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# Teacher Attunement to Peer-Nominated Aggressors

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**This study examined the associations between teacher attunement to aggressive students and students' characteristics in a sample ($n = 278$) of youth in 5th-grade classrooms with the assumption that certain student characteristics may either prime or hinder teachers' attunement to aggressive students. Teacher attunement was measured as the agreement between teacher- and peer-nominations for students who *start fights*. Teachers rated their students on the following characteristics: academic competence, affiliation, popularity, internalizing behavior, and Olympian qualities. Higher affiliation, popularity, and internalizing behavior were associated with decreased odds for teacher attunement to aggressive youth. Higher Olympian qualities were associated with increased odds for teacher attunement to aggressive youth. Implications for interventions are discussed. Aggr. Behav. 43:263–272, 2017.** © 2016 Wiley Periodicals, Inc.

**Keywords: teacher attunement; aggression; teacher perceptions; student characteristics**

## INTRODUCTION

Aggression at school remains a major concern for administrators, teachers, parents, and students because it disrupts school functioning (Henry, 2000), compromises student achievement (Elliott, Hamburg, & Williams, 1998), and poses risks to the mental, emotional, and physical well-being of those involved (Copeland, Wolke, Angold, & Costello, 2013; Hawker & Boulton, 2000; Katiala-Heino, Rimpela, & Rimpela, 2000; Nansel et al., 2001). How schools, teachers specifically, address and respond to aggression has critical implications for students' development by influencing which behavior becomes the norm within the classroom environment and the occurrence of victimization (e.g., Troop-Gordon, 2015). To appropriately address aggression, teachers first need to be aware of which students engage in aggressive behavior (Lancelotta & Vaughn, 1989).

Teacher–student agreement on peers' aggressive behavior is typically low (Ahn, Rodkin, & Gest, 2013; Ollendick, Oswald, & Francis, 1989), indicating that teachers may be unaware of some aggressive acts between students. Whether or not the teacher is aware of aggressive acts has direct implications on the acceptability of aggressive behavior and the acceptance of aggressive peers (Brophy & Good, 1986) which can create a classroom context characterized by increases in students' aggressive behavior and may undermine teachers' ability to maintain control of the classroom (Brophy, 1996; Henry et al., 2000). It is therefore critical that teachers be able to accurately identify youth with aggressive reputations among their peers. However, there is a significant gap in our understanding of the specific student characteristics that may increase or decrease teachers' attunement to such aggressive youth. Our aim in this study was to investigate whether teachers' perceptions of students' academic, social, and behavioral characteristics were associated with their attunement to peer-nominated aggressive youth.

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## Teacher Attunement

Teacher attunement is conceptualized as an aspect of teacher involvement which includes understanding students' peer group memberships (Hamm, Farmer, Dadisman, Gravelle, & Murray, 2011) and has important implications for teachers' ability to act as the invisible hand to promote students' positive adjustment in their classroom (Ahn et al., 2013; Farmer, Lines, & Hamm, 2011; Hamm et al., 2011). In an early study of teacher attunement, Hamm et al. (2011) found that greater teacher–student attunement was positively related to students' sense of belonging at school, students' willingness to protect peers being bullied, and students' sense that peers would stand up for them if they were bullied. Others have measured teacher attunement as teachers' awareness of their students' characteristics and behavior and found that when teachers had high levels of attunement to aggression, the popularity status of highly aggressive boys decreased over time (Ahn & Rodkin, 2014). These findings underscore the impact teacher attunement can have on their students' peer experiences (e.g., Norwalk, Hamm, Farmer, & Barnes, 2015). What is lacking in the teacher attunement literature is whether teachers' perceptions of their students' characteristics are related to how *attuned* they are. To fill this gap in the literature, we examined whether teacher attunement to aggressive youth was related to teachers' perceptions of students' key interpersonal characteristics.

