2003), which may be associated with higher levels of peer acceptance during early childhood. Past findings have indicated that assertive behavior (i.e.,

commands and demands) has been positively associated with peer acceptance for boys but not significantly for girls (Sebanc et al., 2003).

1.4. Study hypotheses

The present study is designed to address the aforementioned objectives and test the following hypotheses. First, in keeping with findings that reveal an association between physical aggression and physical assertion, it is hypothesized that a low to moderate association between *relational aggression* and *relational assertion* will be found, suggesting that the two constructs are related, but measure conceptually distinct behaviors. Furthermore, low to moderate inter-correlations for assertion strategies (i.e., between physical and relational assertion) are anticipated. Second, we hypothesize gender differences for the specific strategies of assertive behavior. In keeping with past research that has demonstrated the importance of same-gender peer interactions (Maccoby, 2002; Pellegrini & Long, 2002) we will further test for gender differences at the level of the target child's gender. That is, similar to the aggression literature we posit that girls will be more relationally assertive to female target children than will boys; whereas, boys will be more physically assertive to male target children than will girls. In addition, we predict that girls will direct more relationally assertive behavior to female than to male target children, whereas boys will direct more physically assertive behavior to male than to female target children. In examining the association between assertive strategies and sociometric status, it is hypothesized that relational assertion will be associated with concurrent and future teacher-reported peer acceptance (Hawley, 1999), whereas, relational aggression will be associated with concurrent and future peer rejection (Coie et al., 2006; Crick et al., 1997). Finally, we hypothesize that relational assertion will uniquely predict future peer acceptance and relational aggression will uniquely predict future peer rejection, even when controlling for the other type of behavior, which will help to further delineate the conceptual distinction between the two constructs.

In order to address the four main goals of the study, we will collect teacher reports and independently observe the assertive strategies and aggressive behavioral subtypes of the participating preschool children in a short-term longitudinal study. Given the intensive nature of the multiple sets of observations in this study, we were forced to rely on a smaller sample size, which makes the testing of effects more challenging (for observational studies with similar or smaller samples see Hawley & Little, 1999; Strayer & Roberts, 2004). We recognize this limitation, a reduction in power; and therefore, the following analyses are exploratory in nature and will require independent replication.

2. Method

2.1. Participants

Participants comprising two classrooms included 37 children (18 boys; 19 girls; *M* age = 49.68 months; S.D. = 7.66), 73% European American, 19% Asian American and 8% African American, recruited from a University laboratory preschool in a large Midwestern city.[1] Participation was 100% and participants' families represented diverse SES backgrounds. Parent-reported demographic information showed most were middle to upper-middle class (e.g., mean yearly income rating = US$ 55,000 to 100,000; mean education rating = 4 year college degree). However, demographic information reported by the school revealed that 29% of the families were reported to be below 150% of the federal poverty level and requested tuition support. For purposes of developing the new observational measure, we also conducted a pilot study, approximately four weeks prior to the start of the main study.[2]

2.2. Naturalistic observations

Data collection occurred both in the fall (time 1) and 4 months later in the spring (time 2). Naturalistic observations of aggression and assertion were collected independently by different observers at different times within each 2-month

[1] Two children changed schools before the end of the academic year.

[2] The pilot sample was randomly drawn from a larger population of children in a University Laboratory Preschool of a Large Midwestern city. Participants included 20 children (9 boys, 11 girls), 13 of which returned in the fall as part of the present study (4 boys, 9 girls), with ages ranging from 41 to 62 months (*M* = 52.15; S.D. = 6.61). The procedure was consistent with that of the larger study.

period (fall and spring). There were eight observers for the observations of aggression and eight independent observers for the observations of assertion. No child was observed more than once per day for aggression and assertion. Training first consisted of watching videos from prior studies and having research assistants' observations checked for accuracy. Observers were then required to spend considerable time in the classroom (i.e., several days) to learn children's names and to conduct practice sessions, which were checked with the trainer's observations. This time spent in the classroom was designed to decrease reactivity (Pellegrini, 1996), which was recorded when children made comments/looks to the observer. Assessments of reactivity were low (less than 5% of the time; Atlas & Pepler, 1998). Additional prosocial behavior, play and submission behavior were collected for the purposes of a different study.

