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Paraprofessional and Teacher Relationships in Working With Students With or At Risk of Disruptive Behavior Disorders

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Abstract

Limited research has been conducted examining the relationship between paraprofessionals and teacher supervisors. This study examined 175 paraprofessionals of students with or at risk of disruptive behavior disorders who reported relationships with classroom teachers in 59 elementary schools. Overall, paraprofessionals rated their relationship with their classroom teachers as positive. Differences in relationship qualities were examined in relation to paraprofessional race/ethnicity, level of education, years of experience, and school economic status (i.e., percentage of students receiving free and reduced lunch). Results indicated that Latinx and Black paraprofessionals reported lower overall relationship quality with their classroom teachers than White paraprofessionals. Paraprofessionals with more years of experience, in general, reported better relationship quality and communications with their classroom teachers; no differences were found for educational level. Negative correlations ($rs = -.25, -.26$) were found between relationship qualities and school economic status. Implications for practice and research are discussed.

Keywords

disruptive behavior disorders, paraprofessionals, teachers, classroom relationships

When working with students with disruptive behaviors, it is imperative for teachers and paraprofessionals to communicate, collaborate, and plan together to support one another and the students in their classroom. Disruptive behavior disorders (DBDs) are common and often co-occur with other behavioral disorders such as attention-deficit/hyperactivity disorder (ADHD), oppositional defiance disorder (ODD), and conduct disorders (CD). Students who display DBDs are often educated in general and special education classroom settings, with many students receiving special education classifications such as other health impaired (OHI) or emotional behavioral disorder (EBD). Given their additional special education classification, students with DBDs are often provided a range of academic and behavioral support services to meet their complex needs in an educational setting (Pikard et al., 2018; Reddy et al., 2013).

Research has underscored that students with DBDs often exhibit a myriad of challenging behaviors and have extensive emotional and academic needs that place them at high risk of negative outcomes such as school failure, school dropout, family and peer difficulties, and drug use (Barker et al., 2010; Delligatti et al., 2003; Reddy et al., 2009). Thus, these students require targeted interventions and supports, as well as ongoing communication and coordination among school personnel such as classroom teachers and paraprofessionals to meet their daily classroom needs. The ability of classroom teachers and support staff, such as paraprofessionals, to effectively communicate, coordinate, and deliver supports is paramount for effectively supporting the behavioral, emotional, and academic needs of this vulnerable student population.

Training, Education, and Requirements of a Paraprofessional

According to Every Student Succeeds Act (ESSA) of 2015, paraprofessionals are noncertified instructional staff personnel who do not hold the position of teacher but assist in the classroom under the guidance of a teacher. Paraprofessionals have many responsibilities including providing one-on-one or small group instructional support for students, managing

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classroom behavior, assisting with instruction outside of the classroom (i.e., library or computer lab), translating student needs, advocating for the students with whom they work, and overall supporting student instruction under the direct supervision of a teacher. Under ESSA, paraprofessionals who provide teaching support must have a high school diploma (or its equivalent) and also meet one of these requirements (a) completed 2 years of study at a college or technical school; (b) hold at least an associate degree; or (c) be able to show, through a formal state or local academic assessment, that they know about and can assist in reading, writing, and math instruction (ESSA, 2015).

Although there are set requirements for hiring paraprofessionals, the training and professional development of paraprofessionals is not always consistent. The Council for Exceptional Children (CEC), in collaboration with the National Resource Center for Paraeducators (NRCP), developed guidelines that highlight the essential knowledge and skills for paraeducators, including those serving individuals with exceptionalities (Specialty Set of Knowledge and Skills for Paraeducators in Special Education; Council for Exceptional Children, 2013). Despite these standards and requirements, many paraprofessionals have little, or no, formal training to prepare them for these responsibilities and are tasked with both instructing and managing children (Jones et al., 2012). Furthermore, classroom teachers lack the time and resources to provide adequate professional development for all the roles paraprofessionals assume (Mason et al., 2017). The lack of training, resources, and time may lead to poorly defined roles and responsibilities for paraprofessionals in the classroom, which may, in turn, strain the paraprofessional and teacher relationship.

Teacher and Paraprofessional Collaboration

Paraprofessionals are often tasked with the responsibility of managing disruptive student behaviors. Communication and collaboration between teachers and paraprofessionals have been associated with positive outcomes for students in elementary school settings (e.g., Downing & Peckham-Hardin, 2007; Goddard et al., 2007). For example, Downing and Peckham-Hardin (2007) interviewed parents, teachers, and paraeducators of students receiving special education services in pre-k, elementary, and middle school about their student/child's success in school, their perception of a high-quality education program, and aspirations for their child in an inclusive school setting. The authors found that each group of stakeholders reported positive outcomes for students and that both teachers and paraprofessionals indicated that collaborating with one another and the students' team was integral to the student's successful outcomes. Similarly, Goddard and colleagues (2007) found that academic achievement was higher for students attending schools with higher levels of teacher collaboration.

