THE PERSPECTIVES OF EDUCATORS ON SCHOOL-BASED OCCUPATIONAL

THERAPY

A Thesis submitted to the faculty at Stanbridge University in partial fulfillment of the

requirements for the degree of Master of Occupational Therapy

by

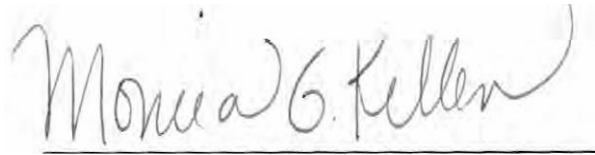Elina Arriaza, Danielle Perkoski, Michelle Tanaka, and Ngan "Noelle" Tran

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Certification of Approval

I certify that I have read The Perspectives of Educators on School-Based Occupational

Therapy by Elina Arriaza, Danielle Perkoski, Michelle Tanaka, and Ngan "Noelle" Tran,

and in my opinion, this work meets the criteria for approving a thesis submitted in partial

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Dedication

This work is dedicated to our families and loved ones who have been our source of inspiration and who have continually provided their moral, and emotional support throughout our educational journeys.

We would also like to thank our friends, classmates, and professors who shared their words of advice and encouragement to conduct this study.

Abstract

Occupational therapists (OTs) play an important role in school settings by supporting both students and teachers, yet research shows that preservice and inservice teachers lack understanding on the role of school-based OTs. Due to a lack of current research, this study aimed to investigate both inservice and preservice perceptions of school-based occupational therapy and differences in preparation for collaboration between preservice and inservice teachers. Nine classroom teachers participated in focus groups and 18 preservice teachers were surveyed to investigate how education, professional development, and experience dictates the amount of knowledge that teachers have on the OT's role in schools and their level of preparedness for interprofessional collaboration. The results indicated that both inservice and preservice teachers had limited knowledge on the scope of practice for school-based OT and experienced several barriers (i.e., lack of time, limited opportunities for face-to-face encounters, large class sizes, large caseloads, multiple responsibilities) that prevented them from successful collaboration with OTs. Special education teachers knew more about school-based OTs due to their experience working with OTs in the classroom; however, these teachers had received little training on the OT's role in a school. Despite these barriers, both preservice and inservice teachers expressed that transparent, flexible communication with OTs and training on the OT's role in schools would be beneficial in improving interprofessional collaboration between the two disciplines.

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The Perspectives of Educators on School-Based Occupational Therapy

The results of the 2015 American Occupational Therapy Association (AOTA)

Occupational Therapy Compensation and Workforce Study survey indicated that 19% of

occupational therapists currently work in school-based settings. School-based

occupational therapy practitioners are occupational therapists (OTs) and occupational

therapy assistants that work with children, educators, and other team members to

facilitate children's ability to participate in everyday activities (occupations) that they

need or want to do in order to promote physical and mental health and well-being (Clark,

Jackson, & Polichino, 2011). In the school setting, the goal of occupational therapy (OT)

is to enhance the student's ability to fully access and be successful in their learning

environment (AOTA, 2019). This is done by understanding the nature of a student's

difficulties, identifying the dynamic relationship between the student and the school's

physical and social environment, and improving a student's performance of tasks and

activities important for school functioning (AOTA, 2019).

Interprofessional collaboration between OTs and teachers remains vital for

students receiving services in schools. To improve collaboration amongst professionals,

both student teachers and credentialed teachers need to understand the role of OT and

how OTs can help their students. According to the Occupational Therapy Education

Research Agenda (AOTA, 2018), occupational therapy research should focus on the

promotion of inclusion and equity in the education setting. Due to a lack of research on

teacher perceptions, not enough information exists on how much teachers understand

about the scope of OT in the schools and about inclusive practices in the general

education setting.

Literature Review

This literature review addresses the roles of school-based occupational therapists in regards to inclusion, legislation and advocacy, and interprofessional collaboration. Inclusion and its role in the education setting is discussed first, followed by legislation and advocacy responsible for inclusion, and the need for interprofessional collaboration brought about by inclusion-related legislation. Despite the need for collaboration among occupational therapists and teachers, barriers to collaboration impede the effectiveness of services delivered to students with special needs.

Inclusion

Inclusion works to improve access in the general education setting for students with disabilities by helping them access the curriculum, experience peer learning and relationships, and benefit from improved self-efficacy (Carter et al., 2015). Inclusion also gives students opportunities to learn and to participate in classes that remain both challenging and accessible (Mackey, 2014). A great amount of progress has been made over the years to improve the quality of education for children with disabilities. However, barriers still remain to successful inclusion.

Barriers to inclusion include three main areas: organizational, attitudinal, and knowledge (Darrow, 2009). Organizational barriers include school and class structure, the delivery of curriculum, and classroom management (Darrow, 2009). Other research shows that additional organizational barriers include challenges with scheduling, standardized testing, and lack of teacher collaboration (Kozik, Cooney, Vinciguerra, Gradel, & Black, 2009). Most teachers found that their workload and a large number of classes limited their time and prevented them from conducting proper needs assessments

or giving individualized instruction to their students (Mackey, 2014). Attitudinal barriers

involve the perceptions and beliefs of teachers about special education services and

student accommodations needed for inclusion in general education (Darrow, 2009).

