ADDING COLOR TO CONFLICT

Disruptive Students' Drawings of Themselves with Their Teachers

ABSTRACT

Building on work examining teachers' perceptions of the student-teacher relationship, this study investigated how young students draw themselves with their teachers. Fourteen kindergarten and first-grade teachers each nominated 2 disruptive and 2 well-behaved students. Students then completed 1 drawing of themselves with their classroom teacher and 1 with a support teacher (e.g., librarian, art teacher) at 2 time points: the end of the school year (Phase 1) and the beginning of the next year (Phase 2). In coding for 8 markers of relationship quality—vitality/creativity, pride/happiness, vulnerability, emotional distance, tension/anger, role reversal, bizarreness/dissociation, and global pathology—we found no differences in the way that disruptive and well-behaved students depicted their own relationships with teachers. Gender and phase effects were identified, however, with boys depicting greater relational negativity than girls and all students portraying greater emotional distance at the beginning of the school year.

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RESEARCH investigating young students' relationships with their teachers typically makes use of teacher-report measures to assess variables such as conflict, closeness (or warmth), and dependency (e.g., Arbeau, Coplan, & Weeks, 2010; Solheim, Berg-Nielsen, & Wichstrøm, 2012; Spilt, Koomen, &

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Jak, 2012; Tsai & Cheney, 2012). Using these measures, teachers rate their relationships with disruptive students more poorly than with well-behaved students (Henricsson & Rydell, 2004). Interactions with such students involve more frequent disagreement and reprimands, causing their teachers frustration, and are therefore rated high in conflict and low in closeness (e.g., Rudasill, Reio, Stipanovic, & Taylor, 2010; Silva et al., 2011). This is particularly the case for boys, whose teachers are more likely to view them as disruptive (Beaman, Wheldall, & Kemp, 2007) and also more likely to view their relationship in a negative light (e.g., Troop-Gordon & Kopp, 2011; Wyrick & Rudasill, 2009).

Missing from this discussion, however, is a strong student voice. While a small number of studies use student self-report measures (e.g., Murray, Murray, & Waas, 2008), few directly compare the perceptions of disruptive and well-behaved students (particularly boys). Moreover, it is possible that very young students with disruptive behavior may not be as perturbed by some self-report variables, such as conflict, as their teachers are. We know little of how these disruptive young students represent other aspects of relational positivity and negativity with teachers, such as pride, emotional distance, or vulnerability.

Understanding disruptive students' perceptions of their relationships within the earliest years of schooling is critical. While teachers' relationship ratings predict students' social, behavioral, and academic trajectories (e.g., Hamre & Pianta, 2001; Hughes & Chen, 2011; Murray & Zvoch, 2011), students' own perceptions are likely to drive their attitudes toward school, prosocial behavior, and, in the later years, school dropout (e.g., Lee & Burkam, 2003).

Furthermore, understanding how very young disruptive students experience relationships with different teachers may assist in better targeting early relationship interventions. Although it was not possible to investigate every complexity, this study sought to examine young students' representations of the student-teacher relationship, comparing relational representations of both disruptive and nondisruptive students and boys and girls, while also considering students' relationships with multiple teachers at different points in time.

We review current research investigating young students' perceptions of the student-teacher relationship. We then examine the use of drawing tasks as a research method for exploring how young children portray relationships. While research has also used drawing tasks as a method for investigating students' conceptual knowledge (Lane & Coutts, 2012) and metacognitive knowledge (Pezzica, Pinto, Bigozzi, & Vezzani, 2016), we review the use of such tasks to specifically investigate children's relationship perceptions. We note the potential for drawings to depict various aspects of emotional positivity and negativity within relationships, thus complementing and extending existing findings with self-report measures.

Elementary School Students' Perceptions of Their Relationships with Teachers: Methods and Early Findings

While studies examining teacher perceptions of the student-teacher relationship in elementary school are more common, recent studies that do consider students'

perceptions have most frequently also used self-report rating scales. These include an adapted version of the Inventory of Parent and Peer Attachments, administered to students in grades 5–8 (Murray & Zvoch, 2011); the Network of Relationships Inventory, administered to students in grades 2–4 (Hughes, 2011; Hughes, Cavell, & Jackson, 1999; Mercer & DeRosier, 2010; Wu, Hughes, & Kwok, 2010); the Relatedness Scale, administered to students in grades 2–8 (Lynch & Cicchetti, 1997); and a simplified scale with items designed specifically for children (e.g., "I like my teacher") and administered in third grade (Henricsson & Rydell, 2004).

Because students in kindergarten and first grade have limited ability to read or follow complex instructions, the use of self-report rating scales with this very young age group is more difficult. While a small number of researchers have read items aloud to some students (e.g., Decker, Dona, & Christenson, 2007), others have instead attempted to adapt the self-report methodology—for example, using an image of a large barometer for kindergarten students to indicate levels of teacher support (Murray et al., 2008). Though Decker et al. (2007) found that disruptive students who perceived a positive relationship with their teachers also experienced better social, behavioral, and engagement outcomes, their sample included students in kindergarten through sixth grade. To date, only two studies have used adapted self-report methodology to specifically examine the perceptions of kindergarten and first-grade students with disruptive behavior. Mantzicopoulos and Neuharth-Pritchett (2003) asked students to agree or disagree with 31 items representing warmth, conflict, and dependency by placing the items in a mailbox or trash can, finding strong associations between students' negative relationship perceptions and teachers' reports of problem behavior. Spilt, Koomen, and Mantzicopoulos (2010) asked students to complete a similar computer-based assessment using photographs, finding an interaction between behavior and gender. Boys who perceived less warmth in their relationship were rated as being more aggressive by their teachers, whereas girls who perceived less warmth in their relationship were rated higher in social inhibition. No study yet has directly compared the perceptions of disruptive and well-behaved students.