Paraprofessionals and teachers have different perspectives that may influence their relationships. Jones et al. (2012) found that although paraprofessionals reported positive relationships with their students, teachers appraised the paraprofessional–student relationships more negatively. Paraprofessionals also appraised their feedback from teachers more positively than teachers. Finally, the teachers reported taking paraprofessionals' opinions regarding student interactions into consideration more often than paraprofessionals perceived that they did (Jones et al., 2012). These results underscore the need for assessing paraprofessional experiences with classroom teachers and perceived relationships.

Relationships and positive rapport between paraprofessionals and teachers influence their relationships. Biggs et al., (2016) found that communication and interpersonal connections among teachers and paraprofessionals were perceived as important to a positive professional relationship that promotes trust and openness. They interviewed a small subset of teachers and paraprofessionals working with students with severe disabilities in elementary school settings. Interviews revealed that professional relationships between special education teachers and paraprofessionals were critical to ensuring students receive high-quality educational experiences. Biggs and colleagues also found that teachers and paraprofessionals reported better and more positive relationships when both individuals reported sharing the same long-term vision of student success while being invested in the same goals for the classroom and students and have similar expectations for their students. This research supports findings and suggestions from a review of the literature on paraprofessionals by Giangreco and colleagues (2010), which states the need to establish collaborative relationships with paraprofessionals given their roles in the classroom. This is imperative to ensure paraprofessional interactions are positive for both students and teachers. The review conducted supports the need for continued research in the area of paraprofessional collaboration, given the limited literature in the field.

In addition to building positive relationships through rapport, other variables can contribute to the quality of the teacher–paraprofessional relationship. Previous research in the medical literature has focused on the concordance of race/ethnicity to patient satisfaction. LaVeist and Nuru-Jeter (2002) found patients reported the highest satisfaction if they were race concordant with their physician. More recently, Street et al. (2008) found the physician–patient relationship was strongest when patients viewed themselves as similar to their physician. This included characteristics such as personal beliefs, values, and communication as well as higher ratings of trust, satisfaction, and intention to adhere. Although rooted in medical care, this literature can be used to examine relationships in the classroom, such as teacher and paraprofessional concordance of race and ethnicity in relation to their levels of trust and communication.

This study will begin to explore this topic, which is limited in the field of education.

Study Purpose

Taken together, the research is very limited in examining the nature of teacher and paraprofessional relationships in elementary schools and, in particular, the relationships of school personnel who support students with chronic behavior difficulties. The quality of teacher and paraprofessional communications and interactions are important for creating a positive learning environment for all students that lead to meaningfully improvement in student academic engagement, behavior, and achievement. Furthermore, research is needed to examine professional relationships in relation to common characteristics of paraprofessionals (e.g., years of experience, training) and schools (e.g., student receiving free and reduce lunch). The current literature focuses on the characteristics of students and teachers, with limited exploration of paraprofessional characteristics. Such research will advance understand of the nature of teacher and paraprofessional relationships and the potential impact of their relationship qualities on school personnel and students.

The current literature focuses on relationships between paraprofessionals and teachers who support students with severe disabilities, including autism and intellectual disabilities. Additional investigations are needed to explore relationships between those who support students with more common disabilities such as DBDs. DBDs such as ADHD, ODD, and OCD are common in both general and special education classrooms. ADHD is one of the most common childhood disorders, with 8.4% of all U.S. children 2 to 17 years of age receiving a formal diagnosis (Danielson, Bitsko, et al., 2018). Among these children, 6 in 10 also had at least one other mental, emotional, or behavioral disorder, with 5 in 10 children having a behavior or CD and 3 in 10 children having a co-occurring anxiety disorder. As such, children with ADHD are a vulnerable population that requires support from school personnel who must work together effectively, including classroom teachers and paraprofessionals.

Given the importance of collaboration among paraprofessionals and teachers in supporting students with or at risk of DBDs in elementary school settings, additional research on paraprofessional–teacher relationships is needed. This study is the first to examine the nature of professional relationships between paraprofessionals who support students with disruptive behaviors and their classroom teachers in elementary schools. Also, the current investigation examines professional relationships in relation to common characteristics of paraprofessionals and school context. To this end, we address the following research questions:

Research Question 1 (RQ1): What is the quality of paraprofessional and teacher relationships in elementary school settings when working with students with or at risk of DBDs?

Research Question 2 (RQ2): Do ratings of paraprofessional and teachers of students with or at risk of DBDs relationship quality differ by paraprofessional characteristics such as paraprofessional race/ethnicity, education level, and years of experience as a paraprofessional?