Observations were collected using the focal child technique (Fagot & Hagan, 1985, Keating & Heltman, 1994; Laursen & Hartup, 1989) with observers either in a visually shielded classroom-based observation booth or placed discretely in the child's environment, and occurred during scheduled free play times in varying contexts including the indoor classroom or the outdoor playground. The majority of observations were conducted in the classroom for all children with approximately 25% of each child's observations being conducted on the playground. They were collected in a pseudo-random fashion (first child that was identified in the classroom or on the playground), keeping a relatively similar number of observations across participants (i.e., each child would receive one observation before a focal child received a second observation). For the purposes of this study, "focal" child refers to the child who is being observed (boy or girl), and "target" child refers to the recipient of the behavior (male or female).

2.2.1. Observations of aggression

Eight 10-min observations were collected on each child using a slightly revised procedure and measure employed by Ostrov and Keating (2004), which has been established as a reliable and valid instrument. Thus, a total of 5920 min (98.67 h) of aggression observations were collected for this study (total for time 1 and time 2). Observers recorded any aggressive or prosocial behavior directed at peers, which occurred during the timed interval. In keeping with this coding system, each independent and discrete behavior, based on a temporal break in the interaction, was coded as a unique behavior. Observers recorded the behavior in full detail on a structured observation coding form.

Aggressive behavior, defined as intended to hurt, harm or injure another was broken down into two subtypes: *physical aggression* (e.g., hitting, pushing, threatening physical harm, etc.) and *relational aggression* (e.g., excluding a peer from playgroup, threatening the removal of the relationships, such as: "You can't come to my birthday party" or "I'm not your friend anymore," spreading rumors, secrets or lies, maliciously ignoring a peer, etc.). In order to make proper assessments of the intent to determine aggressive behavior versus other more benign rough and tumble play or socially dominant behaviors (see Pellegrini, 1995), observers were trained to focus on the nature of the interaction, the affect of the participants and any displays of harm (e.g., seeking assistance from the teacher, crying or venting emotion, objecting, complaining or purposefully leaving the interaction).

2.2.2. Scoring of aggression observations

The scoring of these observations followed the process used by Ostrov and Keating (2004). Specifically, each verified, independent behavior was summed within each category to yield total frequencies of subtype scores.

2.2.3. Reliability of aggression observations

For 10–15% of the total observations, inter-observer reliability was conducted. Given the nature of the focal child event system observations and since all cells of Kappa coefficient were not assessed, intra-class correlation coefficients (ICC's) were used (McGraw & Wong, 1996), as they have been used in similar methodological situations (Arnold, Homrok, Ortiz, & Stowe, 1999; NICHD ECCRN, 2004; Ostrov, 2006; Ostrov & Keating, 2004; Ostrov et al., 2004). Computed ICC's for occurrences of behavior revealed: physical aggression, ICC = .91; relational aggression, ICC = .82. All of behaviors demonstrated acceptable levels of inter-rater reliability (p's < .001) between the independent observers.

2.2.4. Observations of assertion

Four 10-min observations (six 10-min observations during pilot testing) were collected on each child using the same procedure as described above, but with a measure, *modeled* after Ostrov and Keating (2004), which consisted of categories of assertion (Hawley, 1999, 2002; Keating & Heltman, 1994). Thus, a total of 2960 min of assertion observations (49.33 h) were conducted for this particular study (times 1 and 2 combined), not including the more than 1600 min of observation during pilot testing. Observers were trained via practice coding from videotapes of

previous studies to reliably recognize assertive behaviors. Assertion was broadly defined to include any behavior that was designed to influence, control and/or manipulate another to acquire social status or resources. Moreover, these behaviors did not include the presence of harm or intent to injure, a component of the aggression definition adopted in the present study (Coie et al., 2006). Assertion consisted of three subtypes. First, *physical assertion* was defined in a similar way to past social dominance typologies and rough-and-tumble play behaviors, and consisted of any behavior designed to exert control over one's physical environment without the intent to hurt or harm and without anger or hostility (i.e., neither dyad member exhibiting negative affect or distress, departing following the behavioral interaction or seeking teacher assistance, see Pellegrini, 1995). This category included but was not limited to the following behaviors: resource (i.e., toys) control as defined as physically refraining from giving or sharing a toy or preferred object upon request, or taking toys from others without a clear sign of harm, anger or hostility (Keating & Heltman, 1994). Second, *relational assertion* was defined as using the manipulation of relationships to increase status, resources, social influence or control over others without the intent to hurt or harm the peer and without hostility, anger or other signs of malicious actions (i.e., neither dyad member exhibiting negative affect or distress, departing following the behavioral interaction or seeking teacher assistance, see Pellegrini, 1995). For example, categories of relational assertion included giving direct verbal orders as a means of manipulation related to relationship roles during play (e.g., "I am the mom, you are little sister, and you are the dog . . . because I say so." or "I'm 5 and you are only 4, so I get to be the doctor and you have to watch.") and using the possibility of a relationship as a means of negotiation to acquire resources (e.g., "I will be your best friend if you give me that toy.").