Findings related to student gender are also unclear. Although several studies show no significant gender differences in students' relationship ratings (Decker et al., 2007; Hughes, 2011; Lynch & Cicchetti, 1997; Mantzicopoulos, 2005), Koepke and Harkins (2008) and Mantzicopoulos and Neuharth-Pritchett (2003) each report poorer relationship ratings from boys. Koepke and Harkins (2008) note, however, that the cognitive demands of some questions (adapted from the Student Teacher Relationship Scale; Pianta, 2001) were problematic for young students, with some requiring a sophisticated theory of mind or multiple concepts to be held in mind at once. Hence, further research using adapted self-report methodology is needed.

Children's Drawings of Relationships

Within extant research examining child-parent relationships, children's drawings have long proved a useful and appropriate tool to examine young children's at-

tachment to their caregivers (e.g., Gernhardt, Keller, & Rübeling, 2016; Madigan, Ladd, & Goldberg, 2003; Pianta, Longmaid, & Ferguson, 1999). Such drawings offer symbolic re-creations not just of people and objects but of experiences, thoughts, emotions, and developing knowledge (Cherney, Seiwert, Dickey, & Flichtbeil, 2006; see also Anning & Ring, 2004, for developmental changes in children's drawings).

The use of children's drawings as a tool to investigate attachment relationships was initially proposed by Kaplan and Main (1986), who identified drawing markers they predicted would relate to attachment styles (see Fitton, 2012, for a review of attachment theory). For example, figures that appeared complete and individuated on a page were theorized to be an indication of a secure attachment style. Although children's drawings have been used to predict parent-child relationship quality since this time, it was not until the work of Fury (1996) that these predictions were tested empirically. Fury (1996) used Kaplan and Main's initial markers to develop global ratings for two positive and six negative relationship dimensions: vitality/creativity and family pride/happiness (positive), and vulnerability, emotional distance/isolation, tension/anger, role reversal, bizarreness/dissociation, and global pathology (negative). Next, using these global ratings, Fury, Carlson, and Sroufe (1997) showed that infant attachment history significantly predicts the relational negativity in children's drawings at ages 8 and 9 years. Critically, these global ratings have since proved more successful in discriminating attachment groups than have Kaplan and Main's original markers (Madigan et al., 2003).

Since the development of Fury's (1996) global ratings, differences in parent-child relationship quality have also been noted in other studies using child drawings. For example, using a purposive sample of elementary school-aged children who were separated from one or both parents, Dallaire, Ciccone, and Wilson (2012) found that girls scored higher than boys in ratings of vitality/creativity and family pride/happiness (i.e., positive dimensions) but lower than boys in ratings of tension/anger and global pathology (i.e., negative dimensions). In addition, within the 55% of their sample who had an incarcerated parent, children who had greater contact with that parent also scored significantly higher in role reversal, thus suggesting that they feel they are more powerful or responsible than the parent.

Given that young children's drawings can accurately depict the emotional quality of their relationships, we use this same methodology in our study to depict their student-teacher relationship perceptions. To our knowledge, only one previous study has depicted student-teacher relationships in this way. Harrison, Clarke, and Ungerer (2007) asked 123 children at age 6 years to draw themselves with their teacher. They then asked the students' teachers to rate those same relationships using the Student-Teacher Relationship Scale (Pianta, 2001). Based on a factor analysis, they created a composite score of relational negativity by combining the five most negative dimensions in those drawings: pride/happiness (reversed), emotional distance/isolation, tension/anger, bizarreness/dissociation, and global pathology. Their findings showed high levels of agreement between students' drawings and teachers' ratings of relationship quality as well as between children's ratings of teacher acceptance and teachers' ratings of relationship quality, thus supporting the validity of using children's drawings to represent the student-teacher relationship. As in past research using teacher reports, they also found higher levels of re-

lational negativity with boys than girls. However, they did not consider the relationship perceptions of disruptive students.

The Present Study

The purpose of this study was to determine whether disruptive students in the earliest years of schooling would portray greater relational negativity in their relationships with their teachers than would well-behaved students. To achieve this, we compared the drawings of disruptive and nondisruptive students, teasing apart each of Fury's (1996) eight dimensions of relationship quality.[1] Given the inherent complexity of student-teacher relationships, we considered each dimension important to understand how students perceive their relationships with different teachers. Each dimension, for example, taps different emotional aspects of these relationships. We note the potential for disruptive students to depict lower quality relationships on some dimensions and not others, therefore highlighting areas of particular risk. Given the equivocal findings of gender differences in children's perceptions, we further aimed to determine whether boys would portray greater negativity in their relationships than girls once the effects of student behavior were controlled. Based on the extant literature, we formed three hypotheses:

1. Disruptive students will depict relationships with their teachers that are higher in relational negativity and lower in relational positivity than those of well-behaved students.
2. Boys will depict relationships with their teachers that are higher in relational negativity and lower in relational positivity than those of girls.
3. The difference between well-behaved and disruptive students' representations of relational quality will be larger for girls than for boys.

Although not the focus of these hypotheses, it is noteworthy that our study also extended past research in two unique ways. First, we obtained drawings from students at two points in time: at the end of the school year (Phase 1), with a classroom teacher with whom students had become familiar, and at the beginning of the following year (Phase 2), with a new classroom teacher. Although studies reporting students' perceptions rarely state the time of year when data were collected, Lynch and Cicchetti (1997) purposefully collected their data at the end of the school year so that students' perceptions of their teachers were well formed (also see Newberry, 2010, for phases identified in building and maintaining student-teacher relationships). We extend this work by comparing these well-formed relationships with newly formed relationships at a close time point (i.e., when socioemotional skills, cognitive skills, and drawing skills would be expected to be similar).

Second, in each phase we asked students to also draw themselves with a support teacher who taught them for at least one lesson a week (e.g., teacher librarian, visual art teacher, sport teacher). Although student interactions with support teachers are less frequent than with classroom teachers, they nonetheless offer a separate source of emotional support, validation, or challenge not previously considered (from either the student or teacher perspective).