Research Question 3 (RQ3): Do ratings of paraprofessional and teacher relationship quality relate to the percentage of students receiving free and reduced lunch (FRL) in schools supporting students with or at risk of DBDs?

Method

Participants

Paraprofessionals. Participants for this study consisted of 175 paraprofessionals who supported students with or at risk of DBDs in 59 elementary schools. All participants were part of a larger randomized controlled trial (RCT) focused on the implementation and effectiveness of a job-embedded behavior coaching model for paraprofessionals (Reddy & Glover, 2017). This study utilized baseline data collected prior to coaching implementation. As shown on Table 1, paraprofessionals ages ranged from 20 to 78; (M = 43.29 years; SD = 13.68), with 90% of participants identifying as female. The sample of paraprofessionals was racially/ethnically diverse, with 33.2% identifying as White (n = 62), 31.6% as Black (n = 59), 20% Latinx (n = 35), 3.7% Asian (n = 7), and 3.9% as other or two or more races (n = 7). Paraprofessionals also reported varying levels of education and experience working in school settings. Years of experience ranged from 1 to more than 10 years, with most reporting more than 10 years (n = 75; 42.9%). Paraprofessional's education also varied, with some college (nondegree) being that most commonly reported (n = 65; 37.1%).

Teachers. Paraprofessionals in the current study were assigned to 163 classrooms and 163 unique general and special education teachers. Demographic data were available for 123 teachers. Teachers' ages ranged from 23 to 69 years old (M = 38.40 years; SD = 11.15), with 98% of participants identifying as female (n = 120). The majority of teachers self-identified as White (66.7%; n = 82), followed by Black (n = 12; 9.80%), Latinx (n = 12; 9.80%) and multiracial (n = 4; 3.30%), with 9.80% (n =12) choosing not to report on their Race/Ethnicity. The majority of teachers (50.40%; n = 62) reported a bachelors' degree as their highest level of education and 38.20% (n = 47) reported a graduate-level degree, whereas 11.40% chose not to report their education level. Comparably, years of teaching experience were more variable. A large portion of teachers (40.70%; n = 50) possessed more than 10 years' experience, and 21.1%

Table 1. Participant Demographics.

	Paraprofessionals $n = 175$	
Demographic Variable	*n*	%
Sex		
Female	158	90.3
Male	12	6.9
Not reported	5	2.9
Race/ethnicity		
Latinx	35	20
Black	59	31.6
White	62	33.2
Asian	7	3.7
Other	7	3.7
Not reported	16	8.6
Level of education		
High school	27	15.4
Some college: nondegree	65	37.1
Associate degree	25	14.3
Bachelor's/masters'/ graduate degree	49	28.0
Not reported	9	5.1
Years of experience		
0–2	40	22.9
2–5	36	20.6
5–10	24	13.7
< 10	75	42.9

($n = 26$) of teachers possessed between 5 and 10 years' experience. A small portion of teachers (9.8%; $n = 12$) possessed only 2–5 years' experience and <2 years' experience (14.6%; $n = 18$). A small portion of teachers also chose not to report on their years of experience (12.20%; $n = 15$).

School Setting

The current data represent 59 schools across one state in the Northeast region of the United States. Schools were located in diverse settings including urban, suburban, and rural areas. Paraprofessionals in this sample served students of varying socioeconomic status, with 109 paraprofessionals (62.3%) working in schools that qualified for FRL status.

Measures

Paraprofessional and Teacher Relationship Scale (PTRS). The adapted PTRS is a modified version of the Parent-Teacher Relationship Scale (Vickers & Minke, 1995), which included 24 items, a total and two subscales, Joining (15 items) and Communication (9 items). The measure was only slightly modified for the sample of teachers and paraprofessionals. Specifically, parent was changed to paraprofessional and the question content was not adapted. For the larger RCT study, the investigators computed reliability and validity statistics for the modified PTRS (see "Method" section for measure description). The adapted PTRS Total and Joining and Communication subscales have strong internal consistency (Cronbach's α of .901, .882, and .872). The adapted PTRS scales are theoretically and factor analytically derived (confirmatory factor analyses using diagonally weighted least squares) yielding fair to acceptable fit to the data (e.g., χ^2/df, goodness-of-fit index, root mean square error of approximation). The adapted PTRS Total scores are summed across the 24-item ratings, and the Joining and Communication subscale scores are summed across the nested item ratings (i.e., 15 items; 9 items).