2.3. Scoring of assertion observations

Scoring was done in the same manner as the aggression measure (Ostrov & Keating, 2004).

2.3.1. Reliability of assertion observations

In order to assess the psychometric properties of the new observational measure of assertion, preliminary data was collected during the summer prior to the present study (mid-July through the end of August). Inter-rater reliability assessments were collected 11% of the time during pilot testing and 30% of the time during the larger study.

To assess inter-rater reliability, intra-class correlation coefficients (ICC's) were computed between independent observers. Inter-rater agreements during pilot testing for the various assertion strategies were, respectively (ICC's above .80 were $p < .001$): physical assertion, ICC = .87; relational assertion, ICC = .90. In the larger study, during the fall, intra-class correlation coefficients for the various assertion strategies were, respectively: physical assertion, ICC = .95 and relational assertion, ICC = .94. During the spring, the inter-observer reliability for the strategies was acceptable to good: physical assertion, ICC = .88; and relational assertion, ICC = .81.[3]

The aforementioned codes for aggressive and assertive behaviors were mutually exclusive observational categories (for similar approach see Ostrov & Keating, 2004). That is, each behavior could be classified as only one behavior. In the event that a behavior potentially fit within more than one behavioral category (e.g., both physical and relational assertion or both physical and relational aggression) the behavior that appeared to be more salient to the observer was chosen as the code of choice. Alternatively, if the observer was not able to decide between the categories, the behavior was entered in the assertion NOS (not otherwise specified) or aggression NOS category and was never included in subsequent scores. Aggression and assertion observations were independently conducted, by separate teams of observers. Aggression observers were trained to rule out assertive behavior and assertion observers were trained to recognize and not code aggressive behavior.

2.4. Teacher ratings of assertion

At times 1 and 2, ratings of each child's assertive behavior were collected from the two head classroom teachers (one per each child report) who were each given an honorarium in the form of a US$ 25 gift certificate for their

[3] Non-verbal assertion was initially assessed given its importance in past social and developmental psychology research (i.e., staring, squinting, invading another child's personal space, arms akimbo; Burgoon & Dunbar, 2000; Keating & Heltman, 1994). However, non-verbal assertion was dropped from the study due to low reliability coefficients (ICC = .66).

participation. To independently rate the assertiveness of each focal child in their class, teachers answered a six item questionnaire of social influence with peers, developed and used successfully in past research (e.g., "S/he usually gets the best roles in class activities"; "S/he gets what s/he wants in class"; "S/he usually gets attention from others;" "S/he usually gets what s/he wants, even if others don't;" "S/he usually gets attention from teachers;" and "S/he make sure s/he gets what s/he wants" Hawley, 2002, 2003). The teacher measure consisted of an index for rating the child on a scale of 1–5, ranging from almost never or seldom (1) to often or almost always (5). Hawley (2003) reports appropriate internal consistency (Cronbach's $\alpha = .85$) for this measure. In the present study, the teacher measure of assertion demonstrated acceptable internal consistency with Cronbach's $\alpha = .87$ at time 1 and .88 at time 2. This report is not an exhaustive index of all types of assertive behaviors, but it was the best available teacher report instrument for establishing the initial validity of the present observations. The measure was correlated with both observed physical assertion $r = .44$, $p < .01$ and observed relational assertion $r = .39$, $p < .01$ at time 1. In addition, at time 2 teachers and observers tended, although not significantly, to agree for physical assertion, $r = .27$, $p < .09$, and they significantly agreed for relational assertion, $r = .33$, $p < .05$. Thus, the present observational system has demonstrated some initial evidence of validity.