Theoretical Orientation

This study draws on aspects of both ecological systems theory (Bronfenbrenner, 1979) and attachment theory (Bowlby, 1988). Ecological systems theory describes three characteristics of relationships that are important for development: reciprocity, balance of power, and affective relation (Bronfenbrenner, 1979). Based on these characteristics, schooling is likely to be most effective when student-teacher relationships promote prosocial skills and the notion of interdependence, gradually shift the balance of power to the student to promote autonomy, and foster positive emotional connections. Young students who behave disruptively may perceive or experience these relational characteristics in fundamentally different ways to their peers; for example, by recognizing themselves as having more power in the relationship than is appropriate (see Dallaire et al., 2012; Dumas, LaFreniere, & Serketich, 1995, for examples from child–parent relationships). We note the potential for the role-reversal subscale to indicate students' perceived balance of power and for the remaining subscales to indicate students' affective relation.

Attachment theory describes that young children form internal working models of their relationships with caregivers that are used to inform and predict their subsequent relationships (Bowlby, 1988; Fitton, 2012). Where students perceive a warm, positive relationship with their teacher, they are likely to expect similarly positive relationships with other teachers and to respond accordingly. In contrast, students insecurely attached to their first classroom teacher should predict negative relationships in first grade and beyond (Sabol & Pianta, 2012). Given this, we expect that disruptive students (especially boys) will portray emotionally negative relationships with all teachers in our study, regardless of teacher type or phase.

Method

Participants

Participants included 51 students (28 well behaved: 12 boys, 16 girls; and 23 disruptive: 17 boys, six girls) from six kindergarten ($M = 72.17$ months, $SD = 4.76$) and eight first-grade ($M = 84.61$ months, $SD = 4.56$) classes in Sydney, Australia. To ensure the sample was sociodemographically representative, government elementary schools were purposively chosen from three Greater Sydney regions: the Outer West, the Northern Beaches, and North Sydney. Within each class, teachers then nominated two disruptive and two well-behaved students to participate. The number of disruptive student participants in the final sample was fewer than the number of well-behaved students in the final sample for two reasons. First, when recruiting student participants, one classroom teacher only nominated one disruptive student. This teacher perceived all other students in the class to be well behaved. Second, two disruptive students changed schools between phases and two more were absent from school during Phase 2 testing. These four students were excluded from the analyses.

Design

The study consisted of two phases. Phase 1 took place at the end of the school year, when students were in kindergarten and first grade. Phase 2 took place at the

beginning of the next school year, as students moved to first grade and second grade (delay: $M = 3.53$ months, $SD = 0.50$). In each phase, students were invited to complete two drawings: one of themselves and their classroom teacher and one of themselves and a support teacher. Although in Phase 2 all students were forming new relationships with their classroom teachers, 26 students illustrated relationships with support teachers that were continuing from the previous year. The mean durations of these relationships are shown in Table 1.

Selection. In Phase 1, 14 classroom teachers were each asked to nominate (*a*) two students in their class who were well behaved and (*b*) two students who frequently behaved disruptively. These teachers' nominations were essential as they were based on greater relationship intensity than those of support teachers.[2] Disruptive behavior was defined as any behavior that regularly interfered with other students' learning or their own teaching. Although teachers in the government school system are trained to identify and manage disruptive behavior, we note that their nomination of students as disruptive or well behaved was necessarily subjective. Indeed, consistent with the subjective nature of the student-teacher relationship more generally, we were keen to identify students whom teachers themselves found troublesome regardless of gender. Similar to existing literature (e.g., Cluniess-Ross, Little, & Kienhuis, 2008), in interviews with these teachers but not the focus of this study, these teachers identified disruptive behaviors as being relatively minor but frequently occurring, such as speaking out of turn, making unnecessary noise, and distracting other children but also included being disobedient, defiant, or behaving aggressively toward others.

In both phases, classroom teachers[3] were also asked to identify support teachers who the students were familiar with and who regularly taught the class for at least one lesson each week. While support teachers varied between classes, depending on the needs of the class and the resourcing of the school, they included learning and support teachers, teacher librarians, computer teachers, sports and visual arts teachers, and specialized language teachers. Despite greater relationship intensity with classroom teachers, students' relationships with support teachers are sometimes greater in duration (see Table 1). Whereas classroom teachers typically change each year, support teachers often remain in the same role with the student cohort throughout their elementary schooling. Altogether, students' drawings depicted relationships with 29 different classroom teachers and 18 different support teachers.

Table 1. Relationship Durations in Weeks

	Classroom Teachers		Support Teachers	
	M (*SD*)	Range	*M* (*SD*)	Range
Phase 1	43.10 (1.36)	39–45	46.31 (22.34)	20–92
Phase 2	6.62 (2.48)	1–10	36.23 (33.76)	1–104

Note.—$N = 48$. One student had a shorter relationship duration with teachers in Phase 1 (21 weeks) as this student enrolled at the school in Term 2. Two students had longer relationship durations with classroom teachers in Phase 1 (90 weeks) as they had the same first-grade classroom teacher as the previous year. For the sake of clarity, these students have been omitted from Table 1. To ensure these cases did not affect our findings, the analyses were rerun without the data from those students. The pattern of results was the same, however, and so we retained results from the original analyses.

Measures and Procedure

The primary measure was a student-teacher drawing task adapted from Fury's (1996) child-family drawings (in which children are asked to draw themselves and their family as a measure of the parent-child relationship). To complete the task, students were provided with a white A4 piece of paper, 10 colored pencils, one lead pencil, and an eraser. They were then asked by the researcher to draw their classroom teacher, using the following instructions: "First, think about things [classroom teacher's name] does. Now, think about things [classroom teacher's name] says to you. Can you draw a picture of you and [classroom teacher's name] at school?" There was no time limit to the task, and the actual completion times varied. Once students indicated that they had finished, they were asked if there was anything they wanted to add to their drawing and were given additional time to do so if desired. Once complete, students were asked to identify themselves and their teacher by pointing to each in the drawing. They were then asked, "Can you tell me about this picture? What have you drawn?" Although answers to these questions were typically brief and simplistic, they were used to interpret aspects of the drawings that were ambiguous. Once students had completed the drawing of themselves with their classroom teacher, the task was then repeated for their support teacher. The same researcher, a former elementary school teacher, individually administered the task to all participants at both points in time.

