THESIS

PRELIMINARY RELIABILITY OF THE OCCUPATIONAL THERAPIST

TEACHER INTERACTION SCALE

Submitted by

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In partial fulfillment of the requirements

For the Degree of Master of Science

Colorado State University

Fort Collins, Colorado

Spring 2010

COLORADO STATE UNIVERSITY

December 16, 2009

WE HEREBY RECOMMEND THAT THE THESIS PREPARED UNDER OUR SUPERVISION BY JANINE HOTTOVY ENTITLED A PRELIMINARY RELIABILITY STUDY OF THE OCCUPATIONAL THERAPIST TEACHER INTERACTION SCALE BE ACCEPTED AS FULFILLING IN PART REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE.

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ABSTRACT OF THESIS

PRELIMINARY RELIABILITY OF THE OCCUPATIONAL THERAPIST

TEACHER INTERACTION SCALE

This preliminary study sought to identify a reliable means of capturing and rating interactions between occupational therapists (OTs) and teachers according to the dyads' qualities of collaboration. Five OT and teacher dyads were recorded in their authentic environments as participants discussed on-going student needs. Judgment study methodology, including using "thin slice" segments from the videotaped interactions, was employed. A coding scheme was created specific to this study's question and by a panel of judges to code the collaborative characteristics of each dyad's interaction. This coding scheme, the Occupational Therapist Teacher Interaction Scale (OTIS), included 23 items and was divided into three subdomains: OT Interaction Qualities, Teacher Interaction Qualities, and Pair Interaction Qualities. Data was analyzed to determine effective reliability using intraclass correlations. Results showed that all three OTIS subdomains achieved effective reliability with an ICC of greater than .75 and that 18 of the 23 individual items did as well. These findings indicate that judgment methodology and the OTIS are reliable means of

capturing and rating collaboration between OTs and teachers. Further research is indicated to assess validity of the findings and begin to correlate collaborative practice with student outcomes.

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Introduction

Many students in American schools need special services to maximize their education. Current legislation mandates that students who have disabilities and who have been identified as needing special education and related services receive these services in the least restrictive environment (LRE) so that they may progress within the general curriculum and participate alongside their age peers as much as possible while meeting their educational goals (IDEA, 34 CFR §300.320[4]). This legislation creates new opportunities for special education and related service professionals to work alongside general educators because it shifts the special services model traditional pull-out methods to the LRE, often the student's classroom (Swinth & Hanft, 2002). In educational settings, OTs are considered related service providers and, therefore, serve on educational teams to help students access, participate, and ultimately benefit from their education (IDEA, 2004 Sec. 300.34(a) and Sec. 602(26) (A)). Collaborative forms of consultation are currently considered best practice for working under this model (Hanft & Shepherd, 2008; Jackson, 2007; Savelsbergh & Staebler, 1995). Consequently, in the educational context, collaboration between team members, such as between OTs and teachers is viewed as relevant and important to student performance outcomes (Dunn 1990; Idol, 1997; Idol, 2006; Friend, 2000; Gonzalez, Nelson, Gutkin, & Shwery, 2004; Green & Keys, 2001; Gutkin, 1999; Kane & Henning, 2004; Kemmis & Dunn, 1996; Nochajski, 2001; Salvesbergh & Staebler, 1995). However, to date, no standard practice for collaboration has emerged leaving members of educational teams with encouragements to be collaborative without explicit means of doing so. This disconnect is particularly relevant for

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occupational therapy practitioners as more OTs work in schools and early

intervention settings than in any other setting (AOTA, 2004).

Despite recommendations that collaboration be considered a best practice

among members of educational teams (Friend & Cook, 1997; Hanft & Shepard, 2008;

Kane & Henning, 2004), there is a paucity of evidence quantifying its effect on

student outcomes or indicating what specific practices constitute effective

collaboration (Bose & Hinojosa, 2008; Friend, 2000; Giangreco, Edelman, & Dennis,

1991). To date, there is not a reliable means of observing and rating collaboration

between members of educational teams in the everyday school practice context. The

purpose of this preliminary research is to pilot judgment study methodology to

determine if it is possible to reliably observe the collaborative aspects of student-

centered interactions between occupational therapists (OTs) and teachers.

When referring to the interactions between members of educational teams, the

words *consultation* and *collaboration* are often used synonymously. A distinction

must be made. Consultation is a format for information exchange and describes when

members of a student's educational team meet with the intention of optimizing

service delivery and outcomes based on their philosophies, expertise, assumptions,

and values (Schein, 1999). It is a broad term. Alternatively, collaboration describes

the quality of teamwork demonstrated by team members during the consultation

process (Hanft & Shepard, 2008). Therefore, understanding the distinctions between

collaboration and consultation in the interactions between educational team members

may be important because while some consultation practices are collaborative (Idol,

Paolucci-Whitcomb, Nevin, 1995; Schein, 1999; West & Idol, 1993) others are not

(Hanft & Shepherd, 2008; Bose & Hinojosa, 2008). Hanft and Shepard (2008) describe collaboration as, "an interactive team process dependent on the communication and interpersonal skills and knowledge of its individual members" (p.28). Collaborative consultations involve joint problem "diagnosis" and education by the consultant regarding skills to help prevent/resolve future problems (Hanft & Shepard, 2006; Schein, 1999). Predominant non-collaborative models of consultation include an ''expertise' or 'selling and telling' model, characterized by a consultant entering a system to give expert advice or service based on an already identified need that the system feels that it cannot fulfill for itself, and the 'doctor-patient' model, characterized by a consultant entering a system to diagnose problems and implement solutions (Schein, 1999). Schein (1999) suggests that non-collaborative consultations often result in misunderstandings, misinformation, and dissatisfaction with the consultant.