2.4.1. Teacher ratings of peer acceptance and rejection

Teachers were also asked to complete the Preschool Social Behavior Scale-Teacher Form (PSBS-TF) designed by Crick et al. (1997) to assess the social interaction styles of each preschool child; however, for our present study, the items of particular interest were how *accepted* (two items, e.g., "This child is like by same-sex peers.") and *rejected* (two items, e.g., "This child is disliked by same-sex peers.") the focal child was by same- and opposite-sex peers (for evidence of the validity of teacher-reported sociometric status, see Wu, Hart, Draper, & Olsen, 2001). Teachers responded to items on the PSBS-TF by rating on a 5-point scale how true each item is for each of their students. In prior research (see Crick et al., 1997; Ostrov et al., 2004), these teacher-report measures of acceptance and rejection have demonstrated acceptable psychometric properties, and in the present study, they consistently yielded an acceptable Cronbach α above .70.

3. Results

To address the stated objectives upon having established a reliable (e.g., inter-observer) and valid measure of assertion, we conducted analyses that assessed: (a) the inter-correlations between assertion strategies and the inter-correlations between aggression subtypes, (b) gender differences among assertion strategies, (c) the concurrent and future associations between both assertion and aggression with peer sociometric status and (d) unique associations between relational assertion and relational aggression and future sociometric status. All conducted analyses were two-tailed. Descriptive statistics for the study variables are presented in Table 1.

3.1. Inter-correlations of aggression subtypes and assertion strategies

The first set of analyses tested the extent to which observed subtypes of aggression were related to observed assertion strategies (see Table 2). Bivariate correlation analyses revealed that observed aggression subtypes and observed

Table 1
Descriptive statistics for study variables

Behavior	Time 1			Time 2		
	Mean	S.D.	Range	Mean	S.D.	Range
Physical assertion (O)	2.54	2.87	0–10	1.66	1.57	0–6
Relational assertion (O)	4.66	4.68	0–20	3.83	2.93	0–10
Physical aggression (O)	2.26	3.08	0–16	1.46	1.72	0–7
Relational aggression (O)	2.11	2.57	0–10	1.14	1.48	0–6
Assertion (TR)	18.66	3.64	12–30	20.31	3.72	13–30
Peer acceptance (TR)	6.91	1.42	4–10	7.20	1.26	5–10
Peer rejection (TR)	4.11	1.21	2–7	3.86	1.17	2–6

Note: O = Observation; TR = teacher report; S.D. = standard deviation.

Table 2
Inter-correlations of observed aggression subtypes and assertion strategies

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
P Assert T1	X	.31^{+}	.14	−.08	.31+	.12	.35*	.03
R Assert T1		X	.30^{+}	.29	.07	.26	−.01	.28
P Assert T2			X	.30^{+}	.41**	.08	.07	.40*
R Assert T2				X	.19	−.07	−.07	.33*
P Agg T1					X	.37*	.34*	.04
R Agg T1						X	.36*	.03
P Agg T2							X	.03
R Agg T2								X

Note: P = Physical; R = relational; Assert = assertion; Agg = aggression; T1 = Time 1; T2 = Time 2; $^{+}p < .08$; $^{*}p < .05$; $^{**}p < .01$.

assertion strategies were related but distinct constructs. In general, these slight to moderate correlations between observed aggression and the independently assessed observed assertion, suggest the unique contribution of each construct.

3.2. Gender differences in assertion

In order to investigate gender differences in assertion, a 2 (focal child gender) × 2 (time) × 2 (target gender) × 2 (behavior type: physical assertion, relational assertion) ANOVA with repeated measures was performed. The ANOVA revealed a main effect for behavior type with relational assertion occurring more often than physical assertion, $F(1,35) = 17.07$, $p < .001$, $\eta^2 = .34$. The ANOVA also revealed a focal child gender by target child gender interaction, $F(1,33) = 7.07$, $p < .01$, $\eta^2 = .27$. This interaction was qualified by the predicted three-way interaction between focal child gender, target gender and behavior type, $F(1,33) = 7.07$, $p < .01$, $\eta^2 = .18$ (see Table 3 for descriptive statistics collapsed across time).