Coding. To code each student-teacher drawing, Harrison and colleagues' (2007) adapted coding scheme was used. This scheme is based on the original scheme of Fury et al. (1997) for child-family drawings, with only minor amendments. Drawings were analyzed across two positive and six negative dimensions: vitality/creativity,[4] pride/happiness, vulnerability, emotional distance/isolation, tension/anger, role reversal, bizarreness/dissociation, and global pathology (see Table 2). Each dimension was rated on a 7-point rating scale, with 1 being *very low* to 7 being *very high*. In Figure 1*a*, for example, role reversal was rated 7 because the student depicted himself as being much larger than his classroom teacher, with exaggerated arms and hands. In Figure 1*b*, role reversal is comparatively less extreme; however, the student still appears slightly more potent than his support teacher and is not easily recognizable as a child (rated 5). Interrater reliability was completed with 15% of the drawings, with the second coder blind to the study's hypotheses and participants' characteristics. Reliability on all dimensions was high, with all two-way mixed, single-measure, intraclass correlation coefficients (>.812, all $p < .005$).

Interestingly, five drawings depicted the teacher but not the student. Although Harrison et al. (2007) did not rate role reversal if a student excluded either themselves or their teacher, this approach would omit those students' data from the analysis entirely (i.e., even if the same students' other drawings included both figures). We instead rated these drawings very low in role reversal, reasoning that drawings where the teacher is more powerful or potent than the student also score lower on this dimension. To ensure this approach did not affect our findings, we then repeated our analyses by substituting those ratings with mean scores from the same phase of the study (see Elliott & Hawthorne, 2005). Our findings were unaffected; thus, we report results from our original analyses.

Table 2. Drawing Dimensions for Student-Teacher Relationships

Dimension	Description
Vitality/creativity	Emotional investment in drawing reflected in embellishment, detail, color, and creativity
Pride/happiness	Student's sense of belonging and happiness in the relationship expressed by signs, symbols, positive affect and connection (e.g., smiles, hand holding, engaging in a positive activity together)
Vulnerability	Vulnerability and uncertainty reflected in size disproportions (e.g., teacher is huge), placement of figures on the page, and exaggerated body parts and/or facial features
Emotional distance/ isolation	Emotional separation reflected in disguised expressions of anger, neutral or negative affect, physical barriers, and distance between figures (e.g., the student is distinctly separate, or figures are engaged in unrelated activities)
Tension/anger	Tension or anger inferred from figures that appear constricted, closed, without color or detail, careless in appearance, scribbled, or crossed out (e.g., figures appear unfinished or have missing body parts)
Role reversal	Suggestions of role reversal inferred from differentiation of size or roles of figures (e.g., child is larger than teacher); may include distorted body extremities
Bizarreness/dissociation	Underlying disorganization expressed by unusual signs, symbols (e.g., dead trees, sharp teeth, red rain), or fantasy themes (e.g., the student appears animal-like or is depicted as being the teacher)
Global pathology	Overall degree of negativity reflected in global organization, completeness of figures, and use of color, detail, affect, and background scene

Source.—Adapted from Fury et al., 1997. Copyright 2006 by John Wiley and Sons.

Analyses

Given the related nature of the dependent variables measured in this study, running separate ANOVAs and ignoring the extent to which the variables are related would result in redundancy in the tests. A more effective method therefore is to run a multivariate analysis of variance (MANOVA). For this reason, to examine the relationship perceptions of disruptive students and test for interactions with gender, a mixed-design MANOVA was used. Student behavior (disruptive, well behaved) and gender (boys, girls) were entered as between-subjects factors, and Fury's (1996) eight relationship dimensions (vitality/creativity, pride/happiness, vulnerability, emotional distance/isolation, tension/anger, role reversal, bizarreness/dissociation, and global pathology) were entered as dependent variables. To also test the robustness of these effects across different educational scenarios, teacher type (classroom, support) and phase (Phase 1, Phase 2) were entered as within-subjects factors. Finally, to check for differences in our findings between kindergarten and first-grade students, grade was also initially entered as a between-subjects factor. Because there were no significant main effects, $F(8, 36) = 0.736$, $p = .659$, $\eta_p^2 = .141$, or interaction effects, all $F < 2.05$, all $p > .068$, grade was omitted from our final analysis. Due to the nested nature of the data, such that several individual children drew pictures about the same teachers (i.e., children were nested within teachers), an unconditional multilevel model was carried out for each dependent variable to assess the effect of this nesting. None of the effects of teacher were significant, with all intraclass correlations below .12 and most at zero. In other words, the variability between teachers accounted for no more than 12% of the variance of the data sets.

Results

We first present our results with regard to behavior and gender (see Table 3). We then report on findings for teacher type and phase, focusing specifically on any interactions with behavior and gender. All three- and four-way interactions were nonsignificant and are not reported further. Figures 2, 3, and 4 provide examples of the kinds of responses gathered.