## Student Characteristics and Teacher Attunement

Students' characteristics may either elicit greater teacher attunement or may hinder teacher attunement to aggressive behavior. For example, when students engage in positive behavior or demonstrate positive characteristics, teachers may be less likely to recognize when these youth are being aggressive. This phenomenon is referred to as the halo effect (Thorndike, 1920) which is defined as "the influence of a global evaluation on evaluations of individual attributes of a person," meaning that we tend to think that nice people have nice qualities (Nisbett & Wilson, 1977, p. 250). An example of this cognitive bias, the "beauty-is-good" stereotype, explains why people tend to ascribe positive qualities (e.g., friendliness) to attractive individuals who may also get away with transgressions such as aggressive behavior (Dion, 1972, 1974; Dion, Berscheid, & Walster, 1972). For instance, Rosen and Underwood (2010) found that the popularity of highly attractive youth did not suffer despite their high use of aggressive behavior. The authors reasoned that because positive qualities are ascribed to attractive individuals, behavior incongruent with those qualities are judged more leniently (Dion, 1972; Rosen & Underwood, 2010). Additional research suggests that when aggressive youth also employ prosocial strategies or possess additional valued qualities, peers and teachers' perceptions of those students may be more favorable (Dijkstra, Lindenberg, Verhulst, Ormel, & Veenstra, 2009; Hawley, 2003; Vaillancourt & Hymel, 2006). Together, the theoretical assumptions of the halo effect bias and empirical research on aggressive youth suggest that the aggressive behavior of some students may go unnoticed by teachers when those students possess simultaneous valued characteristics that are perceived as incongruent with aggressive behavior.

One positive characteristic that may invoke such a cognitive bias is academic competence. High academic competence typically indicates that the student earns high grades and engages in academic behavior (Wentzel, 1993). Academically competent students are also more likely to engage in prosocial behavior and have positive peer interactions (Green, Forehand, Beck, & Vosk, 1980; Wentzel, 1993). These related forms of behavior may lead to a halo effect where teachers assume that academically competent students are unlikely to engage in aggressive behavior. Thus, we expected academic competence to be negatively associated with teacher attunement to aggressive behavior.

Similar to academic competence, the halo effect may also occur for students high on affiliation (e.g., being friendly). As a prosocial behavior, being friendly toward others is incongruent with the idea of being aggressive toward others; indeed, Parkhurst and Asher (1992) found that prosocial behavior such as being kind or cooperative was negatively related to starting fights. Other studies report negative associations between some forms of aggressive behavior and prosocial behavior (e.g., Kokko, Tremblay, Lacourse, Nagin, & Vitaro, 2006). Given this, students with high affiliative qualities may go undetected as aggressors by their teachers. This led us to predict a negative association between teacher attunement to aggression and students' affiliative qualities.

The extent to which teachers perceive that their students exhibit internalizing behavior may also be related to teachers' awareness of their students' aggressive behavior. Being sad, shy, and worrying frequently are characteristics more often associated with being victims of aggression (Hawker & Boulton, 2000). If the teacher is primed to perceive the student as a victim because they display internalizing behavior often associated with victimization, the teacher may be less likely to see that student as an aggressor. With this in mind, we expected a negative association between students' internalizing behavior and teacher attunement to aggression.

We also examined the relation between teacher attunement to aggressive students and teachers'

perceptions of their students' popularity. Teachers may not always associate popularity with aggressive behavior for late elementary school students. Associations between aggressive behavior and popularity are mixed in later elementary school grades (e.g., LaFontana & Cillessen, 2002; Rose, Swenson, & Waller, 2004; Sandstrom & Cillessen, 2006). These results suggest considerable heterogeneity of popular youth with some popular students being more likely to engage in aggressive behavior while others are not, as demonstrated in findings of "model" boys with positive qualities (e.g., academic competence, affiliation) versus "tough" popular boys with high levels of aggression (e.g., Rodkin, Farmer, Pearl, & Van Acker, 2000). Because popular youth may possess these other positive and valued qualities, the cognitive bias of the halo effect may prevent teachers from being aware of the aggressive behavior of some popular youth. Additionally, teachers may have good relationships with popular youth, decreasing the likelihood that teachers would be attuned to students' aggression (Troop-Gordon, 2015). Based on these considerations, we expected a negative association between teacher attunement and popularity such that the more popular a student was, the less likely teachers would be attuned to their aggressive behavior.