Knowledge barriers consist of the knowledge and skills that are required of teachers to

effectively provide accommodations and the appropriate education for students (Darrow,

2009). Many teachers felt inadequately prepared and trained for inclusive teaching

strategies, and this therefore led to negative attitudes towards inclusion and unsuccessful

inclusive strategies (Jenson 2018; Gehrke, & Cocchiarella, 2013).

Despite these barriers to inclusion, research shows that proper teacher preparation

leads to improved perceptions on inclusion in the schools. For instance, "previous

experience working with people with special needs, whether in a professional or personal

setting, influenced teacher attitudes towards inclusion" (Jenson, 2018, p. 14).

Additionally, developing an understanding of inclusion increased teacher confidence and

motivation to implement inclusive practices in the classroom (Jenson, 2018).

Legislation and Advocacy

Inclusion in education for students with disabilities became a national mandate

after the passing of the Individuals with Disabilities Education Act (IDEA) in 1990

(Sepanski & Fisher, 2011). IDEA was signed into legislation because approximately one

million children with disabilities were being excluded from the education system (Office

of Special Education and Rehabilitative Services [OSERS], 2007). Prior to IDEA, many

individuals with disabilities lived in state institutions that were designed for persons with

mental retardation or mental illness (OSERS, 2007). Due to the advocacy of family

associations in the 1950s and 1960s, federal legislation began to support and improve

programs and services for children with disabilities (OSERS, 2007). This led to the

establishment of Head Start enrollment for young children with disabilities and free,

appropriate public education to children with a disability across the United States

(OSERS, 2007).

      Individualized Education Plans. As the push for inclusion in schools continues

to grow, more and more educational personnel must work together to address student

needs and to assist their students in accessing the curriculum. Occupational therapy

practitioners, educators, and other support staff are encouraged to collaborate to develop

new skills, share ideas, and improve services for students with disabilities (Bose &

Hinojosa, 2008). Part of this inclusion and collaboration emerges through the

development of individualized education plans (IEPs) for students, and members of the

IEP team may include OTs, teachers, and other necessary personnel (Lipkin, Okamoto,

Council on Children with Disabilities, & Council on School Health, 2015).

      Through IDEA, IEPs were developed for students who need special education and

related services. The IEP is an educational map that includes (1) the child's present level

of performance; (2) measurable annual goals; (3) the child's progress towards meeting

the annual goals; (3) special education and related services; (4) program modifications or

supports; (5) the extent of the child not participating with nondisabled children in a

regular classroom; and (6) individual appropriate accommodations that are necessary to

measure academic achievement and functional performance (Public Law 108-446, 2004).

For a child to receive special education services, a school professional may request or

refer the child for an evaluation to see if he or she has a disability (U.S. Department of

Education, 2019). The child will be assessed for all areas pertaining to his or her

suspected disability (U.S. Department of Education, 2019). A group of education

professionals and parents will look at the evaluation results to determine if the child has a

disability and whether he or she will need special education services (U.S. Department of

Education, 2019). The child is deemed eligible for services when he or she is found to be

a child with a disability. The IEP team must meet to write an IEP for the child within 30

calendar days once it has been determined that a child is eligible for special education

and related services (U.S. Department of Education, 2019).

One of the related services that a child could receive is occupational therapy. Related

supportive services are not required as a part of special education, however, it may be

considered if the child could benefit from the support of other professionals such as OTs,

speech therapists, physical therapists, or school counselors. If the IEP team determines

that occupational therapy is appropriate for the written goals, the occupational therapist

will determine the methodology, intensity, and frequency of therapy required to meet

those goals (California Board of Occupational Therapy, 2019). In developing IEPs,

members of the interdisciplinary team must work together to support students in reaching

their goals (Lipkin et al., 2015). Even if a student does not qualify for special education

services, teachers may also request for occupational therapy consultations for students in

their classrooms that struggle with certain areas like handwriting or behavior

management (Sepanski & Fisher, 2011). Despite the need for collaboration among

interdisciplinary professionals, the aforementioned barriers continue to impede the

successful use of this service delivery model in schools.

Collaboration

Collaboration among teachers and therapists has been identified as a key to success for inclusion. Friend and Cook (2000) discussed that collaboration is a style of interaction that consists of a group of people who share decision making, resources, and accountability when working towards a common goal. Additional characteristics of collaboration include an appreciation for the interpersonal style and trust that develops between those who collaborate (Friend & Cook, 2000). Similarly, Bose and Hinojosa (2008) have explained that collaborative relationships are achieved by developing shared values, defining team roles and responsibilities, gathering for team meetings, and maintaining administrative support. This type of service delivery model remains key for teachers that need help aiding students that struggle to access the curriculum in their classrooms. Collaboration with other personnel allows teachers to support students with disabilities in their classrooms and, therefore, promote inclusive environments.

To promote inclusion and student success, OTs have been pushing for more collaboration in their interventions in schools. Currently, OTs pull students out of the classroom to conduct one-on-one intervention sessions, and this is referred to as a pull-out service delivery model. As stated by Campbell, Missiuna, Rivard, and Pollock (2012), using a collaborative approach, rather than a pull-out one-to-one method, is becoming an essential priority for OTs. Generalizability of skills, or transfer of skills in different settings, improves through the collaborative approach since it allows OTs to work on skills with students in the classroom and other settings involved in that student's daily routine (Clough, 2018). However, there is a current struggle to establish these collaborative methods in a generalizable and universal manner amongst therapists,

families, and educators (Campbell et al., 2012). Despite this struggle, OTs still aim to

implement more collaborative treatment since research shows that collaboration in the

classroom leads to benefits for both the students and personnel working with the students

(Bose & Hinojosa, 2008; Jasmin, Gauthier, Julien, & Hui, 2017).