The literature on school-based collaboration reveals that collaboration may occur during four distinct aspects of consultation: *service planning*, *service implementation*, *when monitoring outcomes*, and/or *through teamwork*. Collaborative *service planning* occurs when individual members of a team share responsibility for identifying problems and selecting problem-solving strategies drawn from their own knowledge or expertise (Idol, 2002; Schein, 1999; Swenson, 2000). Friend and Cook (1997, 2000) add that collaborative service planning culminates in shared decisions about what actions are needed. Second, collaborative *service implementation* occurs when all individuals on the team have equal ownership for the provision of needed services (Swenson, 2000). The practice of 'role release,' provides an example of

collaborative implementation. Role release requires team members to selectively share intervention strategies across traditional discipline boundaries with direction and support provided by the team member most skilled in the use of that particular intervention strategy (Giangreco, York & Rainforth, 1989; McGonigel, Woodruff, & Roszmann-Millican, 1994). Third, collaborative *outcomes monitoring* involves all team members working toward a common student-centered goal with shared accountability for the results (Friend & Cook, 2000). Bose and Hinojosa (2008) identified the importance of administrative support to facilitate shared versus discipline-specific goal setting and outcome monitoring. Lastly, collaborative *teamwork,* a common theme, includes team members' mutual trust (Friend & Cook, 2000), intentional and effective communication, ability to resolve conflicts, and if respectful "ground rules" for team interaction are followed (Bose & Hinojosa, 2008). Shared responsibility for team organization (Swenson, 2000), preserving equal status across all team members, (Rainforth, York,& McDonald, 1992) and maintaining friendly, collegial relationships (Louis & Krus, 1996) can further foster collaborative teamwork.

Moving toward collaboration during consultations in schools has been difficult because school-based OT services have historically relied on the expert, OT-driven models of service, offering one-to-one OT in a "pull-out" model and focusing on OT-established goals (Swinth & Hanft, 2002). Studies have found that the isolated, pull-out model no longer fits an educational system that is striving for interdisciplinary collaboration based on team-established education goals to facilitate student outcomes (Jackson, Harper, & Jackson, 2001; Jirikowic, Stika-Monson,

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Knight, Hutchinson, Washington, Kartin, 2001; Spencer, Turkett, Vaughan &

Koenig, 2006; Swinth, 2004).

It appears that collaboration is not commonly practiced by school OTs despite

the fact that it is promoted in the literature and by the American Occupational

Therapy Association (AOTA, 2004). A state-wide survey of school-based

occupational therapists in Colorado found that 61% of respondents most frequently

used "pull-out" models when providing occupational therapy services (Spencer,

Turkett, Vaughan, & Koenig2006). The Colorado study found that 74% of reported

student goals and objectives that were being addressed by the OT were, in fact,

written by the OT and not based on team input or teacher collaboration. Similar to the

Colorado findings, Swinth (2004) reported in her nationwide survey of school-based

OTs, that respondents spent less than 40% of their service time working with students

in the general education classroom context. Taken as a whole, these finding suggest a

lack of collaborative team focus in the current delivery of OT services.

In 2001 Nochajski interviewed educators and related service personnel and

found, "While that educators and therapists believe collaboration is mutually

advantageous for both students and team members, it does not appear that a true

collaborative approach is being used…," (pp 109-110) and that, "participants did not

seem to have a clear understanding of the concept of collaboration and defined much

of what was occurring at their schools as collaboration when it appears to have been

something else" (p. 110), such as communicating better or combining efforts.

Supporting Nochajski's work, Hanft and Shepard (2008) found collaboration in the

schools mis-identified as team meetings, informal discussions, working a classroom,

helping teachers and aids, and general getting along rather than a problem-solving process or working toward common goals and objectives. Additionally, Bose and Hinojosa (2008) pointed to how OTs' recognition of the value of collaboration often did not match how they interacted with teachers.

There is no research available that has investigated the relationship between effective collaboration and student performance outcomes related to everyday schooling. The research that exists on collaboration in the educational context primarily focuses on identifying barriers. From this literature we know that challenges include difficulty transferring discipline-referenced goals from evaluation reports to individualized education plans (IEPs) (Giangreco, Edelman, & Dennis, 1991), mistaking conversation for collaboration (Friend, 2000), and OTs clinging too tightly to their role as experts (Bose & Hinojosa, 2008). Hanft and Shepard (2008) identified these types of challenges to collaboration: interpersonal, personal, and systemic challenges. Interpersonal challenges occur when "one or more team members lack effective communication or social skills." Personal challenges involve individual team members' knowledge of and experience with collaboration, IDEA requirements, IEP development and integration, and use of evidence-based practice. Systemic challenges occur when individuals and systems lack the necessary time and resources to build strong teams (Dettmer, Thurston, & Sellberg, 2005; Hanft & Place, 1996). Despite the identified barriers in the literature, the potential for collaborative consultation as a service delivery that produces enhanced student outcomes has much support (Giangreco, Eldman, Prelock, Reid, Dennis, & Edelman, 2000; Giangreco, York & Rainforth, 1989; Gutkin & Curtis, 1999; Hanft & Place, 1996; Rodger, 1995;