It is also likely that certain characteristics may prime teachers to be more attuned to students' aggressive behavior. The characteristics associated with being Olympian, such as winning a lot and being good at sports, are associated with salient physical attributes related to the successful use of aggression. For example, frequent perpetrators of physical aggression tend to take advantage of their larger size (Olweus, 1991). It is unsurprising then that high status youth who are aggressive often have high levels of these valued Olympian qualities (Rodkin et al., 2000; Vaillancourt & Hymel, 2006). The common physical link between Olympian qualities and aggression may prime teachers to be more aware of students' aggressive behavior when those students are high on Olympian qualities. As such, we predicted that students' Olympian qualities would be positively associated with teacher attunement to aggression.

### Current Study

For this study, we examined a sample of students from 5th-grade classrooms (aged 11–12) identified by their peers as being aggressive and assessed whether different teacher-rated characteristics predicted teacher attunement to these peer-identified aggressive youth. We used peer nominations of aggressors with the understanding that teachers may not necessarily be privy to all of their students' interactions (Cairns & Cairns, 1994; Gest, 2006). Students share a peer ecology and are more likely to be able to identify aggressive youth who may otherwise go undetected by authority figures (Gest & Rodkin, 2011). Thus, we identified a subset of late elementary school students who were nominated by peers as those who started fights. Teachers similarly identified youth who started fights. Teacher attunement was measured as the agreement between the peer and teacher nominations. We then tested whether the teacher-rated behavioral characteristics were associated with teacher attunement to students' aggression.

## METHOD

Participants were recruited from elementary schools as part of a larger longitudinal study (Project REAL: Rural Early Adolescent Learning; see Hamm, Farmer, Lambert, & Gravelle, 2014 for further description). The purpose of Project REAL was to develop a teacher training program designed to support students at-risk for poor school adjustment. This project was a cluster randomized trial involving matched pairs of schools with one school from each pair randomly assigned to either the control or intervention condition. For the current study, we used data collected between 2005 and 2008 from the preintervention (baseline) time point from a sample of 50 schools located in the Far Western ($n = 4$), Midwestern ($n = 4$), Northern Plains ($n = 4$), Southwestern ($n = 4$), Southeastern ($n = 6$), Appalachian ($n = 20$), Pacific Northwest ($n = 4$), and Deep Southern ($n = 4$) regions of the United States. Most of these 50 schools (70%) were located in fringe, distant, or remote rural areas (National Center for Education Statistics locale codes 41, 42, or 43). The remaining 30% of schools were in distant or remote towns (locale codes 32 or 33). School sizes ranged from 49 to 628 with an average of 307 students per school. Across all schools, minority students accounted for 27.4% of students ($SD = 35.5$) and boys accounted for 51.8% ($SD = 4.0$) of students. Sixty-four percent of students were eligible for free- or reduced-price lunch.

### Student Participants

All students in regular 5th-grade education classrooms were invited to participate. A total of 2,231 students consented to participate (53.1% girls, $n = 1{,}184$) which reflected an average participation rate of 60.1% (range of 10.8–92.3%) per classroom. The majority of participating students were White (61.5%), 24.8% of participants were Black, 4.8% were Hispanic, 4.9% were Asian or other, and 4.2% were unknown. Gender and race information were collected from school record data. Given the nature of the rural locales for many of the schools, some 5th-grade classrooms contained students of other grades. Of the 2,231 participating students, the

majority (74%) were in 5th grade, 9% in 4th grade, 15% in 6th grade, and 2% in 7th grade (average age 11–12 years old). Rather than constrain our sample to those only in 5th grade, all students in 5th-grade classrooms were included to accurately capture social dynamics within the classroom ecology.

## Teacher Participants

All 5th-grade classroom teachers were invited to participate. Teacher participation rate was 97%. The majority of teachers were women (81.1%) and White (61.1%). Nearly half the teachers held masters degrees (48%); of the remaining, 39.4% of teachers completed some graduate work, 11.8% completed 4-year college degrees, and a small minority (0.8%) completed a doctorate degree. Almost all teachers were certified (96%) and in the area they were teaching (95.2%). The majority of the teachers were over the age of 45 (41.7%); 27.6% were aged 26–35, 22% were aged 36–45, and the smallest percentage of teachers were aged 22–25 (8.7%). Forty-five percent of teachers had 10 years or less of experience, 24.4% of teachers had 11–20 years of experience, and 30.6% had 21 or more years of experience.