The PTRS consists of a 24-item Likert-type scale that assesses the quality of paraprofessional and teacher relationships. Paraprofessionals rated their level of agreement on a 5-point scale (1 = *almost never*, 2 = *once in a while*, 3 = *sometimes*, 4 = *frequently*, and 5 = *almost always).* The Joining subscale focused on several areas including trust, cooperation, respect understanding, and expectations. Items included statements such as "We trust each other," "We cooperate with each other," "I respect this teacher," "We understand each other," and several others (see Table 2). The Communication subscale comprised items related to communicating thoughts, concerns, or questions with paraprofessionals' cooperating teacher. Items included "I tell this teacher when I am pleased," I tell this teacher when I am concerned," "I tell this teacher when I am worried," "I ask this teacher's opinion about student's progress," and "I ask this teacher for suggestions."

Procedures

Paraprofessionals from eligible schools met with research staff for informed consent, which was approved by the university Institutional Review Board. The data used for this study were collected at baseline of the larger RCT. Baseline data included several questionnaires and scales that assessed school and participant demographic information, school and classroom practices, paraprofessional training needs, relationships with classroom teachers, and student behavior problems and social skills. The PTRS is one of several measures collected at baseline. This study focused on the quality of paraprofessionals' perceived relationships with their classroom teachers and the quality of such relationships in relation to specific characteristics by utilizing the data derived from the PTRS questionnaire in addition to the demographic data.

Data Analysis

Several data analytic methods were used to address research questions. Descriptive statistics were computed for PTRS scale and items scores, and Pearson product–moment correlations were computed to examine relations between PTRS scales (Total, Joining, and Communication) and

Table 2. Descriptive Statistics for PTRS Subscales.

PTRS Subscale Items	Minimum	Maximum	*M*	*SD*
Total sum score	67	120	111.54	10.218
Joining subscale				
1. We trust each other.	3	5	4.84	0.464
2. It is difficult for us to work together.	1	5	4.76	0.785
3. We cooperate with each other.	1	5	4.83	0.601
4. Communication is difficult for us.	1	5	4.76	0.816
5. I respect this teacher.	2	5	4.91	0.369
6. This teacher respects me.	3	5	4.91	0.337
7. We are sensitive to each other's feelings.	1	5	4.50	1.129
8. We have different views of right and wrong.	1	5	4.39	1.087
9. When there is a problem with students this teacher is all talk and no action.	1	5	4.80	0.711
10. This teacher keeps promises to me.	1	5	4.79	0.563
11. When there is a behavior problem, I have to solve it without getting help from the teacher or paraprofessional.	1	5	4.56	0.887
12. When things aren't going well it takes too long to work them out.	1	5	4.72	0.724
13. We understand each other.	3	5	4.87	0.386
14. We see students differently.	1	5	4.29	1.062
15. We agree about who should do what regarding students.	1	5	4.51	1.061
16. I expect more from this teacher than I get.	1	5	4.76	0.823
17. We have similar expectations of students.	1	5	4.69	0.748
18. This teacher tells me when s/he is pleased.	1	5	4.54	0.914
19. I don't like the way this teacher talks to me.	1	5	4.85	0.643
Joining subscale sum score	49	95	89.31	7.914
Communication Subscale				
20. I tell this teacher when I am pleased.	1	5	4.38	1.043
21. I tell this teacher when I am concerned.	1	5	4.54	0.862
22. I tell this teacher when I am worried.	1	5	4.40	1.028
23. I ask this teacher's opinion about student's progress.	1	5	4.45	0.862
24. I ask this teacher for suggestions.	1	5	4.45	0.828
Communication subscale sum score	8	25	22.22	3.661

Note. PTRS = Paraprofessional and Teacher Relationship Scale.

school-level economic status as defined as the percentage of students who received FRL. Strengths of relationships were assessed using Cohen's (1988) classifications, where *r* of .10 to .30 were small, $r > .30$ to .50 were medium, and $r > .50$ were large. Kruskal–Wallis *H* tests, a rank-based nonparametric test, was computed to examine differences in PTRS scale scores (Total, Joining, and Communication subscale sum scores) between three paraprofessional demographic variables (e.g., race/ethnicity, level of education, and years of experience as a paraprofessional). Kruskal–Wallis *H* tests are used to determine statistically significant differences between two or more groups of an independent variable (e.g., level of education) on a continuous or ordinal dependent variable (e.g., PTRS scale sum scores).

Results

RQ1: Quality of Paraprofessional and Teacher Relationships

As shown in Table 2, PTRS Total scores yielded a sum score of 111 ($M = 111.54$; $SD = 10.21$) ranging from 67 to 120 (highest possible score). The Joining subscale sum score was 89.3 ($M = 89.31$; $SD = 7.914$) ranging from 49 to 95. All Joining subscale item means were above 4.29, with the lowest scoring item being "We see students differently" ($M = 4.29$) followed by "We have different views of right and wrong" ($M = 4.39$). Higher scoring items included "I respect this teacher" and "This teacher respects me" with a mean of 4.91, respectively. The Communication subscale sum score was 22.2 ($M = 22.22$; $SD = 3.66$) ranging from 8 to 25. All Communication subscale item mean scores were above 4.38, with the lowest scoring item being "I tell this teacher when I am pleased" ($M = 4.38$), followed by "I tell this teacher when I am worried" ($M = 4.40$). The highest scoring item was "I tell this teacher when I am concerned" ($M = 4.54$). Higher scores represent higher ratings of a positive relationship with the classroom teacher.