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Swinth & Hadley-More, 2003; Swinth & Hanft, 2002; Szabo, 2000; Villa, Thousand, 1996; York, Rainforth & Giangreco, 1990). Unfortunately, scientifically-based evidence related to collaborative and classroom integrated approaches is limited at best (Swinth, Spencer, & Jackson, 2007). The intent of this study is to support future outcome-focused research on collaborative practices in the educational context. It will investigate a means to reliably code the characteristics of interactions between OTs and teachers as they discuss education-related needs or progress of students.

Methods

Judgment study methodology (Rosenthal, 2005) was employed to rate videotaped interactions between occupational therapists (OTs) and teachers. Videotaped in vivo, the discussions focused on students served by both the OT and the teacher and who either received occupational therapy services in school or who were being considered for OT service. Judges coded the OT-teacher dyads for interaction qualities. The purpose of using this approach was to determine if naïve judges could reliably code characteristics of the interactions identified in the literature as collaborative.

Participants

Dyads. A convince sample of five dyads consisting of a school-based OT and a general or special education teacher participated in this study (Table 1). Following human subject research approval at both Colorado State University and a local education agency (LEA), participants were recruited with the assistance of a colleague from the LEA's occupational therapy department. First, OTs were recruited via email with follow-up phone conversations. Then, each OT invited a

teacher with whom they anticipated having an upcoming meeting with to discuss a focus student(s).   To be included in the study, OTs must have had a minimum of one year of school-based experience and be a professionally registered OT with current experience working with preschool through middle school students. The inclusion criteria for teachers included a minimum of one year of teaching experience, teacher certification, and current employment as a general or special education teacher in a preschool through middle school classroom with one or more students who have disabilities.

Judges. A convenience sample of ten graduate students who were candidates in a two-year long Master's Degree in Occupational Therapy participated as judges. Three were in their first year and seven in their second year of the program. The judges, aged 22 to 34 years (M = 28.2 years) were recruited through announcements in their classes. Nine judges were female and one was male. Six of the 10 judges had previous experience in schools, either through occupational therapy Fieldwork placements or previous employment. The decision to include OT graduate students as judges was based on Rosenthal's (1987) recommendation that judges with higher amounts of education and an interest in a given topic make more reliable judges. In preliminary analyses, it was determined that at least 7 judges would be required to reach acceptable levels of reliability (Rosenthal, 1987, 2005).

Materials

Leading behavioral researchers, Bakeman and Gottman (1997), encourage researchers to develop behavioral coding schemes based on: (1) clinical expertise and (2) the literature. Therefore, Spencer, Daunhauer, & Hottovy (2007) developed a

coding scheme, the OT-Teacher Interaction Scale (OTIS, see Appendix A) specifically for this study. This coding scheme was based on consultation and collaboration literature (Hanft & Shepard, 2008; Idol, 2002; Schein,1999; Sheridan, Welch, & Orme, 1996), as well as the researchers' professional experience working in educational settings. Twenty-three characteristics of collaboration emerged from the literature and these items were then organized on the OTIS into three subdomains: OT Qualities, Teacher Qualities, and Pair Qualities according to a 7-point Likert scale.

Procedure

Each dyad met and was videotaped interacting in the teacher's classroom at a time when students were not present (e.g. after school). The dyad set meeting times based on their work schedules as they would have normally done. The OT then notified the researcher when and where the meeting would occur. The OTs and teachers were prompted to use their time together as they typically would to discuss on-going classroom and student needs. The participants knew that the videos would be viewed by a small group of university students and that the identities of all participants would remain anonymous. In order to maintain an authentic interaction atmosphere, the researcher minimized movements and distractions while operating the video equipment. Interactions varied from 15-45 minutes in length and focused on one to three students. In two of the five dyad interactions the OT and teacher were joined by other members of the student(s)' educational team, including speech pathologists, physical therapists, and vision therapists. These additional team members were included in the video footage because, as team members, their

presence was authentic to the interaction's normal context. However, interactions specific to these additional team members were not coded. Video recording with sound was chosen for use in this judgment study because its reliability has been shown to be greater on average than silent video, audio, or content-filtered speech clips (Noller, 1985).

Analysis

With a rich tradition in the social sciences, judgment studies have been found to generate reliable ratings of the qualities of human behavior often lost in microanalytic behavioral coding (Ambady, Benieri, & Richeson, 2000).

Judges' Ratings of Dyad Interactions. Two "thin slices," or video segments, were selected from each dyad's interaction to be coded by the judges. A "thin slice" has been defined by Ambady, Benieri, and Richeson (2000) as "a brief excerpt of expressive behavior sampled from the behavioral stream that is less than five minutes long" (p. 203). In this study a dyad's entire interaction functioned as the 'behavioral stream' and two segments were excerpted from each dyad; one 60 seconds in length and one 90 seconds in length. In order to be selected segments needed to address upcoming goals, student progress, and/or outcomes regarding previously implemented strategies. Segment length was based on Ambady and Rosental's (1992) meta-analytic findings that "thin slices" of behavior (30 seconds to 5 minutes) capture information just as reliably as longer clips. For each of the five dyads studied it was possible to identify two coherent segments.