## Procedure

Following approval from the Institutional Review Board, students were recruited from all participating schools. For those students wishing to participate, parental informed consent was required for participation. Data from students were collected using group administered survey procedures. Students were assured of confidentiality and told they could stop participating at any time. A trained research assistant read the questions aloud while other research assistants monitored the room and answered any questions from students. Participating students were given a school supply item for their participation.

All teachers of participating students were asked to participate. Consenting teachers completed survey packets about the participating students in their classrooms, including individual assessments of their students' academic and interpersonal competence. Teachers were given financial compensation for participating. Both student and teacher data were collected on a similar schedule in the spring semester in 5th-grade classrooms.

## Measures

**Teacher attunement to peer-nominated aggressors.** Peer and teacher nominations were used to categorize student aggressors. Peer nominations of student aggressors were collected following established peer nomination protocol in which students were asked to nominate up to three peers who best fit certain behavioral descriptors from free recall (i.e., no class list was provided; Estell, Farmer, & Cairns., 2007). The item for *aggressor* was "*This person starts fights. This person says mean things to other kids or pushes them, or hits them*." Students were allowed to self-nominate. The total number of nominations was tallied for each student and a proportion score was created by dividing the total number of nominations each student received by the number of potential nominators (e.g., Estell et al., 2007). The proportion score was then multiplied by a constant of 1,000 to clarify differences, then standardized per established peer nomination procedures (see Rodkin et al., 2000). A *Z*-score greater than + 0.50 was used to classify students as aggressive according to peers. Consistent with previous research using nomination procedures and recommendations for acceptable participation rates, we analyzed data from students in classrooms with 50% or higher participation rates ($n = 1{,}864$; Farmer et al., 2009; Marks, Babcock, Cillessen, & Crick, 2013)

Teacher nominations of *aggressors* were collected by having teachers nominate from free recall students in their class "*who pick on others, start disagreements or fights*." Nominated students were classified as aggressive according to teachers.

Finally, using both the peer and teacher nominations, we created a binary variable to capture teachers' attunement to peer nominated aggressive students. If students were classified as aggressive by both peers and teachers, students were given a value of "1" to indicate teacher attunement to peer-nominated aggressive students. If students were classified as aggressive by peers but not by teachers, students were given a value of "0" to indicate that the teacher was not attuned to students' peer-nominated aggressive status. Students that did not meet either criteria were considered unidentified and were excluded from analyses.

**Interpersonal competence scale-teacher (ICS-T).** Teachers completed the ICS-T for each participant (Cairns, Leung, Gest, & Cairns, 1995). In 5th-grade classrooms, this measure was completed by students' primary teacher. For this measure, teachers were asked to rate each participating student on 18 items assessing a range of characteristics using a 7-point Likert-type scale. The factor structure found by Cairns et al. (1995) was replicated in this sample with both a principal-components analysis and a confirmatory factor analysis, yielding results in line with previous research utilizing the ICS-T (e.g., Rodkin & Berger, 2008; Xie, Cairns, & Cairns, 2002). The present study analyzed five factors: *academic competence* ("good at spelling," "good at math"; $\alpha = 81$), *affiliation* ("smiles," "friendly"; $\alpha = 71$), *internalizing* ("very shy," "always sad," "always worries"; $\alpha = 60$), *popularity* ("popular

with boys," "popular with girls," "lots of friends"; $\alpha = 0.83$), and *Olympian* ("good looking," "good at sports," "wins a lot"; $\alpha = 73$). The ICS-T has demonstrated moderately high test-retest reliability and convergent validity (Cairns & Cairns, 1994; Cairns et al., 1995; Rodkin et al., 2000). Factors were standardized by classroom.