To breakdown each interaction, analyses were first conducted by examining the two-way interactions and testing for each behavior type separately. In all subsequent analyses, the dependent variable was the composite behavior score across the study, since time was not a significant effect. It was revealed that the two-way interaction between focal child gender and target child gender was not significant for physical assertion, $F(1,33) = 12.39$, $p < .07$. In contrast, the two-way interaction between focal child gender and target child gender was significant for relational assertion, $F(1,33) = 12.39$, $p < .001$, $\eta^2 = .27$. To further breakdown the analyses, tests were conducted with two (gender) one-way ANOVAs to assess gender differences for each specific type of relational assertion (i.e., relational assertion to a female or relational assertion to a male). Across the study, it was revealed that focal boys were more relationally assertive to male target children than were focal girls, $F(1,33) = 4.47$, $p < .05$, $\eta^2 = .12$. In addition, focal girls were more relationally assertive to female target children than were focal boys, $F(1,33) = 8.18$, $p < .01$, $\eta^2 = .20$. To breakdown the analysis even further, main effects of target child gender were tested for each focal child gender separately. For relational assertion, a main effect for target child gender was found for focal girls, $F(1,19) = 9.00$, $\eta^2 = .32$, indicating that girls were more relationally assertive to female target children than they were to male target children. No other effects were significant (see Table 2).

Table 3
Mean frequencies of assertive behavior displayed by focal children to male and female peers during free play

Assertion	Target child gender	Focal boys			Focal girls		
		Mean	S.D.	Range	Mean	S.D.	Range
Physical	Male	2.80	3.19	0–10	1.35	1.95	0–6
	Female	1.87	2.50	0–7	2.45	1.82	0–5
Relational	Male	5.87^{a}	6.21	0–22	2.50^{b}	3.05	0–10
	Female	2.27^{a}	2.28	0–7	6.15^{c}	4.86	0–21

Note: Superscripts with different letters (a–c) in the same row or column are significantly different and means are collapsed across time.

Table 4
Associations between relational assertion and sociometric status at time 1

Variable	1	2	3	4
Relational assertion to male target child	×	−.13	.50^{+}	−.16
Relational assertion to female target child	.11	×	.27	.20
Peer acceptance	−.13	.57**	×	−.26
Peer rejection	.14	−.43^{+}	−.71***	×

Note: Correlations for focal boys are above the diagonal and correlations for focal girls are below the diagonal. $^{+}p < .06$, $^{**}p < .01$, $^{***}p < .001$.

3.3. Concurrent peer acceptance, aggression and assertion strategies

We further explored the concurrent association between peer acceptance and assertion by gender, and to reduce the risk for Type I error, restricted the analyses to time 1 only. For girls, teacher-reported peer acceptance was associated with observed relational assertion to female peers, while peer rejection tended, although not significantly, to be negatively associated with observed relational assertion to female peers. For boys, teacher-reported peer acceptance tended, although not significantly, to be associated with observed relational assertion to male peers (see Table 4).

Correlations were also run between relational aggression and concurrent peer status. It was revealed that relational aggression and peer acceptance (both at time 1) were not correlated, $r = -.13$, *ns*. However, in keeping with past research, relational aggression at time 1 was correlated with peer rejection at time 1, $r = .38$, $p < .05$.

3.4. Associations between relational assertion, relational aggression and future sociometric status

First, regression models were run in which relational aggression and relational assertion both at time 1 and gender were simultaneously entered to evaluate their relative contribution to the prediction of peer acceptance at time 2 (i.e., the outcome variable). The first model was significant. Specifically, observed relational aggression negatively predicted peer acceptance and observed relational assertion significantly predicted peer acceptance. Gender was not a significant predictor. Second, a model was conducted with the identical time 1 predictors and peer rejection at time 2 serving as the outcome variable. The second model approached but did not reach conventional significance levels. Relational aggression positively predicted future peer rejection. Relational assertion negatively predicted future peer rejection. Finally, gender was not a significant predictor (see Table 5).

3.5. Unique associations between relational assertion, relational aggression and future peer sociometric status

To test the unique associations between relational assertion and relational aggression with future peer sociometric status, we conducted a series of hierarchical regression models. In these models, we tested for the unique association between relational assertion at time 1 and future peer acceptance and rejection (in separate models) by controlling for the variance associated with relational aggression at time 1 and with gender. For example, in the first model, at step 1 both gender and relational aggression were entered, and observed relational assertion at time 1 was entered at

Table 5
Relational assertion and relational aggression as predictors of future peer acceptance

Outcome, predictors	β	F	R^2
Model I: Peer acceptance-time 2			
Relational assertion-time 1	.48**	(3,31) = 4.58^{+}	.31
Gender	.18		
Relational aggression-time 1	−.34*		
Model II: Peer rejection-time 2			
Relational assertion-time 1	−.34*	(3,31) = 2.76^{+}	.21
Gender	−.16		
Relational aggression-time 1	.36*		

Note: $^{+}p < .06$, $^{*}p < .05$, $^{**}p < .01$.