Once selected, the 10 segments were randomized on a master DVD using Microsoft Movie Maker (Version 6.0) with one minute of blank screen time between

each segment. Three practice segments were inserted at the beginning of the master DVD. The practice segments consisted of two recruited colleagues with school-based practice experience role-playing an OT-teacher meeting. Each segment began with a code number to ensure judges were all reporting on the same dyad. Coding occurred in one session where 10 judges viewed together , but individually coded the interactions. Judges were instructed use their "gut reactions" to code each segment on a separate OTIS immediately after viewing it. A minute of coding time was allotted between segments and extra time was provided as need but did not exceed 40 seconds. In segments depicting three or more people, the OT and teacher were identified by laser pointers for the duration of the clip.

After all coding was completed, judges were encouraged to comment in writing on their experiences with the OTIS after all dyads had been coded. When their feedback was completed, they were informed of the study's purpose and future directions.

Analysis of Judges' Ratings of OT-teacher Interactions. Because this study wanted to find the effective reliability for 10 judges rather than a single judge, intraclass correlations (ICCs; Portney & Watkins, 2009) were used for analysis. Effective reliability is an average of the judges' ratings and, because it cancels out random errors from individual judges, is a stronger rating (Rosenthal, 1987). A minimum reliability coefficient of .75 was used as the criterion per Portney and Watkins' (2009) suggested guidelines, which acknowledged that while determining reliability is somewhat subjective, ICC reliability coefficients ≥ .75 indicates good reliability. Finally, the grand average for each of the 23 OTIS items for each dyad

were calculated by averaging the averages of the dyad's first and second segments by OTIS item. Then all of the judges scores were averaged together by item for each dyad (see Figures 1-3). These grand averages indicate by item how the group of judges .

Results

The effective reliability coefficients of the judge's ratings of occupational therapist (OT)-teacher interactions using the 23 items from the Occupational Therapist-Teacher Interaction Scale (OTIS) averaged .83 (.67-.92; see Table 2) which was above the criterion level. Five items, 4 Teacher Qualities: *Teacher is Comfortable*, *Teacher Shares Problem Solving*, *Teacher Clarifies for Understanding*, and *Teacher Takes Responsibility*, and 1 OT Quality: *OT is Comfortable* fell slightly below the .75 criterion (.73, .68, .67, .7, and .72, respectively). The average effective reliability for the OTIS by each domain also met the reliability criterion as follows: OT Qualities .85, Teacher Qualities .79, and Pair Qualities .85. Finally, grand averages for the judges' judges ratings of each dyad by OTIS item ranged from 3.1 to 6.7 (see Figures 1-3).

Discussion

This preliminary study investigated whether judges naïve to the purpose of the study could reliably code occupational therapists (OTs) and teacher interactions during in vivo meetings regarding focus students. The findings indicate that overall judges can reliably code OT-teacher interactions with the average reliability for each subdomain falling above the reliability criterion level of .75 and 18 of 23 (items falling above the reliability coefficient cut-off of .75.

These reliability findings, though preliminary, are congruent with other judgment studies (Daunhauer, Coster, Tickle-Degnen & Cermak, 2007; Kaldec, 2005; Tickle-Degnen & Coster, 1995). In all of these judgment studies, researchers studying the quality of interactions of either parents or practitioners in a naturalistic context generally found high reliability among their coders.   There is preliminary evidence that the Occupational Therapist-Teacher Interaction Scale (OTIS) coding scheme can be used to reliably code OT-teacher interactions that occur in an authentic environment.

This is a preliminary study with a modest number of dyads. But even with these modest numbers some trends and future directions surfaced. Below interpretation of the reliability findings, limitations, and areas to be addressed in future research are discussed.

Reliability Considerations

Of the three OTIS domains, Teacher Qualities received the lowest reliability (.79) although the averaged reliability of the domain's items did meet the overall $\geq$. 75 reliability criterion.   Importantly, four of the nine OTIS items in the Teacher Qualities domain fell slightly below $\geq$ .75 reliability criterion. This is notable given that only one OTIS item from the OT Qualities domain fell below the .75 cut-off. While this is a preliminary study, this finding is important to consider. The slightly lower reliability on some of the Teacher Quality items may reflect experiential bias by the judges who were being mentored and trained to identify with the professional habits of occupational therapists rather than teachers. Additionally, of the 10 judges, six reported experience being in schools, either through OT Fieldwork experience or

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previous employment. Because of the limited number of judges, post hoc reliability tests of these two groups would not be valid. However, this discrepancy may affect reliability and further research may be warranted to consider judges' school experience when rating OT-teacher interactions.

Another reliability consideration is that the OTs were recruited first and then invited a teacher with whom they had an upcoming meeting to discuss a focus student(s). Therefore, by having the first notice and the ability to chose the teacher partner they were going to be observed with, it is possible that the OTs may have felt more volitional about their participation or more prepared which might have been broadcast in a way that made them easier for the judges to code.