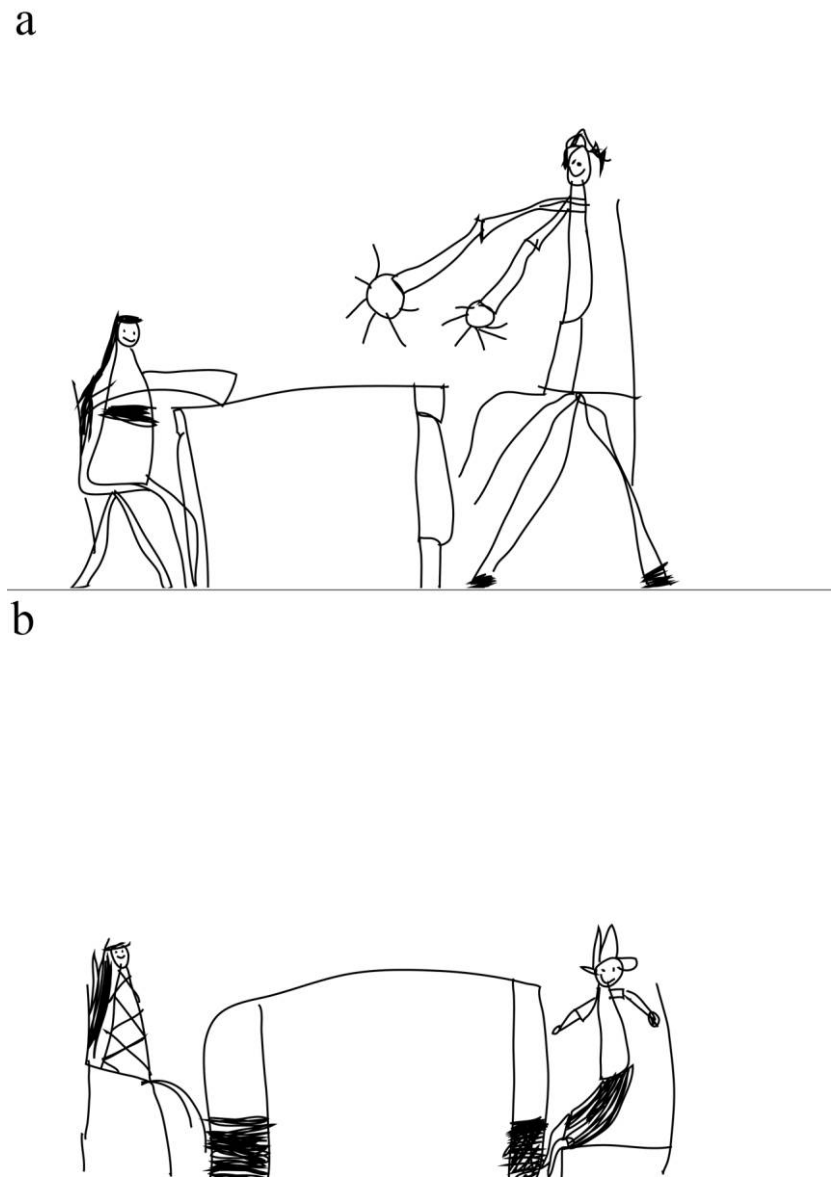

Figure 1. Example drawings provided by one disruptive boy showing (*a*) the student with his kindergarten classroom teacher, and (*b*) the student with his kindergarten support teacher (Phase 1). In both images the student is positioned on the right, sitting at a desk opposite the teacher.[5]

Table 3. Main Effects and Interaction Effects for Between- and Within-Subject Factors

Effect	F	p	η_p^2
Main effect:			
Behavior	.81	.597	.140
Gender	5.77	.000[+]	.536
Teacher type	3.26	.006	.394
Phase	3.66	.003	.423
Interaction effect:			
Behavior × gender	2.51	.026	.334
Behavior × teacher type	.96	.481	.161
Behavior × phase	2.03	.067	.289
Gender × teacher type	.80	.605	.138
Gender × phase	1.20	.325	.193
Teacher type × phase	.52	.836	.094

Note.—$df = 8, 40$. All three- and four-way interactions were nonsignificant, all $F < 1.39$, all $p > .228$.
[+] $p < .0005$.

Effects for Behavior and Gender

The main effect for student behavior was not significant, suggesting no difference in the relational representations of disruptive and well-behaved students (e.g., see Fig. 2*a* and 3*a*). There was, however, a significant main effect for gender. Univariate analyses showed that girls' drawings of their classroom teachers were higher in relational positivity, including vitality/creativity, $F(1, 47) = 8.04$, $p = .007$, $\eta_p^2 = .146$, and pride/happiness, $F(1, 47) = 31.38$, $p < .0005$, $\eta_p^2 = .400$, whereas boys' drawings were higher in relational negativity, including vulnerability, $F(1, 47) = 31.77$, $p < .0005$, $\eta_p^2 = .403$; emotional distance/isolation, $F(1, 47) = 23.54$, $p < .0005$, $\eta_p^2 = .334$; tension/anger, $F(1, 47) = 47.74$, $p < .0005$, $\eta_p^2 = .504$; role reversal, $F(1, 47) = 10.19$, $p = .003$, $\eta_p^2 = .178$; bizarreness/dissociation, $F(1, 47) = 43.13$, $p < .0005$, $\eta_p^2 = .479$; and global pathology $F(1, 47) = 31.28$, $p < .0005$, $\eta_p^2 = .400$ (see Table 4). Although there was a significant interaction between gender and behavior overall (i.e., for all relationship dimensions combined), between-subject effects on each independent relationship dimension were small and not significant, all $F < 1.24$, all $p > .271$, $\eta_p^2 < .026$. We do not interpret this interaction effect further.

Interactions with Teacher Type

Of primary relevance to this study is that there were no significant interactions between teacher type and student gender or behavior. We note, however, that the main effect for teacher type was significant. Averaged across student behavior and gender, drawings of classroom teachers were higher in relational positivity, including vitality/creativity, $F(1, 47) = 14.70$, $p < .0005$, $\eta_p^2 = .238$, and pride/happiness, $F(1, 47) = 5.82$, $p = .020$, $\eta_p^2 = .110$, whereas drawings of support teachers were higher in relational negativity, including vulnerability, $F(1, 47) = 7.94$, $p = .007$, $\eta_p^2 = .145$; emotional distance/isolation, $F(1, 47) = 7.46$, $p = .009$, $\eta_p^2 = .137$; tension/anger, $F(1, 47) = 11.76$, $p = .001$, $\eta_p^2 = .200$; role reversal, $F(1, 47) = 12.90$, $p = .001$, $\eta_p^2 = .215$; bizarreness/dissociation, $F(1, 47) = 8.48$, $p = .005$, $\eta_p^2 =$

Figure 2. Drawings provided by one disruptive boy. The first image (*a*) shows the student with his kindergarten classroom teacher at school (Phase 1). The second image (*b*) shows the student throwing mud and his first-grade classroom teacher standing in the rain (Phase 2). According to the student, his first-grade teacher is saying "naughty boy," and he is replying "take it back."