### Final Sample

A total of 278 students (27% girls, $n = 75$) were identified as aggressive by peers. Of the 278 students in the final sample, the majority (76%, $n = 211$) were in 5th grade, 5% were in 4th grade, 17% were in 6th grade, and 2% were in 7th grade. The sample of peer-identified aggressive students resembled the larger study sample in ethnicity status. For our analyses, we collapsed groups into majority and minority ethnic status, yielding 49% majority ethnic status (i.e., White) and 51% minority ethnic status (e.g., Black, Hispanic). We compared the students identified as aggressive through peer nominations ($n = 278$) to the remaining participants ($n = 1{,}586$) and found that significantly more boys than girls were identified as aggressive, $\chi^2$ (1, $N = 1{,}864$) = 84.39, $p < .001$, and significantly more minority students than majority students were identified as aggressive, $\chi^2$ (1, $N = 1{,}864$) = 20.73, $p < .001$.

Of the 278 students included in analyzes, 113 students (33% girls, $n = 37$) were identified by peers as aggressive but not by teachers (teacher not attuned) and 165 students (23% girls, $n = 38$) were identified by both peers and teachers as aggressive (teacher attuned). There were no gender or majority/minority ethnic differences in the attunement variable, $\chi^2$ (1, $N = 278$) $< 3.21$, $p = .073$. Examining teacher data from research sites where demographic information was collected, we found no significant differences in teacher attunement based on teachers' age, ethnicity, highest level of education, or number of years of experience, $\chi^2$s $< 6.08$, $ps > 0.108$.

## RESULTS

### Descriptives and Correlations

Table I lists the means, standard deviations, and correlations of the primary study variables of interest. There were significant and positive correlations among academic competence, affiliation, popularity, and Olympian factors, $rs > 0.26$, $ps < .001$, indicating that teachers who perceived students to be good at school also saw those students as more friendly, more popular, and more likely to win or be good at sports and vice versa. There was a significant negative correlation between internalizing behavior and all other student characteristics (i.e., academic, affiliation, popularity, and Olympian), $rs > -0.28$, $p < .001$, such that the more teachers' perceived students to be academically competent, friendly, popular, or Olympian, the less likely they were to perceive those same students as having internalizing problems.

### Teacher Attunement to Aggressive Students

Given the nested nature of the data, we utilized hierarchical generalized linear modeling (HGLM) for Bernoulli distributions using Hierarchical Linear Modeling (HLM) software to test our hypotheses on the dichotomous outcome score of teacher attunement using full maximum likelihood estimation (Bryk & Raudenbush, 1992; Raudenbush & Bryk, 2002). We conducted a two-level model to reflect the nature of the data with students nested in classrooms. To separate the total variance between Level 1 (within-classroom) and Level 2 (between-classroom), we calculated the intra-class correlation coefficient (ICC). Since Level 1 variance components are not estimated in HGLM, we assigned the Level 1 variance the value of $\pi^2/3$ per recommendations (Snijders & Bosker, 1999) in order to calculate the ICC. The unconditional model yielded an ICC of .01, indicating that only 1% of the variance was between classrooms, variance component = .00, $\chi^2(277) = 278$, $p = 0.472$. Despite the nonsignificant variance at the classroom-level, we continued to test our hypotheses using HGLM to produce unbiased estimates of the coefficients that account for the fact that students were grouped together in the same classroom and have shared variance. At Level 1 (student level), we controlled for gender (0 = girls, 1 = boys), and ethnic status (0 = majority, 1 = minority) and included all independent variables (i.e., student characteristics) which were grand-mean centered which means that the intercept is interpreted as the predicted outcome for a student who is average (i.e., typical) on all independent variables.