Puccinelli, Tickle-Degnen, and Rosenthal (2004), found that judges tend to be more sensitive to subjects on the left versus the right. Depending on the focus of research, this reliably consideration may be taken into account in future, larger studies. In the present study, participants randomly sat so that OTs were on the left in two out of five dyads.

Future studies may also consider segment length when studying collaboration in context. It might be useful to determine if longer or shorter segments in the 30 second to 5 minute window established by Ambady and Rosenthal (1992) would be more reliable, particularly for studies of collaboration which may have high variability among participants or dyads.

Limitations

Three key limitations must be acknowledged. Despite demonstrating preliminary evidence that occupational therapist (OT)-teacher interactions can be observed

reliably using the Occupational Therapist-Teacher Interaction Scale (OTIS), the small number of dyads limits the generalizability of interaction qualities observed in this study. Secondly, although the OTIS measured OT-teacher interactions, all judges were OT students. It is recommended that future use of the OTIS include judges with backgrounds in teaching as well as those from OT backgrounds. Thirdly, many of the dyad participants related that formal meetings, like the ones videotaped for this study, occur much less frequently than "on the fly" interactions, which take place wherever and whenever the OTs and teachers get a spare moment. In fact, one OT joked that her best collaboration occurred stall-to-stall during bathroom breaks. While the procedure for this study captured meetings in a meaningful context, the procedures used to record meetings perhaps do not capture every element of OT-teacher interactions, including extremely informal meetings. Future research needs to more fully embed video recording of OT teacher interactions to get a more complete picture across more different types of interactions.

Research in the context. This study faced additional challenges given the logistics of capturing authentic OT-teacher interactions. Scheduling meetings between two busy professionals was often difficult as various circumstances could delay a long-planned meeting or unexpected time was found in schedules prompting more spur-of-the-moment meetings. Additionally, because they were the contact people, participating OT's had to navigate logistics of communicating meeting times and changes to the research team.

Besides difficult scheduling, OT-teacher meetings had some unexpected formats. Instead of meeting about one student, as the researchers assumed would

happen, the OT and teacher met to discuss all students receiving services between them. Also, two of the five meetings involved the student's entire team, including physical, speech and language, and vision therapists. One meeting in particular, was scheduled so tightly into the school day video needed to be abruptly halted when students entered the room for class.

Also, videotaping can feel invasive to some. However, despite initial concerns, participants appeared to habituate quickly to the camera. It should be noted, though, that the use of videotaping may have deterred some OTs and/or teachers from participating. Reluctance to be videotaped may have also been related to the current national economic downturn and subsequent cuts to education funding. Additionally, there was the potential to pre-bias OTs and teachers with the use of "collaboration" versus "interaction" during recruitment. Although the researchers used care to label the study as looking at the "interactions" between OTs and teachers, participants generally immediately referred to the study as focusing on "collaboration", perhaps "collaboration" is so often stressed as good practice. Potential participants may have declined participation because of the implied importance of "collaboration" and, therefore, did not want to be captured on camera and those who did participate may have been on their best professional behavior due to the research media.

Lastly, thin slice methodology was appropriate for this particular study but may not be the methodology of choice for all future studies of collaboration. For this study it allowed the researchers flexibility with consistency in order to access OT-teacher interactions in an authentic environment. It also provided an opportunity for

the researchers to create a tool that specifically focused on characteristics of collaboration because one did not yet exist.

Judgment study feedback. In order to fully assess the OTIS as a coding tool, qualitative feedback was collected from the judges regarding their experience. Feedback included wanting clarification on OTIS items, however there were no recurring themes for specific items. Some judges expressed confusion when viewing segments depicting an entire education team as they had trouble differentiating interactions strictly between OTs and teachers despite highlighting the key players with laser pointers. Other judges mentioned wanting increased segment length. .

Lastly, one judge inquired about adding an OTIS item rating body language. Interestingly, the one OTIS item that most closely approximates rating non-verbal communication, *Is Comfortable*, received ICCs < .75 for both OT and teacher, indicating judges did not agree strongly about what they were observing for these two items. There are a variety of reasons for the low reliability for these two OTIS items (*OT is Comfortable* and *Teacher is Comfortable*), including less than ideal camera angles on some participants due to the nature of filming conversation in the context, and possibly dyad participants feeling rushed because meetings were squeezed into already busy days or the last appointment of a full workday. Additionally most of the dyads met while sitting in child-sized chairs and desks.

Future Research

While this preliminary study as found a reliable means of rating OT-teacher interactions on a collaborative scale, future research is needed to explore the vailidity of this method. While the scales in OTIS come directly from literature on

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collaboration, triangulating the findings of this research with additional means of measuring collaboration would be advisable. These additional measurements may include qualitative data or tools which have not yet been created.

Secondary to the hypothesis, differences in interactions which may reflect consultation style were observed, as evidenced by the variability in the grand averages of judges' ratings. Some judgment studies using thin slices have been used to predict behavior of students rating teachers (Ambady and Rosenthal, 1992), predict teacher expectations and affect toward students based on teacher behavior, and also used to distinguish biased from unbiased teachers of teachers (Babad, Bernieri, & Rosenthal, 1987,1989b, 1989c). Future studies, then, may benefit from expanding this methodology to occupational therapy practice to monitor changes in OT-teacher interactions following specific training and to explore specific collaborative practices used by OT's and teachers more in-depth. Further research correlating collaborative practices with student performance may provide evidence toward effecting structural change in school-based practice to ease barriers to collaboration that are discussed above.