   Benefits of collaboration. Collaborative strategies among educators and school-

based OTs are valuable methods of improving a student's academic performance.

Campbell et al. (2012) have explained that collaboration positively benefits a student's

academic performance. Hang and Rabren (2009) discovered that the co-teaching of

general education and special education teachers in classrooms, a form of collaboration,

led to significant differences in student outcomes for math and reading. Student

satisfaction also increased when collaborative methods were implemented in the

classroom; students felt that collaboration improved their confidence in their academics,

improved their overall performance, and led to them behaving more in the classroom

(Hang & Rabren, 2009). Aside from increasing student satisfaction and improving

student academic performance, collaboration also benefits the teamwork between

teachers and OTs.

   Interdisciplinary practice improves through increased use of collaborative

strategies. Villeneuve (2009) found that collaboration, a joint effort, remains beneficial

because "it produces solutions that are different from those that individual team members

could produce independently" (p. 209). Aside from exchanging ideas, collaborative

strategies also ensure that all members of the IEP team remain informed of the student's

progress and that each member works towards the same goals with that student (Bose &

Hinojosa, 2008). For instance, when using a collaborative approach, teachers were found

to be increasingly likely to implement the strategies taught to them by OTs, as compared

to non-collaborative approaches (Campbell et al., 2012). Additionally, research supports

that collaboration is an effective method of intervention due to the increased overall

satisfaction of teachers when they use collaborative teaching methods (Bose & Hinojosa,

2008; Hang & Rabren, 2009). Barnes and Turner (2001) and Campbell et al. (2012)

indicated that increased collaboration between teachers and OTs led to improved teacher

perceptions of occupational therapy contributions to student skill development; this led to

increased respect and trust among the interdisciplinary team members. Furthermore,

numerous researchers have indicated that collaboration strengthens teamwork among

educators and OTs leading to improved outcomes and satisfaction for both educators and

students (Barnes & Turner, 2001; Bose & Hinojosa, 2008; Hang & Rabren, 2009;

Campbell et al., 2012).

Barriers to collaboration. Despite the benefits of collaboration, barriers to

implementing collaborative practices in schools complicate the relationship between

educators and OTs when working with students in schools. Both teachers and OTs remain

key members of interdisciplinary IEP teams for students with disabilities in general

education (Lipkin et al., 2015). Part of a strong collaborative relationship involves mutual

trust and respect among all parties involved (Bose & Hinojosa, 2008). Therefore, it

remains important to consider the educators' perspectives on OTs when discussing

barriers to collaboration.

The educator's perspective. One of the barriers to collaboration is the teacher's

lack of understanding of the occupational therapist's role in assisting students in the

classroom. A phenomenological study was conducted by Diego (2010) through one-on-

one interviews that consisted of open-ended questions about the individual participant's

experiences with school-based occupational therapy consultation services. Interviews

were conducted with six elementary education teachers, and results indicated that most of

the participants did not know what areas occupational therapy addressed in the school

setting, or were unfamiliar with the role of the OT (Diego, 2010). As a result, not

knowing the OTs' role affected the teachers' decision to refer students to occupational

therapy (Diego, 2010). Cahill and Egan (2017) conducted a similar study that found there

were common misconceptions as to what specialties and services OTs can provide to

students. Additionally, many educators were unaware that OTs could address mental

health needs and perform this type of service (Cahill & Egan, 2017). Sepanski and Fisher

(2011) found that most general education teachers in Indiana public schools limited their

referrals to occupational therapy for mostly handwriting or other fine motor skill issues.

Preservice teachers also reported a lack of knowledge about the roles of interdisciplinary

professionals in the schools (Howell, Myers, O'Brien, & Schneck, 2017; Gregory, 2018).

These misconceptions regarding occupational therapy limit preservice and K-12 teachers'

opportunities to collaborate with OTs in the school. Thus, the lack of collaboration

among professionals negatively affects the quality of services delivered to students,

especially students with disabilities in mainstream classrooms (Hunt, Soto, Maier,

Muller, & Goetz, 2002).

Other barriers inhibiting collaboration include limited professional development

opportunities in collaborative practices and available time for collaboration for preservice

and K-12 general education teachers (Bose & Hinojosa, 2008). Teachers reported that a

lack of resources and guidance on how collaborative relationships can occur led to

difficulties implementing collaborative practices in the schools (Villeneuve, 2009; Villeneuve & Shulha, 2012). Barnes and Turner (2001) noted that time constraints and large caseloads prevented teachers from meeting with OTs to collaborate on goals for their students. OTs also shared the same sentiments in regards to time and experienced difficulty interacting with teachers on a daily basis (Bose & Hinojosa, 2008). In a national survey, Harvey, Yssel, Bauserman, and Merbler (2010) found that most preservice teacher programs lacked opportunities to learn about and to practice collaboration and inclusion in a general education setting. Howell et al. (2017) noted that the lack of preservice teacher training in inclusion led to increased anxiety among preservice teachers on collaboration. Therefore, additional preservice learning opportunities and teacher training on collaboration would be beneficial to promote effective collaboration.