Table 6
Unique associations between relational assertion strategies, relational aggression and future peer sociometric status

Outcome, step, predictors	β	F, ΔF	R^2, ΔR^2
Model III: Peer acceptance-time 2			
Relational aggression-time 1	−.23	(2,32) = 1.52, ns	.09
Gender	.20		
Relational assertion-time 1 (step 2)	.48**	(1,31) = 9.87**	.31
Model IV: Peer rejection-time 2			
Relational aggression-time 1	.28	(2,32) = 1.83, ns	.10
Gender	−.18		
Relational assertion-time 1 (step 2)	−.34*	(1,31) = 4.25*	.11
Model V: Peer acceptance-time 2			
Relational assertion-time 1	.41*	(2,32) = 3.95*	.20
Gender	.17		
Relational aggression-time 1 (step 2)	−.34*	(1,31) = 4.88*	.11
Model VI: Peer rejection-time 2			
Relational assertion-time 1	−.26	(2,32) = 1.58, ns	.09
Gender	−.15		
Relational aggression-time 1 (step 2)	.36*	(1,31) = 4.75*	.12

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

step 2. The dependent variable was either teacher-reported peer acceptance at time 2 or teacher-reported peer rejection at time 2. Given our primary interest in relational assertion and aggression and to reduce the number of models that were tested, we did not run corresponding models with physical assertion and aggression. All models were run testing for interactions with gender and in no case were these interactions significant. Therefore, these interactions are not discussed further, and the total sample (boys and girls) was used in all subsequent models. Standardized beta weights are presented in the subsequent models (see Table 6).

In the third model, gender and relational aggression at time 1 were entered and the model was not significant. At step 2, relational assertion at time 1 was entered and accounted for a significant increase in explained variance in the prediction of peer acceptance at time 2. Thus, relational assertion predicted future peer acceptance even when controlling for the variance associated with relational aggression and gender.

In the fourth model, gender and relational aggression at time 1 were entered and the model was not significant. At step 2, relational assertion at time 1 was entered and accounted for a significant increase in the explained variance in the prediction of peer rejection at time 2. Thus, relational assertion negatively predicted future peer rejection even when controlling for the variance associated with relational aggression and gender.

In the fifth model, gender and relational assertion at time 1 were entered and the model was significant. At step 2, relational aggression at time 1 was entered and accounted for a significant increase in the explained variance in the prediction of peer acceptance at time 2. Thus, relational aggression negatively predicted future peer acceptance even when controlling for the variance associated with relational assertion and gender.

In the sixth model, gender and relational assertion at time 1 were entered and the model was not significant. At step 2, relational aggression at time 1 was entered and accounted for a significant increase in the explained variance in the prediction of peer rejection at time 2. Thus, relational aggression predicted peer rejection even when controlling for the variance associated with relational assertion and gender.

4. Discussion

The present exploratory study assessed physical and relational strategies of assertion and subtypes of aggression and is the first to examine these behaviors within an observational and short-term longitudinal design. We found that our measures had acceptable psychometric properties (goal 1), revealing inter-observer reliability and concurrent validity. Second, we found low inter-correlations between aggression and assertion subtypes (goal 2). Surprisingly, we did not find gender differences as predicted for relational assertion (goal 3). We did document that relational assertion was more frequent than physical assertion. In addition and in keeping with the gender segregated nature

of early childhood play milieus, we found that focal girls directed more relationally assertive behaviors to female target children than did focal boys, whereas, focal boys directed more relationally assertive behaviors to male target children than did focal girls. These effects await replication but further underscore the need to assess at the level of the recipient (target child gender) to explore the role of gender effects. The final and central goal of the study (goal 4) was to test the discriminate validity of the constructs by exploring both the concurrent and prospective associations between relational assertion/aggression and peer acceptance/rejection. The concurrent correlations between observations of assertion strategies and aggression subtypes suggest that these two broad constructs are unique, with each respective behavior having independent properties. Relational assertion was associated with peer acceptance, whereas, relational aggression was associated with peer rejection, suggesting some initial discriminant validity for these constructs. In a more robust test of the association, we found that relational assertion predicted future peer acceptance as well as peer rejection (negative association) even when controlling for the variance associated with relational aggression and gender. Finally, we found that relational aggression predicted future peer rejection and peer acceptance (negative association) even when controlling for the variance associated with relational assertion and gender. In sum, these findings indicate the unique developmental role of both relational aggression and relational assertion.