HGLM models define the outcome variable in terms of probability (i.e., likelihood of teacher attunement to peer-nominated aggressors). To improve estimation, a log-odds transformation of the outcome variable is used in HGLM models; however, this transformation prevents direct interpretation of coefficients as with HLM procedures. To interpret coefficients, we reversed the transformation of the predicted outcome score (see Brown, Herman, Hamm, & Heck, 2008). Two predicted outcome scores were generated to interpret the magnitude of the effect for significant independent variables: (i) a predicted outcome score based on the intercept which denotes teacher attunement to a typical peer-nominated aggressive student; and (ii) a predicted outcome score to represent teacher attunement to a peer-nominated aggressive student scoring 1 *SD* above

**TABLE I. Means and Standard Deviations by Teacher Attunement and Correlations Among Student Characteristics**

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 1. Gender | — | | | | | |
| 2. Academic Competence | −0.15** | — | | | | |
| 3. Affiliation | −0.08 | 0.26*** | — | | | |
| 4. Internalizing | −0.06 | −0.28*** | −0.35*** | — | | |
| 5. Popularity | 0.05 | 0.28*** | 0.50*** | −0.36*** | — | |
| 6. Olympian | 0.15* | 0.37*** | 0.42*** | −0.38*** | 0.67*** | — |
| Teacher attuned "1" (n = 165) M (SD) | | −0.44 (0.95) | −0.66 (0.93) | −0.24 (0.85) | −0.31 (1.09) | 0.00 (1.05) |
| Teacher not attuned "0" (n = 113) M (SD) | | −0.20 (0.95) | −0.26 (0.94) | −0.09 (0.95) | 0.03 (1.07) | 0.02 (1.06) |

*Note.* Gender reference group, girls. Variables 2–6 are teacher-rated student characteristics.
*$p < .05$; **$p < .01$; ***$p < .001$.

the grand mean of that independent variable of interest which was calculated by adding the intercept and the coefficient for that variable. Predicted outcome scores were then converted into probabilities by undoing the log-odds transformation. The magnitude of the effect is represented as the difference between these two predicted probabilities. We provide an example of how we calculated and interpreted these two predicted probabilities below.

Table II summarizes the estimated coefficients for the student-level (Level 1) variables. The predicted outcome for teacher attunement to a typical peer-nominated aggressive student is the student-level intercept of $y = 0.51$. This is the log-odds of the probability represented by the equation $y = \log(p/(1-p))$. To convert the log-odds into a predicted probability, we used the equation $p = 1/(1 + e^{(-y)})$ for $y = 0.51$. Holding all predictors constant, the predicted probability that a teacher was attuned to a typical peer-nominated aggressive student is 0.62.

The association between students' affiliative qualities and teacher attunement was significant with a coefficient value of −0.52. The predicted outcome score $y$ for a peer-nominated aggressive student scoring 1 *SD* above the mean for affiliation is calculated as the sum of the intercept value of 0.51 and the affiliation coefficient of −0.52; $y = 0.51 \pm 0.52 = -.01$. To convert this log-odds probability, we solved the equation $p = 1/(1 + e^{(.01)})$, yielding a predicted probability of 0.50. Thus, when peer-nominated aggressive students had higher affiliative qualities, 1 *SD* above the mean, the probability that their teacher was attuned to their aggressive behavior decreased from 0.62 to 0.50.

Teacher-rated internalizing behavior and popularity were also significantly negatively associated with the likelihood that teachers would be attuned to peer-nominated aggressive students. Holding all other predictors constant, the probability of an aggressive student having a teacher attuned to his or her aggressive behavior decreased from 0.62 to 0.49 for students scoring 1 *SD* above the mean on internalizing behavior. Similarly, being popular significantly decreased the probability that students would have teachers attuned to their aggressive behavior. Having higher popularity status according to teachers, 1 *SD* above the mean, reduced the probability of teacher attunement from 0.62 to 0.51, net of the effects of other predictors.

The one student characteristic that was positively associated with teacher attunement was Olympian qualities, net of the effects of all other predictors. When teachers perceived high Olympian qualities in peer-nominated aggressive students the probability of students having a teacher attuned to their aggressive behavior increased from 0.62 to 0.72. The association between academic competence and teacher attunement was not significant.