Conclusion and Practice Implications

Most importantly, this investigation provides a reliable means to observe OT-teacher interactions in the natural context. Research methods that support contextual research are important for understanding practice trends. These methods are especially relevant when studying collaboration in schools as current practices appear to differ from those recommended by research and the American Occupational Therapy Association (Bose, Hinojosa, 2008).

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Furthermore, it is hoped that this project will spur further discussion and research in the field to go beyond defining collaboration and its barriers to begin addressing elements of effective collaboration; identifying aspects of collaboration that may be mediated by intervention, and understanding the relationship between collaboration and student outcomes.

Table 1.

Participant Characteristics

	N	Years in Profession		Years with School District		Months Working In This OT-Teacher Team	
		Average	Range	Average	Range	Average	Range
Occupational Therapists	5	20.8	9-33	14.1	8-20.5	35.4	3-96
Teachers	5	18.9	5.5-34	7.6	3-15	35.4	3-96

Table 2.

Effective Reliability Coefficients for OTIS Items

	Reliability Coefficient*	*p* value
OTIS Subdomain for OT Qualities	.85	
Is comfortable	.92	<.001
Acknowledges talent of teacher	.89	<.001
Is respectful	.73	.001
Seeks information	.85	<.001
Shares information	.90	<.001
Gives advice	.78	<.001
Shares problem solving	.87	<.001
Clarifies for understanding	.81	<.001
Takes responsibility	.87	<.001
OTIS Subdomain for Teacher Qualities	.79	
Is comfortable	.68	.003
Acknowledges talent of teacher	.85	<.001
Is respectful	.84	<.001
Seeks information	.87	<.001
Shares information	.92	<.001
Gives advice	.88	
Shares problem solving	.67	.003
Clarifies for understanding	.7	.002
Takes responsibility	.72	.001

OTIS Subdomain for Pair Qualities	.85	
Equal status	.87	<.001
Equally invested	.88	<.001
Shared identification of problems/concerns	.75	<.001
Shared decision making	.86	<.001
In-synch/ "on the same page"	.87	<.001
Total	.83	