RQ2: Differences in Relationship Quality by Paraprofessional Characteristics

As shown in Table 3, Kruskal–Wallis *H* tests revealed differences in overall ratings of relationship quality between

Table 3. Differences in Relationship Quality by Common Paraprofessional Characteristics.

Paraprofessional characteristics	PTRS Total	Joining subscale	Communication subscale
Race/ethnicity groups	$H = 17.612$ *	$H = 22.26$ *	$H = 4.10$
Education levels	$H = 3.18$	$H = 4.34$	$H = 1.86$
Years of experience	$H = 8.47$ *	$H = 5.25$	$H = 12.20$ *

Note. PTRS = Paraprofessional and Teacher Relationship Scale.
*$p < .05$.

paraprofessionals and classroom teachers based on paraprofessionals' racial or ethnic background ($H = 17.61$, $p = .001$). Post hoc analyses (with Bonferroni adjustment) found group differences in relationship quality between Hispanic/Latinx and White or European American paraprofessionals ($H = -31.13$, $p = .019$) and Black or African American and White or European American paraprofessionals ($H = -29.61$, $p = .005$). Results indicated paraprofessionals of underrepresented groups (Black and Latinx) rated their overall relationship quality lower than their White counterparts. Kruskal–Wallis *H* tests also revealed group differences in ratings on the Joining subscale based on paraprofessionals' racial/ethnic background ($H = 22.26$, $p < .001$). Post hoc analyses revealed group differences between Latinx and White/European American paraprofessionals ($H = -33.59$, $p = .007$) and Black or African American and White/European American paraprofessionals ($H = -33.44$, $p = .001$). Specifically, underrepresented groups (Black and Latinx) rate the Joining subscale lower than White paraprofessionals. No group differences based on paraprofessional race/ethnicity were found for the Communication subscale.

Kruskal–Wallis *H* test found no significant differences in relationship quality as measured by the PTRS scales based on educational level (see Table 3). Kruskal–Wallis *H* tests found group differences on the PTRS Total score ($H = 8.478$, $p = .037$) and Communication subscale ($H = 12.203$, $p = .007$) scores based on paraprofessional years of experience (see Table 3). No differences were found between groups on the Joining subscale. Post hoc testing found differences in PTRS Total scores between paraprofessionals with 0–2 years' experience and 5–10 years' experience ($H = -28.333$, $p = .029$) and paraprofessionals with 0–2 years' experience and <10 years' experience ($H = -27.067$, $p = .006$). For the Communication subscale, post hoc testing found group differences between 0 and 2 years' experience and <10 years' experience ($H = -30.028$, $p = .001$) and 0–2 years' experience and 2–5 years' experience. For both the PTRS Total and Communication subscales, paraprofessionals with more years of experience reported higher quality relationships and greater communication with their classroom teachers.

RQ3: Relationship Quality and School Economic Status

School economic status measured by the percent of students receiving FRL was found to have a significant negative correlation ($r = -.25$, $p < .001$) with PTRS Total scores. Similarly, FRL was found to have a negative correlation with the PTRS Joining subscale scores ($r = -.267$; $p = .000$), while no statistically significant relationship was found between FRL and the PTRS Communication subscale scores ($r = -.119$, $p = .115$). As the percentage of students receiving FRL increased, paraprofessional ratings of overall relationship quality and joining with classroom teachers decreased.

Discussion

The nature of teacher–paraprofessional relationships is critically important for forging effective communications and collaborations to support the needs of students in elementary school. This study examined the quality of paraprofessional and classroom teacher relationships from the perspective of paraprofessionals supporting students displaying disruptive behaviors. Students with DBDs present unique challenging in the classroom, including behavioral and academic difficulties. Paraprofessionals are often tasked with providing supports for academics (e.g., Riggs & Mueller, 2001) or social behavior (e.g., Fisher & Pleasants, 2012) to promote students' on-task behavior and access to learning activities in classroom-based settings. Teachers often serve as supervisors, mentors, and providers of professional development to paraprofessionals, and understanding how paraprofessionals view their partnerships with classroom teachers is important for effective service provision to students and paraprofessional and teacher professional development planning.