.153; and global pathology, $F(1, 47) = 9.43$, $p = .004$, $\eta_p^2 = .167$. In Figure 4, for example, differences can be seen in emotional distance/isolation: The student's representation of the relationship with the classroom teacher emphasizes a close bond, whereas the student's representation of the relationship with the support teacher emphasizes a classroom setting where the relationship is shared with other students.

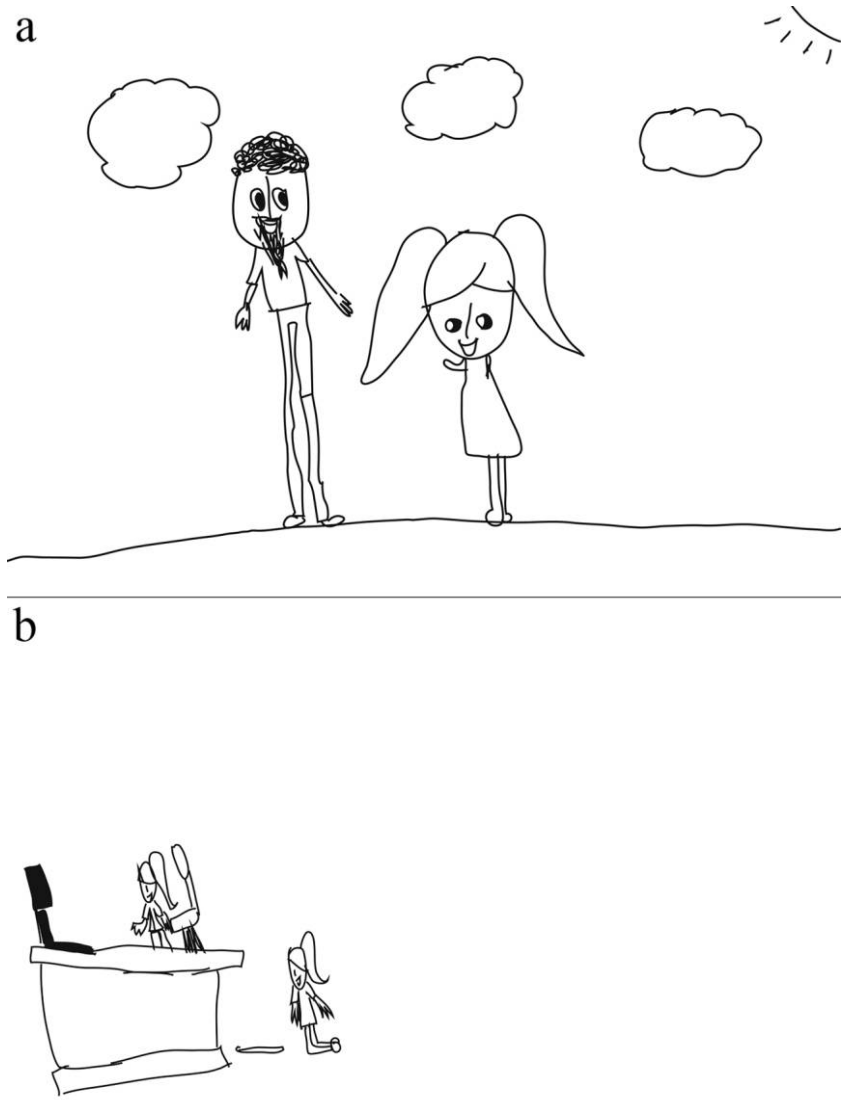

Figure 3. Drawing provided by one well-behaved girl. According to the student, these drawing show (*a*) the student helping her first-grade classroom teacher in the playground (Phase 1) and (*b*) the second-grade classroom teacher working at her desk while the student sits on the floor (Phase 2). Note that pride/happiness was rated higher in 3*a* than in 3*b*. In 3*a* the figures are centered, easily distinguishable, and appear to be reaching toward one another, whereas in 3*b* the figures are placed to the side of the page and appear to be less connected.

Interactions with Phase

Of primary relevance to this study is that there were no significant interactions between phase and behavior or gender. There was also no interaction between

Figure 4. Drawings provided by one well-behaved girl. According to the student, these drawings show (*a*) the student trying to hug her kindergarten classroom teacher, and (*b*) a kindergarten support teacher "playing puzzles" with her and two other students (Phase 1). Note that although both drawings include positive symbolism, the figures in 4*b* are smaller, less detailed, and seated around a desk (i.e., rated higher in emotional distance/isolation).

phase and teacher type. We note, however, that the phase main effect was significant, $F(8, 40) = 3.66$, $p = .003$, $\eta_p^2 = .423$. Averaged across student behavior and gender, univariate analyses showed that drawings of teachers in Phase 2 (at the beginning of the new school year) were higher in emotional distance/isolation, $F(1, 47) = 10.01$, $p = .003$, $\eta_p^2 = .176$, and bizarreness/dissociation, $F(1, 47) = 7.54$,

Table 4. Mean Scores (and Standard Deviations) for Drawings of Classroom Teachers and Support Teachers by Gender (29 Boys, 22 Girls) and Phase