*a reliability coefficient (ICC) of >.75 indicates good reliability

Figure 1. Grand averages of OTIS items in the OT qualities subdomain
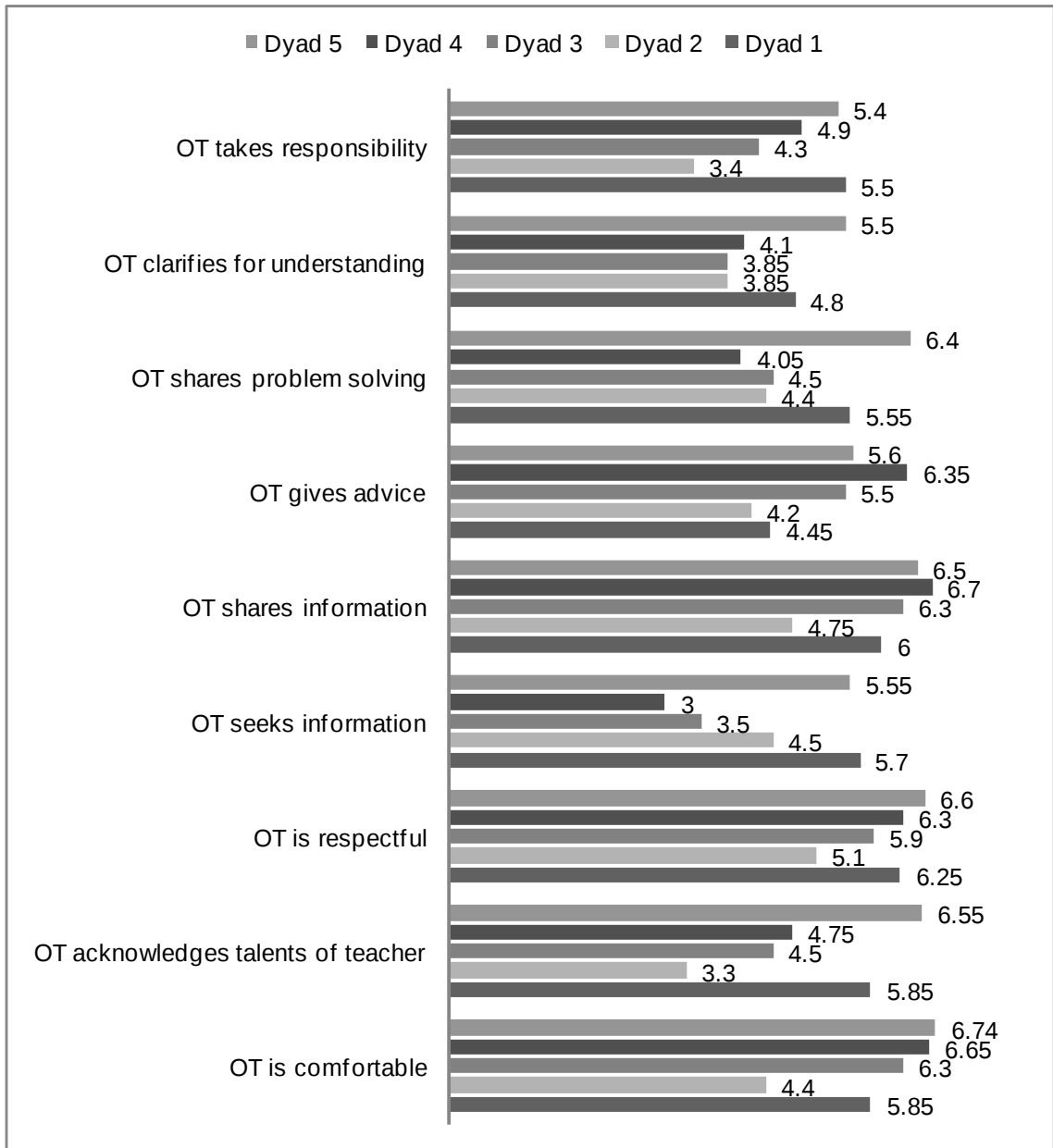
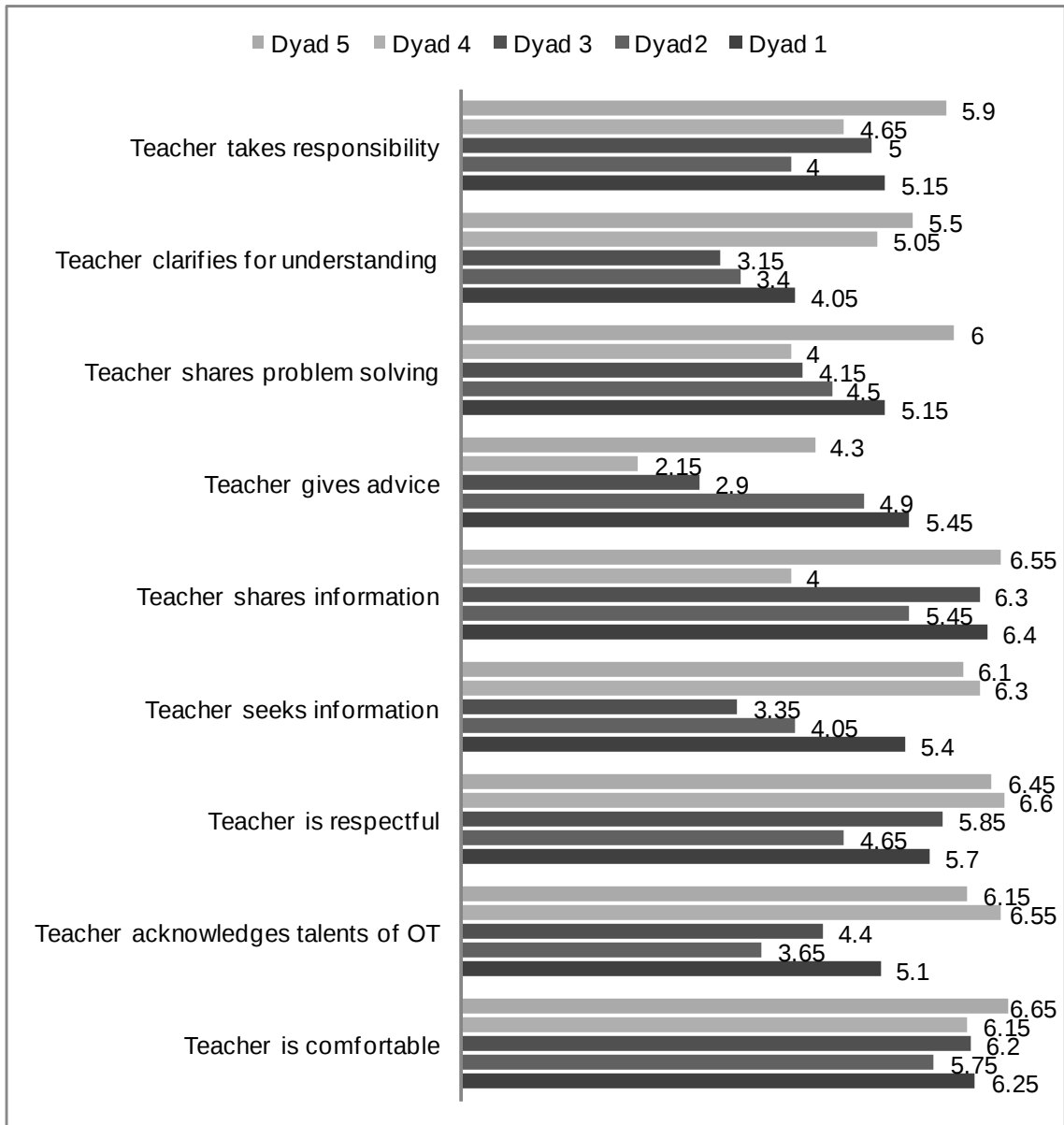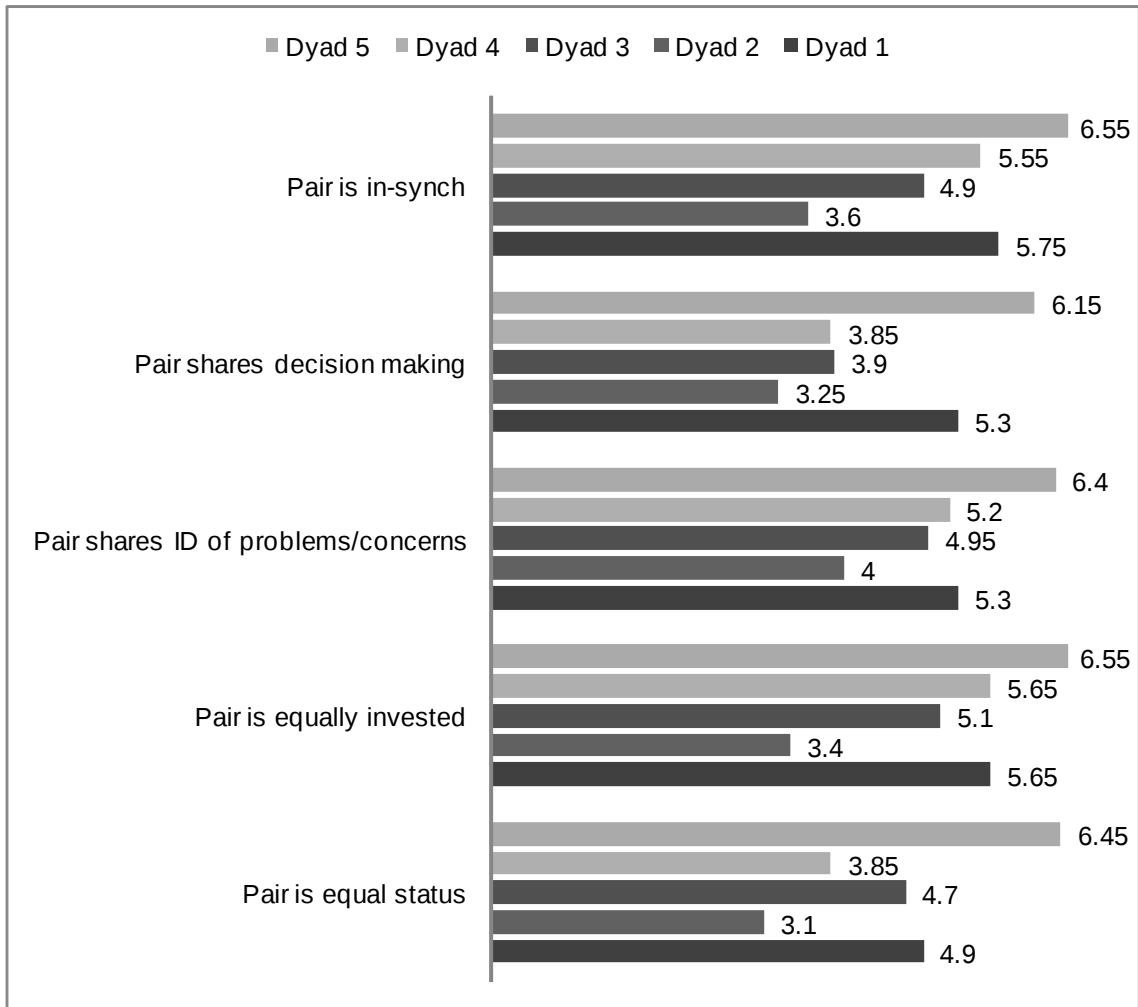*Figure 2*. Grand averages of OTIS items in the teacher qualities subdomain