Findings from this investigation found that, overall, paraprofessionals rated positive relationships with their classroom teachers. Utilizing the PTRS, all items were rated above 4 (range 4.40 to 4.91) on a five-point Likert-type scale. Similarly, the PTRS Joining, and Communication subscale scores offer some nuances in the nature of perceived relationships. For example, paraprofessionals rated most items on the Joining subscale higher than those on the Communication subscale. These results indicate that although paraprofessionals perceive their agreement and collaboration as positive, they may require additional assistance in direct communication with teachers. Specifically, paraprofessionals may hesitate to directly addressing concerns or classroom practices with their teacher supervisors to avoid supervisory conflicts. It is possible that paraprofessionals may not want to appear as

though they are taking over the teachers' role and instead keep their thoughts to themselves instead of engaging in direct communication with teachers. Rueda and Monzó (2002) found that paraprofessionals reported an unequal balance of power in the classroom and felt uncomfortable approaching their classroom teachers. Professional development aimed at addressing communication barriers may be important for improving direct communication between paraprofessionals and teachers.

The joining subscale consisted of 15 items. These items varied in average scores with "I respect this teacher" and "This teacher respects me" receiving the highest average score ($M = 4.91$), respectively. This finding is particularly important and shows that paraprofessionals feel there is a mutual level of respect between themselves and their classroom teacher. Given the importance of classroom paraprofessional and teacher relationships, this is especially poignant and an encouraging result (Downing & Peckham-Hardin, 2007).

Three items (a) *we trust each other*, (b) *this teacher respects me*, and (c) *we understand each other*, all had a range of a minimum score of 3 and maximum of 5, and one item, "I respect this teacher," had a minimum score of 2. These four items all fall into the joining subscale, and no items on the communication subscale received a higher minimum score. Based on these results, it is important to note the themes of trust, respect, and understanding, which is evident in these specific items.

The Communication subscale consisted of nine items, and the Likert-type scale of 1–5 was reverse coded in analysis. The two items with the lowest average score overall also fell into the communication subscale; "I tell this teacher when I am pleased" ($M = 4.38$) and "I tell this teacher when I am worried" ($M = 4.40$). Both items relate to the paraprofessionals communicating their individual feelings to their classroom teacher. These results suggest that paraprofessionals feel the least confident in communicating about their own concerns when worried as well as their own feelings when they are pleased in the classroom. Increasing classroom communication is important to provide the best possible services to students in need.

The current investigation also examined the nature of paraprofessional and teacher relationships in relation to key characteristics of the paraprofessional such as race/ethnicity, educational level, and years of experience as a paraprofessional. Specifically, we found that, in general, paraprofessionals with more years of experience report higher quality relationships and greater communication with their classroom teachers overall and in communication. This is an interesting finding, given that previous research has found that paraprofessionals often report increased relational challenges with teachers who are less experienced and younger (Biggs et al., 2016). Although this study investigates the age of paraprofessionals, rather than teachers, these findings warrant further investigation to observe the relationships between paraprofessionals and teachers with large age differences.

In addition to age and experience, this study revealed differences in ratings of paraprofessional relationships with their classroom teacher based on the race/ethnicity of the paraprofessionals. Differences in overall ratings of relationship quality between paraprofessionals and classroom teachers based on paraprofessionals' racial or ethnic background were reported, specifically between paraprofessionals who identify as Hispanic/ Latino in comparison to paraprofessionals who identify as White or European and paraprofessionals who identify as Black or African American compared with their White counterparts. This finding supports literature and past research, which also describes differences in professional relationships based on cultural differences (Biggs et al., 2016). Rueda and Monzó (2002) used a sociocultural approach to analyze the relationships of Hispanic paraprofessionals and their classroom teachers, finding that many of the paraprofessionals felt their needs were not considered in their roles and did not account for their experience, interests, strengths, or career plans. The relationship between paraprofessionals and teachers based on their racial and ethnic identity is an important finding. This finding warrants future research to extend on the very limited literature on this topic in the field. The relationship quality in the teacher–para dyad is critical and can influence student success (Goddard et al., 2017), but the interaction of race/ethnicity has not been explored. This study begins to answer the questions related to the differences in relationships and the effect race/ethnicity may have on the quality of the relationship. Future research should focus on the interaction of race/ethnicity in collaboration and relationships of paraprofessionals and teachers of students with DBDs.

Finally, the current investigation analyzed the socio-economic status of the schools where paraprofessionals were employed and the potential effect on their relationships with their teacher. Paraprofessionals overall rating of relationship quality decreased, as the percentage of students receiving FRL increased, potentially suggesting that schools with lower socioeconomic status (student/family income) as well as school resources may affect the relationship between the paraprofessional and classroom teacher. Given the context of these particular schools, several areas may be considered that lead to these findings. The potential level of stress, high teacher and staff turnover, teacher burnout, and lack of resources may all be contributing factors to lower quality professional relationships. Although this finding is not surprising, given the extensive literature base on the effects of socioeconomic status and under-resourced schools (Jones et al., 2012), it continues to confirm and add to the literature supporting the need for ongoing support in under-resourced schools.