**TABLE II. Hierarchical Generalized Linear Modeling Parameter Estimates for the Effects of Student Characteristics on Teachers' Attunement to Aggressive Students**

| Predictor | Coefficient | *SE* |
|---|---|---|
| Level 1 (student-level) | | |
| Intercept | 0.51 | 0.38 |
| Gender (control) | 0.23 | 0.32 |
| Ethnic status (control) | 0.25 | 0.30 |
| Academic competence | −0.30 | 0.16 |
| Affiliation | −0.52** | 0.19 |
| Internalizing | −0.54** | 0.18 |
| Popularity | −0.48* | 0.18 |
| Olympian | 0.41* | 0.20 |

*Note*. Gender reference group, girls; Ethnic status reference group, majority.
*$p < .05$; **$p < .01$.

## DISCUSSION

This study provides evidence that teacher attunement to aggressive behavior may be influenced by teachers' perceptions of their students' academic, social, and behavioral characteristics. We found that when teachers

perceived their students as more popular, more affiliative, or displaying more internalizing behavior, teachers were less likely to be aware of students' aggressive behavior. On the contrary, when teachers perceived their students to be higher on Olympian qualities, they were more likely to be attuned to those students' aggressive behavior. These results suggest that teachers' perceptions of their students have implications for teachers' abilities to address and manage aggressive behavior in their classrooms.

## Perceptions of Aggressive Youth

The findings support our hypotheses that certain characteristics may either prime or hinder teacher attunement to aggressive students. In line with our expectations, we found that certain student characteristics were associated with teachers' perceptions of aggressive students. Teachers were less likely to be aware of aggressive behavior from students they viewed as affiliative or popular as these and their associated positive qualities are perceived as incongruent with aggressive behavior (Dion, 1972, 1974; Dion et al., 1972; Eisenberg et al., 1996; Green et al., 1980; Rodkin et al., 2000; Wentzel & Asher, 1995). The combination of such qualities may create a halo effect that hinders a teacher's ability to recognize aggressive behavior that contradicts general positive evaluations of students. Thereby, the aggressive behavior of some popular or friendly students may go undetected by teachers.

These negative associations between positive qualities and teacher attunement challenge the notion that positive qualities are mutually exclusive with having an aggressive reputation among peers. This presents a challenge to intervention efforts aimed at discouraging the use of aggression. When aggressive behavior is used by socially prominent (i.e., popular) youth or youth who possess valued qualities, it may be difficult to reduce this behavior (Vaillancourt, Hymel, & McDougall, 2003). This underscores the need to consider classroom social dynamics and the role that teachers have in those dynamics when attempting to reduce aggressive behavior in the classroom (Farmer et al., 2011, Farmer, Reinke, & Brooks, 2014; Farmer & Xie, 2007; Vaillancourt & Hymel, 2006; Vaillancourt et al., 2003).

In line with our expectations, we also found that teacher attunement to aggressive youth decreased when teachers perceived higher internalizing problems in their students. This is particularly significant because it suggests that teachers may not be recognizing the totality of some students' risks for maladjustment in the classroom. The adjustment of youth with only internalizing behavior is different from the adjustment of youth with both internalizing and externalizing (i.e., aggressive) behavior. Consider the example of bully victims who display both forms of behavior and are at increased risk for a lack of close friendships, anxiety, depressive symptoms, psychosomatic symptoms, and prolonged bullying involvement (Copeland et al., 2013; Katiala-Heino et al., 2000; Kumpulainen, Rasanen, & Henttonen, 1999; Nansel et al., 2001). It goes without saying that teachers need to respond differently to students with both internalizing and externalizing problems and this current study reveals that students' internalizing behavior may hinder teachers' attunement to their aggressive behavior.

The sole student characteristic we found that primed teachers to be attuned to a student's aggressive behavior was Olympian qualities. Youth with Olympian qualities are good at sports, win a lot, and are good looking. We argued that the common physical link between aggressive youth and Olympian youth would prime teachers to be more attuned to aggressive behavior from Olympian youth. Our results support this hypothesis. An additional interpretation is that teachers may be more likely to attend to the behavior of youth with valued Olympian qualities, making their aggression more salient to teachers (Rodkin et al., 2000; Vaillancourt & Hymel, 2006). Together, these results suggest that teachers' perceptions of students' characteristics may impact on how attuned teachers are to aggressive youth in their classrooms.