	Classroom Teachers		Support Teachers	
	Boys	Girls	Boys	Girls
Phase 1:				
Vitality/creativity	5.00 (1.60)	5.41 (.91)	4.34 (1.42)	5.18 (.96)
Pride/happiness	4.52 (1.24)	5.73 (.83)	4.14 (1.19)	5.36 (.85)
Vulnerability	3.90 (1.37)	2.41 (1.18)	4.52 (1.12)	2.77 (1.41)
Emotional distance/isolation	3.45 (1.30)	2.23 (.92)	3.90 (1.15)	2.68 (.57)
Tension/anger	3.07 (1.19)	1.95 (.79)	3.59 (1.09)	2.14 (.77)
Role reversal	3.34 (1.45)	2.36 (1.18)	3.62 (1.32)	2.91 (1.19)
Bizarreness/dissociation	2.83 (1.10)	1.86 (.71)	3.38 (.94)	2.05 (.65)
Global pathology	3.55 (1.30)	2.27 (.88)	4.07 (1.19)	2.73 (.70)
Phase 2:				
Vitality/creativity	4.34 (1.42)	5.55 (1.10)	3.93 (1.41)	5.18 (1.01)
Pride/happiness	4.07 (1.36)	5.41 (1.14)	3.79 (1.21)	5.32 (.72)
Vulnerability	4.03 (1.12)	2.86 (1.52)	4.79 (.98)	2.77 (1.38)
Emotional distance/isolation	3.93 (1.13)	2.91 (1.54)	4.41 (1.12)	2.82 (1.01)
Tension/anger	3.41 (1.02)	2.09 (.81)	4.00 (1.28)	2.27 (.63)
Role reversal	3.00 (.80)	2.41 (1.22)	3.41 (1.18)	2.50 (1.01)
Bizarreness/dissociation	3.59 (1.09)	2.23 (.92)	3.76 (.95)	2.41 (.67)
Global pathology	3.93 (1.13)	2.77 (1.23)	4.34 (1.08)	2.91 (.75)

$p = .009$, $\eta_p^2 = .138$ (see, e.g., Fig. 2*b* and 3*b*). There were no other differences, all $F < 3.29$, all $p > .076$.

Discussion

This study contributes to the limited extant research on children's perceptions of student-teacher relationships by comparing the perceptions of students considered disruptive by their teachers and students considered well behaved. Using a student-teacher drawing task to depict the emotional quality of the relationship (see Harrison et al., 2007) and examining relationships with both classroom and support teachers, we hypothesized that disruptive students would portray greater negativity in their drawings than students nominated as being well behaved. Considering that boys are more frequently identified as disruptive than girls, we also included gender as an independent factor, hypothesizing that boys will perceive poorer relationships with their teachers than girls. Although we found an interaction between gender and behavior overall, there were no significant interaction effects on any individual relationship dimension (perhaps due to the low representation of disruptive girls in our sample). We therefore discuss our findings with regard to gender and behavior separately.

In contrast to our first hypothesis, that disruptive students will depict relationships with their teachers more negatively than well-behaved students, no significant effects were found. The disruptive young students in our sample appeared to view their relationships with classroom and support teachers no differently than the students who were considered to be well behaved. These findings differ from other studies investigating young children's perceptions of these relationships,

which show that children's relationship perceptions are associated with teacher reports of problem behavior (Mantzicopoulos & Neuharth-Pritchett, 2003; Spilt et al., 2010). These findings are also at odds with studies reporting teachers' perceptions, which show that teachers rate their relationships with disruptive students negatively (e.g., Ladd & Burgess, 1999; Silva et al., 2011).

There are several possible explanations for the differences observed between our findings (using student drawings) and those of previous studies reporting children's relationship perceptions. First, methodological differences need to be considered. In the research conducted by Mantzicopoulos and Neuharth-Pritchett (2003) and Spilt et al. (2010), students were asked to agree or disagree with images representing warmth, conflict, and dependency. In comparison, this study required students to create their own images depicting their relationships with particular teachers, which were analyzed for indications of students' affective relation to their teachers and perceived balance of power in those relationships. In addition, although it is beyond the scope of this study to examine possible effects, we acknowledge that unlike Mantzicopoulos and Neuharth-Pritchett (2003) and Spilt et al. (2010), rather than using teacher ratings of problem behavior and social skills, we were interested in teachers' own nominations of student behavior as being either disruptive or well behaved, specifically from teachers who had taught those students for almost a full school year.

Second, other theoretical explanations need to be considered. For example, given research showing that younger students have difficulty recognizing teachers' emotions (Andersen, Evans, & Harvey, 2012) and are typically regarded as being egocentric, it may be that these students are simply unaware that a teacher's frustration with their behavior may be indicative of a less warm relationship. In other words, any negative regard directed toward the disruptive student may go unnoticed. However, it is also possible, and perhaps more likely, that at a young age, any negative regard may not affect the way the child feels about or depicts the relationship. Given the consistencies in child-parent and student-teacher relationships (O'Connor & McCartney, 2006), for example, young students who behave disruptively at home yet still experience loving and supportive relationships with their parents may expect their relationships with teachers to also be positive despite their behavior. Indeed, Bowlby theorized that children's internal working models were both transferable and self-perpetuating: "Nevertheless, as a child grows older, the pattern becomes increasingly a property of the child himself, which means that he tends to impose it, or some derivative of it, upon new relationships such as with a teacher, a foster mother, or a therapist" (Bowlby, 1988, p. 143).

Alternatively, some students may behave disruptively as a way to maintain proximity and communication with teachers they like (McGrath & Van Bergen, 2015). Furthermore, the modest and conflicting levels of agreement between student and teacher reports noted in other studies (e.g., Hughes et al., 1999; Murray et al., 2008; Spilt et al., 2010) may reflect students' and teachers' differing interpretations of challenging student behavior. In this study, for example, it is not known if disruptive students viewed their own behavior as troublesome or not. To disentangle these possibilities, future research comparing teachers' and disruptive students' relationship perceptions needs to also consider students' own perceptions of their behavior.