Gaps in the Research

Despite these barriers, educators reported positive impacts of collaborating with OTs such as enhancing strategies, gaining a better understanding of children's sensorimotor needs, improving classroom management and self-confidence, and increasing empathy towards parents (Jasmin et al., 2017). Educators also reported that they felt that occupational therapy benefited their students by leading to positive changes in skill performance in the classroom (Diego, 2010). Positive associations aside, there is limited research that addresses the understanding of the roles of school-based OTs. Additionally, little is known about the perceptions of preservice teachers in regard to collaboration and the development of collaboration skills, how co-teaching and inclusive education is included in higher education curriculum, and teacher preparation for

inclusive teaching (Santagata & Guarino, 2012; Gladstone-Brown, 2018). Researchers

noted that a gap in training or education on inclusion existed between special education

and general education preservice teachers (Harvey et al., 2010; Jenson, 2018). Despite the

abundance of studies on the perceptions of OTs in the school system, there is a lack of

current research on the perceptions of both preservice and inservice teachers in regard to

occupational therapy.

Statement of Purpose

Understanding the role of occupational therapy in a school-based setting remains

essential for student academic success. For this success to occur, it is imperative that

training for preservice teachers includes education in interprofessional collaboration with

special education services (e.g. occupational therapy). General education teachers also

need to have adequate time and training to engage in interprofessional collaboration

(Diego, 2010). Due to a lack of current research, this study aims to find relevant educator

perspectives on the role of occupational therapy in schools. Our primary research

questions for this study is: What are preservice and inservice teachers' perceptions of the

role and effectiveness of occupational therapy in the schools? Our secondary research

question for this study is: Are there any differences between the amount of knowledge

between preservice and inservice teachers regarding school-based occupational therapy?

Through these questions, our study seeks to understand how education,

professional development, and experience dictates the amount of knowledge that teachers

have on the occupational therapist's role in schools and their level of preparedness for

interprofessional collaboration. We hope to open up a discussion on themes relevant to

both teachers and occupational therapists. We believe the results of the discussion will

help occupational therapists understand the teachers' view and improve future

collaborative practices between both preservice and K-12 teachers to promote student

success.

Theoretical Framework

Bandura's social learning theory offers a unique look at how the environment

shapes an individual's behaviors and learning. Bandura (1971) notes that behavior results

from an interactive process between an individual's direct environment and cognitive

processes. Blair (1993) describes this interactive process as "people and their

environment [acting as] reciprocal determinants of each other" (p. 246). The notion that

both personal and environmental factors influence behavior describes social learning

theory's definition of the learning process.

Based on the influence of the environment on behavior, Bandura (1971) argues

that direct experience and observations of others play a role in learning and shaping

behavior. Observation of others, or modeling, kickstarts learning through the building of

representational thoughts after experiencing observed material (Price & Archbold, 1995).

Learning through modeling remains crucial since observing behavior often leads to a

higher chance of adopting that observed behavior (Turner & Shepherd, 1999). Therefore,

credible role models or peers largely influence how people learn; for instance, the

dynamic between teacher and student or between teacher and teacher leads to learning

through the use of modeling (Turner & Shepherd, 1999). Aside from the direct

environment, personal factors also play a critical role in influencing behavior and the

learning process.

Bandura believes that regulation of behavior through an individual's cognitive processes remains the key element to learning in the individual's direct environment (Mpofu & Nthontho, 2017). Price and Archbold (1995) note that social learning theory posits that cognitive processes shape the amount that the environment influences the development of behavior. Cognitive processes, such as self-perception and memory, develop based on experiences; the more influential experiences remain cemented in memory and positively influence how people see themselves and their subsequent behavior (Price & Archbold, 1995). Social learning theory notes that expectancies and self-efficacy shape behavior both positively and negatively (Blair, 1993). According to Blair (1993), people rank outcomes of behavior either positively or negatively and this ranking leads to the adoption or avoidance of behavior that leads to those outcomes. Personal confidence in the effectiveness of a socially learned behavior leads to the increased use of that behavior (Turner & Shepherd, 1999; Mpofu & Nthontho, 2017). This indicates that perceptions of expected outcomes and self-confidence influence behavior outside of modeling; mere observation of a behavior does not guarantee that an individual will learn and exhibit that behavior (Blair, 1993). Therefore, social learning theory argues for the importance of considering both personal thoughts and the environment when attempting to understand learning and behavior.

Social learning remains a vital process to understand in settings that require collaboration amongst team members. In a group setting, individuals learn through others' experiences by observing their actions and the resulting consequences; this type of conditioning explains how peers influence an individual's perceptions and behaviors. Knowing how group dynamics and direct experience affect behavior was an essential

component in our study's aim to understand the perceptions teachers have towards

occupational therapists (OTs) in the schools. Teachers might note that both behavioral

factors and environmental factors affect the way they perceive occupational therapy's

role in schools. Through self-reinforced perceptions, teachers may have formulated either

negative or positive associations with occupational therapy. We might find that this

interplay between environment and behavior not only explains why teachers perceive

their interactions with OTs to be a certain way, but also offers a potential solution for

improved relationships between teachers and OTs.