## Implications of Teacher Attunement

Teacher attunement to aggression (or lack thereof) has significant implications for the functioning of the classroom, the adjustment of victims, and the prognosis for aggressive youth. When teachers are not aware of aggression, the behavior may continue unchecked, further reinforcing the perpetrators' use of aggression (Huesmann & Eron, 1984) which may help establish a classroom norm for aggression and increase the use of aggression by classmates (Henry et al., 2000). For instance, when students see that aggressive peers avoid consequences and are rewarded for aggression, they may imitate aggressive behavior themselves (Cohen & Prinstein, 2006). This may create a potentially volatile classroom that is difficult for teachers to effectively manage and instruct. As such, teacher attunement to aggressive students is likely to be vital to the functioning of the classroom environment.

Lack of attunement to certain aggressive students may be particularly discouraging for victims. Victims of aggression tend to experience adjustment difficulties such as low self-esteem, depression, and anxiety (see Hawker & Boulton, 2000). These difficulties may be exacerbated in a classroom context typified by peer victimization. For example, aggressive behavior by

popular adolescents may create a classroom environment in which peer victimization becomes the norm (Dijkstra, Lindenberg, & Veenstra, 2008; Vaillancourt et al., 2003). Given long-term consequences of victimization (e.g., McDougall & Vaillancourt, 2015) it is imperative that teachers are aware of aggressive behavior in order to reduce victims' risks for maladjustment.

Teachers' lack of attunement also has implications for aggressive students. Teachers are often asked to identify students at risk for social maladjustment (Lancelotta & Vaughn, 1989) which requires correspondence between teachers' perceptions and peers' perceptions of students (van den Berg, Lansu, & Cillessen, 2015). In these instances, teachers may not refer aggressive youth who need services. Additionally, aggressive youth are at risk for academic maladjustment (Cairns & Cairns, 1994). For example, popular aggressive youth may avoid school over time and may show decreases in academic performance (Troop-Gordon, Visconti, & Kuntz, 2010). These combined consequences of teacher attunement for aggressive youth, victims, and the classroom in general underscore the necessity of understanding what factors may help promote teachers' awareness of social dynamics. As such, this current study makes an important contribution by addressing the question of what influences how *attuned* teachers are.

## Limitations and Future Directions

This study makes important contributions to the field of aggression research and teacher attunement by delineating associated student characteristics of hidden aggressors. However, a few of the study's limitations must be noted. First, the generalizability of the findings may be limited as this research sample is selected from rural schools. Thus, it is inappropriate to generalize the results to other geographic areas. Second, we were limited in our ability to fully distinguish between social and physical aggressors. Additional descriptors for the *starts fights* nomination for both peers and teachers included: picks on others, starts disagreements or starts fights, says mean things to other kids or pushes them, or hits them. The lack of differentiation limits our understanding of whether teacher attunement varies by different forms of aggression or the social functions of aggression. Third, we are limited in our ability to discuss the development and maintenance of teachers' attunement to aggressive youth because this study focused on a single time point and only examined the concurrent relationships between student characteristics and teacher attunement to peer-nominated aggressive youth in 5th grade. As such, we cannot determine whether teachers' perceptions of students' characteristics are associated with stability and change in teacher attunement to aggressive youth.

There are several potential lines of research arising from the present study. First, future research can investigate student characteristics which explain teacher attunement of aggressive youth in other areas (e.g., urban). Second, future studies can investigate teacher attunement to aggression longitudinally and identify factors associated with the development and maintenance of attunement over time. Such a line of inquiry would bring forth fruitful information that can be applied to intervention efforts using teachers to reduce aggression levels in the classroom. In addition, it is critical for teachers to understand how social dynamics contribute to the use of aggression behavior (Farmer & Xie, 2007) and how they can manage the social dynamics within the school ecology that facilitate positive learning environments (Hamm, Farmer, Lambert, & Gravelle, 2014). Therefore, a third future direction suggested by this study is an examination of how teachers' attention to peer social dynamics relate to teacher attunement to aggression. Such work may further disentangle the mechanisms contributing to teacher attunement and enhance teachers' ability to identify hidden aggressors, which may help teachers reduce the occurrence of and acceptability of aggressive behavior in their classroom.

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