Study Limitations

Findings from the present investigation should be considered in light of several limitations. First, the sample in this investigation was derived from paraprofessionals who volunteered to participate in a large multisite coaching randomized controlled study. As part of the baseline assessment, all participants were asked to rate their perceived relationship with their classroom teachers. This study relied on self-reports and did not interview or systematically observe interactions and planning meetings between paraprofessionals and classroom teachers. Second, paraprofessionals in this study were assigned to support elementary school students with or at risk for DBDs. Thus, it remains unknown if the results in this study would be comparable to paraprofessionals serving other student populations (e.g., autism, intellectual disabilities, emotional disturbance), age groups (e.g., preschool, middle school, high school), and school contexts (rural, suburban, urban). Third, the sample was from one state in the Northeast and may not generalize to other states and regions of the United States. Fourth, 75 (42.9%) paraprofessionals reported having 10 or more years of experience in the role. Given the high rates of turnover and hiring trends in the field (U.S. Department of Education, National Center for Education Statistics, Statistics of State School Systems, 2017), the large proportion of our sample with more than 10 years' experience may not adequately reflect the population. Finally, data collected solely at the beginning of the school year are only reflective of paraprofessional and teacher relationships at that one time point. Data collection procedures limit the evaluation of directionality and causation when discussing the relationships between teachers and paraprofessionals.

Future Research

This study is one of only a few studies to measure the quality of professional relationships from the view of the paraprofessional, specifically for students with DBDs. Although findings are interesting, more research is needed to advance understanding of this important construct. First, larger paraprofessional samples are needed to replicate and validate the findings in this study. Studies that are not linked to larger, coaching-based RCTs are needed. Second, mixed-method design studies that assess the quality of professional relationships from paraprofessionals, teachers, and school leaders would be beneficial. Specifically, a longitudinal study evaluating the trends in paraprofessional and teacher relationships over the course of a school year would aid in the discussion of relationship quality and allow for additional discussions around causation and directionality of the results.

Third, future investigations should include direct observation of formal and informal professional interactions (feedback, problem-solving, planning meetings), as well as rating scale methodologies. Fourth, studies are needed that examine the nature of paraprofessional relationships for different student populations (e.g., DBDs vs autism), age groups (elementary vs middle school), and contexts (rural vs urban). Fifth, studies that compare teacher versus paraprofessional ratings of professional relationships would offer new insights into this area that may forge professional development conversations. In addition to comparing teacher and paraprofessional perceptions, research focused on the quality of the relationships based on the race/ethnicity of members of the teacher/paraprofessional dyad is an important next step for the literature. Examining perceived relationships based on differing racial or ethnic backgrounds can contribute to the field and future practice. Finally, research is needed that examines how ratings of professional relationships are influenced by student emotional and behavioral symptomology, as well as academic achievement.

Conclusion

Paraprofessionals and classroom teachers work as a team to orchestrate the learning environment for all students including those with disabilities. The nature of their relationship, specifically how they communicate and join together to support each other, may have important implications for the overall ecology of the classroom and specifically students with challenging behavioral needs. It is our hope this study serves as an initial step in examining perceived relationships forged between paraprofessionals and their supervisors, classroom teachers. Additional investigations are needed to fully understand how professional relationships may affect professional improvement for paraprofessionals, classroom teachers, and the students they serve in elementary schools.

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References

Barker, E. D., Oliver, B. R., & Maughan, B. (2010). Co-occurring problems of early onset persistent, childhood limited, and

adolescent onset conduct problem youth. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, *51*(11), 1217–1226. doi:10.1111/j.1469-7610.2010.02240.x

Biggs, E. E., Gilson, C. B., & Carter, E. W. (2016). Accomplishing more together: Influences to the quality of professional relationships between special educators and paraprofessionals. *Research and Practice for Persons with Severe Disabilities*, *41*(4), 256–272. https://doi.org/10.1177/1540796916665604

Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers.

Council for Exceptional Children. (2013). *Specialty set of knowledge and skills for paraeducators in special education*. https://exceptionalchildren.org/standards/paraeducator-preparation-guidelines

Delligatti, N., Akin-Little, AN., Little, SG. (2003) Conduct disorder in girls: Diagnostic and intervention issues. *Psychology in the Schools*, *40*(2), 183–192. https://doi-org.proxy.libraries.rutgers.edu/10.1002/pits.10080

Danielson, M. L., Bitsko, R. H., Ghandour, R. M., Holbrook, J. R., Kogan, M. D., & Blumberg, S. J. (2018). Prevalence of parent-reported ADHD diagnosis and associated treatment among U.S. children and adolescents, 2016. *Journal of Clinical Child and Adolescent Psychology*, *47*(2), 199–212. https://doi.org/10.1080/15374416.2017.1417860