Methodology

Design and Setting

This qualitative study utilized focus groups and a survey research design. We

developed the survey and focus group questions employed for this to answer two primary

research questions: understanding preservice and inservice teachers perceptions of the

role and effectiveness of school-based occupational therapy, and identifying any

differences in knowledge on school-based occupational therapy between preservice and

inservice teachers (Krueger, 2002) (see Appendices E, F, G and H). The survey with the

preservice teachers took approximately 20 minutes and the focus groups with the

inservice teachers took approximately one hour.

The focus group survey with the preservice teachers took place in a classroom at a

public university in Orange County. Two focus groups for inservice teachers were

conducted at two different elementary schools; one in Irvine, California and the other in

Garden Grove, California.

Participants

Following institutional review board (IRB) approval, emails and phone calls were made to approximately 20 elementary schools and universities in two counties in Southern California, Orange County, and Los Angeles County. The universities and elementary schools contacted were based on the geographical location and the familiarity of the researchers. Initial emails and phone calls contained background information about the study (see Appendices A, B, and C). We contacted these schools and universities at least three times, via either email or phone, to find participants; however, after contacting sites at least three different times and receiving no responses, we determined that these sites remained uninterested. As a result, the participants for this study were recruited from a convenience sample.

For the focus groups, we recruited inservice teachers from the networks of acquaintances and previous colleagues. The participants were identified based on their current employment at an elementary school with a job title of general education teacher or special education teacher. Participants were also identified based on their location in Southern California. One of the researcher's acquaintances connected the researchers to a professor of a Preliminary Mild/Moderate Ed. Specialist Program. This professor allowed the researchers to conduct their survey with the preservice teachers who were enrolled in a special education credential program during class at the university campus. The participants for this study included nine inservice teachers and 18 preservice teachers. The study only included English-speaking participants and therefore excluded non-English speakers.

Procedure

  Inservice Teachers. Four sixth grade teachers were recruited from an elementary school in Irvine, California (Group 1) and five primary grade (kindergarten through second) teachers were recruited from an elementary school in Garden Grove, California (Group 2). We provided their availability to the inservice teachers at both schools. Due to limited availability, the inservice teachers at both schools asked to run the focus groups during their lunchtime break. Therefore, we split the focus groups into two, 30-minute sessions for each group of inservice teachers. This led to a total of four focus group sessions with two sessions per school.

  The focus group method was used for this study to allow participants to express their opinions and attitudes to help the researchers understand their experiences when collaborating with school-based occupational therapists (OTs). Previous research shows that the utilization of focus groups permits a safe space for participants to encourage each other to engage in dialogue, while also remaining conducive to participant's schedules (Rabiee, 2004). Additionally, focus groups provide information about a range of ideas and feelings that individuals have about specific issues, and illuminate the differences in perspectives between the individuals (Boateng, 2012).

  For the two separate participant groups, we provided consent forms, demographic surveys, and lunch (see Appendices D and F). Consent forms were distributed to the inservice teachers at the initial meeting for each group. During the initial meeting, we emphasized their participation was voluntary, discussed the risks and benefits, stressed that their information would remain confidential, and reinforced they could leave the focus group at any time. We also disclosed that audio recording and note-taking would be

utilized for data collection purposes throughout the focus group discussions. Upon

agreeing to these terms, participants were assigned a number in order to keep their

identities confidential, and were encouraged to refrain from using names of participants,

other colleagues, or students in the discussion. These disclosures were also reiterated

during the second meeting.

After the consent forms were completed by participants, we distributed the

Inservice Teacher Demographic Survey—this only occurred during the first focus group

meeting (see Appendix F). The participants were given approximately five minutes to

complete the survey. Following the survey, two researchers acted as designated

moderators, and two researchers acted as designated note-takers throughout the focus

group session. Out of the four total focus groups, each researcher had an opportunity to

act as a moderator and note-taker.

Following the completion of surveys by the inservice teachers, the two

moderators started the audio recording and began asking focus group questions (see

Appendix H). During the first focus group meeting, the moderators had approximately 20

minutes to ask their first four questions related to occupational therapy (see Appendix H).

At the second focus group meeting, the moderators had approximately 30 minutes to ask

the remaining questions related to inclusion (see Appendix H). Throughout the focus

group sessions, the note-takers jotted down themes discussed by the participants and

recorded the order of the responses to support the audio recordings.

At the conclusion of each focus group, the two moderators summarized the ideas

discussed and debriefed on the participant's experience during the discussion. After

ending the discussion, we stopped the audio recording and thanked the participants for

their involvement. At this time, we distributed AOTA (2017a, 2017b) school-based occupational therapy handouts to the participants to clarify any misconceptions and to elaborate on the role of school-based OTs (see Appendices I and J).

      Preservice Teachers. With the permission of the university professor, the researchers were allowed to conduct a survey in a classroom at a public university in Orange County. The researchers introduced themselves, explained the purpose of the research study, and then passed out the consent forms. The researchers emphasized that their participation was voluntary, discussed the risks and benefits, and stressed that their information would remain confidential. Upon completing the consent forms, the participants were each given the Preservice Demographic Survey (see Appendix E) and a response form containing the intended focus group questions for preservice teachers (see Appendix G). Because we chose to distribute the focus group questions in a survey format, we clarified with the preservice teachers that audio recordings were not going to be used. Twenty-minutes were allotted for the participants to respond to the questions. After everyone filled out the forms, the researchers debriefed the participants on their experience and thanked them for their involvement. In the debriefing, we explained the importance of the study and clarified the role of an occupational therapist in a school-based setting.