Figure 3. Grand averages of OTIS items in the pair qualities sudomain

Appendix A

OT-Teacher Interaction Scale- OTIS

Tell me your gut reactions about how the person on the LEFT interacts.

	Not at all			Moderate			Very
Is comfortable	1	2	3	4	5	6	7
Acknowledges talents of other person	1	2	3	4	5	6	7
Is respectful	1	2	3	4	5	6	7
Seeks information	1	2	3	4	5	6	7
Shares information	1	2	3	4	5	6	7
Gives advice	1	2	3	4	5	6	7
Shares problem solving	1	2	3	4	5	6	7
Clarifies for understanding	1	2	3	4	5	6	7
Takes responsibility	1	2	3	4	5	6	7

Tell me your gut reactions about how the person on the RIGHT interacts.

	Not at all			Moderate			Very
Is comfortable	1	2	3	4	5	6	7
Acknowledges talents of other person	1	2	3	4	5	6	7
Is respectful	1	2	3	4	5	6	7
Seeks information	1	2	3	4	5	6	7
Shares information	1	2	3	4	5	6	7
Gives advice	1	2	3	4	5	6	7
Shares problem solving	1	2	3	4	5	6	7
Clarifies for understanding	1	2	3	4	5	6	7
Takes responsibility	1	2	3	4	5	6	7

PAIR QUALITIES: **Tell me your gut reactions about how the pair interacts.**

	Not at all			Moderate			Very
Equal status	1	2	3	4	5	6	7
Equally invested	1	2	3	4	5	6	7
Shared identification of problems/concerns	1	2	3	4	5	6	7
Shared decision making	1	2	3	4	5	6	7
In-synch/"on the same page"	1	2	3	4	5	6	7

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