Our findings did, however, support our second hypothesis—that boys will depict relationships with their teachers that are higher in relational negativity than those of girls. In particular, boys' representations of their relationships with teachers demonstrated poorer affective relation and a disproportionate balance of power than did those of girls. These findings concur with other studies reporting students' (Koepke & Harkins, 2008; Mantzicopoulos & Neuharth-Pritchett, 2003) and teachers' (e.g., Baker, 2006; Silver, Measelle, Armstrong, & Essex, 2005; Troop-Gordon & Kopp, 2011) perceptions of student-teacher relationship quality, showing boys have poorer relationships with teachers than girls. In addition, these findings reflect similarities with other studies using children's drawings, for example, showing that boys' representations of their relationships with teachers (Harrison et al., 2007) and with their families (Dallaire et al., 2012) are more negative than those of girls.

Although it may be argued that differences between boys' and girls' representations of relationship quality reflect gender differences in children's drawing abilities and fine motor skills more generally (see Cherney et al., 2006), we find this position difficult to support when considering the present findings. We note that gender differences emerged on all drawing scales, whether these coded for embellishment and detail (i.e., vitality/creativity) or for psychological and relational aspects of the drawing (including proportions, placement, and facial expressions). In addition, we note that those boys' drawings that did suggest positive relationships included many of the same symbolic elements as girls' drawings (see, e.g., Fig. 2*a* and 3*a*). We therefore consider gender differences in students' drawings to reflect different representations of the student-teacher relationship and not drawing ability.

Although we can only speculate, the gender differences in children's drawings may be explained by findings that boys receive more negative attention from their teachers than do girls (Kesner, 2000) and that teachers prefer the behavior of girls to that of boys (Beaman et al., 2007; Kesner, 2000). Alternatively, these differences may be because boys are typically less engaged (Marks, 2000), have greater academic problems in school (Hamre & Pianta, 2001), and enjoy school less (Furrer & Skinner, 2003) than girls. It is therefore important for future research to determine the underlying drivers of these perceptions and guide the development of interventions aimed at improving student-teacher relationship quality.

Although not the primary focus of the study, it is noteworthy that this study was the first to consider relationships with different types of elementary school teachers and at different points in time. Despite relationships with classroom and support teachers differing in duration and intensity, our findings showed that at the beginning of the next school year, students' drawings of their classroom teachers and support teachers were both rated higher in emotional distance/isolation and bizarreness/dissociation (see, e.g., Figs. 2 and 3). Together, these dimensions tap feelings of emotional separation or loneliness, reflected in the placement of figures, and disorganization, reflected in unusual signs and symbols that may reveal feelings of hostility or abandonment (Fury, 1996). Considering that no significant differences were found between kindergarten and first-grade students' representations at either point in time, we suggest that these findings must be related to the new-year transition rather than reflecting a gradual decline in relationship quality

noted in other research (e.g., Lynch & Cicchetti, 1997). It is therefore important for researchers to consider at what point in the school year they collect data examining students' perceptions, as well as other adjustment influences, and for teachers to consider ways to reduce students' feelings of emotional distance at the beginning of the school year.

Limitations

While our study is the first to compare the relationship perceptions of disruptive and well-behaved kindergarten and first-grade students, focusing specifically on emotional tone, there are four key limitations. First, the relatively small sample size and low representation of girls in the disruptive behavior category did not allow us to accurately report the interaction between behavior and gender. Specifically, although a significant overall effect was found, there were no significant effects on any one relationship dimension. Second, only classroom teachers were asked to nominate the students they found most disruptive. Although the everyday classroom context is important, given that students spend the most time here, it is possible that support teachers might see these students differently (or, indeed, that students may behave differently for different teachers). Third, we report solely on students' representations. While student reports are more likely to reflect emerging relational models of their interactions with a small number of teachers and other adults, teacher reports are more likely to reflect enduring relational models based on experiences with many students (Spilt et al., 2010). Finally, because we chose to minimize the time elapsed between Phases 1 and 2 (thus minimizing changes in cognitive development and physical dexterity), we were unable to comment on the evolution of the student-teacher relationship between disruptive young students and specific classroom teachers. We hypothesize that increases in emotional distance/isolation and bizarreness/dissociation occur as students progress through elementary schooling—particularly as the same increase is also seen in drawings of support teachers (who are typically already known to the students)—yet we note the need for longitudinal research confirming this trend.

Conclusion

This study identifies how young children represent the emotional quality of their relationships with teachers. Interestingly, and in contrast to other research, students whose teachers considered them disruptive viewed their relationships with teachers to be just as positive as did their well-behaved peers. However, regardless of grade, behavior, time of year, or type of teacher, boys' drawings of their relationships with teachers scored higher in emotional negativity than girls. Taken together, our findings suggest that there may be a critical period in early schooling in which disruptive students are protected from the negative consequences of a low-quality and conflictual relationship with their teachers. We highlight the need for interventions to target student behavior in these early years, before the negative effects of their behaviors become entrenched. Unfortunately, in our sample, no such window exists for boys. Boys' poorer quality relationship perceptions, although sometimes considered normative, could place them at risk of maladaptive behavior (Ru-

dasill et al., 2010), negative relationships with peers (Hughes & Chen, 2011), and poorer academic outcomes (Hamre & Pianta, 2001). Greater attention must therefore be directed to enhancing these relationship perceptions, particularly at the beginning of the new school year, when all students perceive greater emotional distance from their teachers.

Notes

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1. Global pathology was used as an indication of overall negativity rather than a composite score.

2. In government schools in the Sydney region, classroom teachers teach the same students for 21 hours and 45 minutes each week, whereas support teachers engage with those same students for approximately 1 hour per week (NSW DEC, 2015).

3. The selection of classroom teachers in Phase 2 was based on students' enrollment in nine first-grade classes and nine second-grade classes.

4. Although we report the vitality/creativity subscale as a positive dimension, others suggest that this dimension may be independent of emotional investment and therefore neutral (Fury, 1996; Harrison et al., 2007).

5. Sample images are digitally traced black-and-white copies. Identifying text, such as names, has been removed.

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