      Research has shown that surveys are a viable tool for qualitative research (Hammer, 2017; Leggett, 2017). Surveys are beneficial in allowing for cost-effective research to be conducted with generalizable results from a sample population (Leggett, 2017). In addition, surveys aid in providing informative feedback from participants within a short time span (Hammer, 2017). Based on the cost-effectiveness and time

efficiency of surveys, the researchers chose to implement this tool with the preservice teachers.

Data Collection

Data was obtained via participant surveys, audio recordings of the focus groups, and from handwritten notes taken by the researchers. Participant consent forms and data collection were kept in the Stanbridge University Master of Occupational Therapy Office in a designated IRB locked cabinet. Communication between participants and researchers was conducted through a designated IRB-approved Stanbridge University email, and participants were informed that they could request access to their personal research data via email at any time.

Data Analysis

Focus group audio recordings were transcribed verbatim utilizing an online transcription service, Temi.com. We reviewed and edited the transcriptions to ensure they remained consistent with the audio recordings and written notes. We utilized Dedoose, a qualitative data analysis software, to analyze the focus group transcriptions using thematic analysis coding. Valid qualitative data analysis methods center around different types of thematic analysis like coding (Braun & Clarke, 2006; Rothwell, 2010). Thematic analysis, a type of qualitative analysis, involves generating a group of key themes known as "codes" found in the raw data (Rothwell, 2010). These codes are then applied to the data to link similar data segments and to identify patterns (Rothwell, 2010). Thematic analysis coding provides flexibility and yields detailed patterns helpful for analyzing participant responses (Braun & Clarke, 2006).

We reviewed the data to identify major topics related to the research questions and worked together to establish codes based on these topics. Two researchers coded the inservice teacher focus group responses and the other two researchers coded the preservice teacher questionnaire responses. Once all of the codes were established, the segments of text from the participant responses were linked to the codes in order to identify the frequency of themes and to highlight shared responses.

Ethical and Legal Considerations

To ensure the study followed ethical practices, we implemented certain procedures to address vulnerable populations, to ensure confidentiality and informed consent, and to abide by IRB standards. Before moving forward with the study, the researchers made sure to obtain IRB approval. Participants in this study included English speaking preservice and inservice teachers in Southern California. The study was entirely conducted in English, so non-English speakers were excluded from participating in the study. Vulnerable populations, such as children, minors, or prisoners, were also excluded from this study. Participation was voluntary and the school teacher participants received food and non-alcoholic beverages during the focus groups due to the groups being conducted during their lunch break—no monetary compensation was given to any of the participants.

After the initial recruitment and once in contact with potential participants, the student researchers discussed with them via email the purpose of the study, the risks and benefits, and the consent/participation process. We stressed that the participants' information and responses would remain confidential, and let the participants know they were free to withdraw at any time. Once participants agreed to participate after initial

recruitment, the student researchers provided them with a list of dates, times, locations, and an outlined schedule for the focus group. Forms for the participants, including the consent form and demographic survey, were not given to the participants until the day of the focus group. At the beginning of the focus group, we walked the participants through the consent form (see Appendix D) and reminded them of their right to leave, discussed the risks and benefits of the study, and disclosed the use of the audio recording. No translator was provided since non-English speakers were excluded from the study. To make participants more comfortable, the researchers informed the participants to ask as many questions as needed before they signed the consent forms.

Additionally, participants were assigned a number as a pseudonym to maintain confidentiality. Notes taken during the focus groups used this number to ensure participants' identities remained confidential. Participant consent forms and data were kept in the Stanbridge University Master of Occupational Therapy Office in a designated IRB locked cabinet. Communication between participants and researchers was conducted through a designated IRB-approved Stanbridge University email, and participants were informed that they could request access to their personal research data via email at any time. Data was only seen by the thesis advisor and the researchers. All computerized data was password protected. All tapes and records will be destroyed one year after the completion of this project.

There were no foreseeable potential risks, however, the participants may have experienced discomfort when answering questions amongst the group. There was a possible risk of focus group participants not maintaining each other's confidentiality however, no known breach of confidentiality occurred during the focus groups.

Researchers encouraged participants not to use names during the discussion and to

maintain the confidentiality of their peers. At the end of the focus groups, the researchers

made sure to summarize the thoughts shared during the group and checked that they had

collected accurate information from the members. Before leaving, the researchers

distributed informational handouts regarding occupational therapy in order to clarify any

misunderstandings expressed during the focus group.

Results

Nine inservice teachers were interviewed and 18 special education preservice

teachers were surveyed in order to further investigate their perspectives on the roles of

occupational therapy. Out of the nine inservice teachers, four teachers had experience

teaching only general education classrooms, two teachers had experience teaching only

special education classrooms, and three teachers had experience teaching both special

education and general education (see Table 1 below). All 18 of the preservice teachers

were enrolled in a mild/moderate special education teaching credential program at a

public university in Orange County. Out of the 18 preservice teachers, nine had been in

the program for one year, seven had been in the program for two years, and two did not

respond when asked how long they had been in the program (see Table 2 below).