Danielson, M. L., Visser, S. N., Chronis-Tuscano, A., & DuPaul, G. J. (2018). A national description of treatment among united states children and adolescents with attention-deficit/hyperactivity disorder. *The Journal of Pediatrics*, *192*, 240–246.e1. https://doi.org/10.1016/j.jpeds.2017.08.040

Downing, J. E., & Peckham-Hardin, K. (2007). Supporting inclusive education for students with severe disabilities in rural areas. *Rural Special Education Quarterly*, *26*(2), 10–15. https://doi.org/10.1177/875687050702600203

Every Student Succeeds Act of 2015, Pub. L. No. 114-95 § 114 Stat. 1177. (2015).

Fisher, M., & Pleasants, S. L. (2012). Roles, responsibilities, and concerns of paraeducators: Findings from a statewide survey. *Remedial and Special Education*, *33*(5), 287–297. https://doi.org/10.1177/0741932510397762

Giangreco, M., Suter, J., & Doyle, M. (2010). Paraprofessionals in inclusive schools: A review of recent research. *Journal of Educational and Psychological Consultation*, *20*(1), 41–57. https://doi.org/10.1080/10474410903535356

Goddard, Y. L., Goddard, R. D., & Tschannen-Moran, M. (2017). A theoretical and empirical investigation of teacher collaboration for school improvement and student achievement in public elementary schools. *Teachers College Record*, *109*(4), 877–896.

Jones, C. R., Ratcliff, N. J., Sheehan, H., & Hunt, G. H. (2012). An analysis of teachers' and paraeducators' roles and responsibilities with implications for professional development. *Early Childhood Education Journal*, *40*(1), 19–24. https://doi.org/10.1007/s10643-011-0487-4

LaVeist, T. A., & Nuru-Jeter, A. (2002). Is doctor-patient race concordance associated with greater satisfaction with care? *Journal of Health and Social Behavior*, *43*, 296–306. https://doi.org/10.2307/3090205

Mason, R. A., Schnitz, A. G., Wills, H. P., Rosenbloom, R., Kamps, D. M., & Bast, D. (2017). Impact of a teacher-as-coach model: Improving paraprofessionals fidelity of implementation of discrete trial training for students with moderate-to-severe developmental disabilities. *Journal of Autism and Developmental Disorders*, *47*(6), 1696–1707. https://doi.org/10.1007/s10803-017-3086-4

Pikard, J., Roberts, N., & Groll, D. (2018). Pediatric referrals for urgent psychiatric consultation: Clinical characteristics, diagnoses and outcome of 4 to 12 year old children. *Journal of the Canadian Academy of Child and Adolescent Psychiatry*, *27*(4), 245–251.

Reddy, L. A., & Glover, T. (2017). *Rutgers university paraprofessional behavior support coaching project coaching manual*. Unpublished manuscript.

Reddy, L. A., Newman, E., De Thomas, C. A., & Chun, V. (2009). Effectiveness of school-based prevention and intervention programs for children and adolescents with emotional disturbance: A meta-analysis. *Journal of School Psychology*, *47*(2), 77–99.

Reddy, L. A., Weissman, A. S., & Hale, J. B. (2013). *Neuropsychological assessment and intervention for youth: An evidence-based approach to emotional and behavioral disorders*. American Psychological Association.

Riggs, C. G., & Mueller, P. H. (2001). Employment and utilization of paraeducators in inclusive settings. *The Journal of Special Education*, *35*(1), 54–62. https://doi.org/10.1177/002246690103500106

Rueda, R., & Monzó, L. D. (2002). Apprenticeship for teaching: Professional development issues surrounding the collaborative relationship between teachers and paraeducators. *Teaching and Teacher Education*, *18*(5), 503–521. https://doi.org/10.1016/S0742-051X(02)00013-6

Street, R. L., O'Malley, K. J., Cooper, L. A., & Haidet, P. (2008). Understanding concordance in patient-physician relationships: Personal and ethnic dimensions of shared identity. *The Annals of Family Medicine*, *6*(3), 198–205. https://doi.org/10.1370/afm.821

U.S. Department of Education, National Center for Education Statistics, Statistics of State School Systems. (2017). *Table 213.10: Staff employed in public elementary and secondary school systems, by type of assignment: Selected years, 1949-50 through fall 2015*. In U.S. Department of Education and National Center for Education Statistics (Eds.), Digest *of education statistics* (2016 ed.). Retrieved From http://nces.ed.gov/programs/digest/current_tables.asp

Vickers, H. S., & Minke, K. M. (1995). Exploring parent-teacher relationships: Joining and communication to others. *School Psychology Quarterly*, *10*(2), 133–150. https://doi.org/10.1037/h0088300