Findings from this study and others (Hawley, 1999, 2002, 2003) help to continue to broaden our view of the assertion construct. By observing preschoolers (ages 3–5) in their natural play settings, we have been able to reliably identify and capture assertion, not only in physically assertive behaviors, but also in relationally assertive behaviors. As indicated by this study, aggression and assertion, though they may slightly overlap, are conceptually distinct constructs (Deluty, 1985; Pettit, Bakshi, Dodge, & Coie, 1990). The low associations that were revealed between the constructs (i.e., relational aggression with relational assertion and physical aggression with physical assertion) further underscore the unique contribution of each behavior.

Analyses of peer acceptance provide evidence that relationally assertive behaviors are significantly related to acceptance among preschoolers, concurrently and prospectively. During early childhood, there exists a considerable amount of overlap between coercive (physical and verbal) and prosocial behavior strategies of social dominance (Hawley, 2002) and both types of social influence and resource control are hypothesized to be associated with peer acceptance (Hawley, 1999). It has been found that children who exhibit these behaviors (i.e., coercive and prosocial) are equally accepted by their peers during early childhood and it is proposed that it is not until they are older (i.e., middle childhood) that these behaviors are systematically differentiated by peers (Hawley, 1999). The present study supports the notion that *relationally* assertive behavioral strategies are also significantly and uniquely associated with peer acceptance during early childhood.

Despite a number of strengths this study contains some significant limitations. The first is that our small sample size and diminished power seriously limited our ability to test for significant effects. Second, since observations of assertion and aggression were conducted independently we are not able to examine the co-occurrences of behavioral categories. In addition, if the observer was not able to determine the appropriate category (i.e., assertion or aggression) these behaviors were dropped from the study, resulting in an artificially lower frequency of both aggression and assertion behaviors. Third, low to moderate levels of stability were documented, which is likely an artifact of the lack of statistical power and thus, interpretation of these and other correlations requires caution and await replication. Finally, the correlations between teacher and observers were moderate in nature, which indicates some agreement and initial validity, but given the large amount of remaining unexplained variance future research is needed to replicate these associations. One possible explanation for the moderate levels of association may be because teachers were reporting on success in social dominance behaviors (e.g., "usually gets the best roles in class activities"), which may be a result of other behaviors, not just assertive strategies. Future research with an adapted teacher report instrument is needed to replicate these findings.

The present findings suggest a number of additional avenues to pursue in future research. First, the current study was faced with a small sample size, which limited our power for testing various effects. It will be important to replicate the present findings with a larger and more diverse sample size. Second, longitudinal research over longer time periods is warranted as assertion strategies during early childhood may predict future psychosocial adaptation or future psychosocial maladjustment. Moreover, longitudinal research that is capable of capturing assertive behaviors as children transition into new classrooms or new schools (i.e., preschool to kindergarten), holds a great deal of promise for understanding the relationship and contextual processes that support these behaviors (Pellegrini & Bartini, 2000).

4.1.1. Implications for practice

This study of assertion and aggression is pertinent to the field of early childhood as it calls to our attention the importance of delineating potentially harmful relationally aggressive behavior from more socially competent relationally assertive behavior. In order to identify children most at risk for future social–psychological adjustment problems as well as to obtain an accurate assessment of young children's social–emotional strengths, we believe researchers and educators should assess for both types of behaviors. Past researchers have demonstrated the benefits of delineating physical aggression from physical assertion (e.g., Deluty, 1985; cf. Sgan & Pickert, 1980; Wall & Holden, 1994) and the present findings support the utility of this distinction for relationally oriented behaviors during early childhood.

In conclusion, the current study has added to our knowledge of assertion during early childhood with the development of a new naturalistic observation measure found to have initial reliability and validity, and the recognition of a more encompassing view of assertive behavior. We now have the necessary tools to observe the focal child in his/her naturalistic setting and gather data to further expand our understanding of assertion, the role of gender and its implications for social–psychological well-being.

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