Table 1. Inservice Teachers Demographics

Participant #	Grade	Years Worked	Teaching Experience
1	6	1-4	General education only
2	6	15+	Special ed + general ed
3	6	15+	General education only
4	6	15+	Special ed + general ed

5	K-2	15+	General education only
6	K-2	15+	General education only
7	K-2	1-4	Special ed + general ed
8	K-2	5-10	Special education only
9	K-2	1-4	Special education only

Table 2. Preservice Teachers Demographics

(Out of 18 total participants)	Yes	No
Currently student teaching	14	4
Have a classroom assignment	15	3
Working in a classroom with students that require support services	8	10
Enrolled in Beginning Teacher Support and Assessment (BTSA) program	9	9
Topic studied: Inclusion	16	2
Topic studied: Relative services	14	4
Topic studied: Interprofessional collaboration	13	5
Topic studied: Occupational therapy	4	14

Amongst preservice and inservice teachers, the topics presented included the roles

of OTs in schools, and the necessary attributes for effective interdisciplinary relationships

with OTs. In the focus groups with inservice teachers, two additional topics were

discussed, which included experience working with OTs, and barriers to collaboration

with OTs. To further highlight the topics discussed, the following sections include the

participants' responses on (1) the roles of school-based OTs; (2) experiences working

with OTs; (3) the barriers to collaboration with OTs; and (4) necessary attributes for

interdisciplinary relationships with OTs.

Roles of OTs In Schools

       Inservice Teachers. Most inservice teachers had a general idea of the roles of

OTs in schools; however, there was a difference in the amount of knowledge between

general education teachers and special education teachers. General education teachers

either had limited to no knowledge, while special education teachers had more

knowledge. The majority of inservice teachers highlighted the main roles of school-based

OTs as working with special education students and teaching handwriting and motor

skills. Two of the four general education teachers expressed having no knowledge of the

roles of school-based OTs based on lack of experience working with kids that required

OT services. For instance, Participant 4 stated: "I have never worked with an OT before.

I've had a number of kids who [had an] IEP, but I've never had one that needed the help

of an OT." Teachers with experience in special education expanded on the roles of

school-based OTs aside from handwriting and motor skills and also mentioned that OTs

helped kids develop life skills and cognitive skills. Only one special education teacher

mentioned that OTs assist kids experiencing sensory difficulties.

       Preservice Teachers. Most of the preservice teachers reported that they were

familiar with occupational therapy yet, very few participants were able to thoroughly

explain all of the roles of school-based occupational therapy. Four participants either did

not know what occupational therapy was or left the answer blank. Participant 7 was the

only preservice teacher that stated that school-based OTs support students to achieve

academic and educational success, and was one of three participants to include sensory

strategies as a component of occupational therapy. Most participants reported the main

roles of school-based occupational therapy to include fine motor skills to improve

handwriting and cutting and gross motor skills to improve balance. For example,

Participant 15 stated: "[An occupational therapist] specializes in developing students'

fine and gross motor skills which includes body parts from the waist and up."

Experience with OTs

Most general education teachers reported they had limited interactions with OTs,

while special education teachers reported more experiences interacting and collaborating

with OTs. For the majority of inservice teachers, the method for the delivery of OT

services to students was through the pull-out method, in which the occupational therapist

pulls the student out of the classroom for therapy. If the student required more support in

the classroom, the occupational therapist would push in or stay in the classroom to

provide services. For example, in Participant 8's experience:

> For me, yes [they pull out] . . . if the child is having some behavioral issues, then
>
> sometimes they push in [to the classroom], um, for safety . . . to make sure . . .
>
> [they provide] extra support. [Sometimes] we do see them, like when they put
>
> bands on our chairs, they will come in and they will show us how the bands work
>
> and how the kids can put their feet . . . they'll come in for that brief moment, tell
>
> the student what it's about.

Most inservice teachers reported they only had brief moments to communicate with OTs

regarding the student's progress. For example, Participant 2 stated,

>Well, with the special ed program, I did talk to the occupational therapist a lot
>more often, but not, again, not on a daily basis. It wasn't . . . every time we met; it
>was once in a while. [Small discussions] like hey, just wanted to let you know, we
>worked on this [or]can you support with that?

Participants 1 to 3—general education teachers—stated that usually the only time they interacted with OTs was during IEP meetings. For instance, Participant 1 stated:

>[In terms of interacting with the occupational therapist, I] practically never
>[interact with them] . . . not until the IEP anyways, like the annual IEP. Like oh,
>he's progressed towards this goal. That's when you would hear how they're doing.

Most of the inservice teachers had either positive or neutral interactions with OTs. However, special education teachers reported more positive interactions with OTs and general education teachers reported more neutral interactions with OTs. Generally, teacher perceptions on the quality of interactions with their school's occupational therapist depended on the OT's behavior and the needs of the student receiving services. For instance, Participant 7 reported:

>It depends on the student. Like sometimes the [occupational therapist will] come
>[to talk] with me . . . [and] some of them . . . want to tell me more. And other
>[OTs] . . . say hi, they take [the students], they bring them back and, that's it. And
>sometimes it depends on what's going on in the classroom too because if they see
>we're in a transition period, they'll talk to me a little bit more. But it's normally
>pretty quick and they just drop them off.

The majority of inservice teachers felt that improvements in interprofessional collaboration could be made between educators and OTs.

Preservice Teachers. The findings from the preservice teachers' experience with OTs demonstrated low instances of OT-related curriculum in the special education teaching program. On the preservice demographic survey, out of a total of 18 participants, 16 studied inclusion, 14 studied related services, 13 studied interprofessional collaboration, and 4 studied occupational therapy.

Barriers to Collaboration with OTs

Throughout the discussion, inservice teachers reported facing systematic barriers preventing collaboration with the school-based OTs supporting their students. The two main barriers included limited support to implement inclusive practices in their classrooms and limited time to communicate with the OTs. Special education and general education teachers discussed limited support as a lack of preparation or training on topics related to inclusion and occupational therapy and limited resources (e.g. classroom aides, etc.). General education teachers found that they had little to no experience receiving training on inclusion in their classrooms and felt unprepared to implement inclusive practices in the classroom. For instance, Participant 5 stated:

> I think in my credential program they may be identified disabilities or special needs by name but that was about it . . . I don't think I received any training. I don't think I even worked with a [kid with autism] until I came into this school, so that was like 12 years into my teaching experience, and I didn't know how to handle it.

General education teachers expressed feeling overwhelmed when accommodating a student with special needs in addition to having their own caseload due to limited support available to them. For example, Participant 3 mentioned:

> We have to wear so many different hats already. Like our job, just teaching and imparting the curriculum is hard enough with the behavior issues . . . that come with, you know, 11 year old kids . . . you've got like 32 kids plus that you're kind of trying to manage everybody's . . . needs . . . [but] it's hard with one person.

Generally, the special education teachers and general education teachers had an overall negative perception towards inclusion due to the lack of training, experience, and support. Participant 2 stated:

> We kept them in a classroom and there were times when...my whole classroom had to evacuate a room [be]cause the kid was throwing a fit in the room . . . Our district . . . and a lot of districts in California especially are trying to be fully inclusive. But then that's at the detriment of 31 other kids in the classroom who also have special needs.

Participant 8 also mentioned:

> As a special [education] teacher, I think we are doing a disservice to our special needs students that we are mainstreaming [into] gen[eral] ed[ucation] classrooms . . . [because] these children do not get the support they need and then they get further behind.

Most of the teachers felt that even though they had certain accommodations for students with special needs, not enough additional resources were given to help support those students in the classroom. Classroom aides worked with some of the teachers to assist the students with special needs, however these aides lacked adequate training and consistent availability. For example, Participant 5 shared:

> I had one difficult child last year who [has autism] and . . . he had 3 different
> aides and he just played off of that situation. He even knew when they were
> changed, and I think a consistent aide that knew his needs and could stay with him
> all day [would be ideal].

Aside from limited support, teachers also expressed not having enough time to communicate or interact with OTs due to the occupational therapist and teacher's large caseloads and limited time during the school day. For instance, Participant 5 stated:

> It would be nice if we had more time to meet with [the OTs, but] I don't know
> when that would be because they are here and gone . . . I wouldn't have a problem
> with meeting [the OTs] after school, but I mean they might not even be at this site
> anymore.

Overall, these systematic barriers restrict teachers' perceptions on inclusion in schools and hinder their collaborative relationships with school-based OTs.

Necessary Attributes in Interdisciplinary Relationships with OTs

Inservice teachers brought up various methods they believed would help improve their interdisciplinary relationship with OTs. One of the common methods included staying informed of the student's progress and goals for occupational therapy; thereby, the teacher could understand the needs of the student and how to help the occupational therapist attain these goals in the classroom. For instance, Participant 2 noted:

> I think knowing the specific goals we're working on is helpful to me to keep track
> of what was going on with the kids so I can enforce that in class. . . . It would be
> nice to know . . . specifically what they're working on and how that happens . . .
> they [can] stop and touch base and say hi or email.

Several teachers mentioned that OTs should find different methods of communication to help them stay informed, if they are not able to touch base in person. For example, Participant 8 stated:

> I don't like it when they stop me in the middle of class, and I have other students. I can't really take my eyes off the entire class . . . I always try to ask them if they can email me or if we can talk at a different time. . . . We go back and forth emailing and I gave her my cell phone number too if we have to text.

The teachers shared that they learned about occupational therapy by directly working with OTs. However, one general education teacher never had the opportunity to work with an occupational therapist, and this teacher, Participant 4, suggested:

> [A] 30-minute check in [of] who you might see throughout the year. . . . I'm sure there's plenty of staff members who have . . . had very limited to no experience . . . like myself. [It would be] so helpful just to kind of know the scope of [other professions] and what to expect to see and might even create an opportunity for a teacher to see a need that hasn't been.

Since the teachers did not have prior knowledge or training about OT, they felt that they were unable to effectively utilize OT services. To address this issue, Participant 3 stated:

> [I would like to have a] quick overview of what to look for that would require an [occupational therapist]. Like what kind of problems would . . . qualify a kid or would an [occupational therapist] help with, 'cause knowing that, just like front-loading that information, I can be aware of what they might need. I think that would really help because then we're not referring [the students to OT] for

miscellaneous things that wouldn't help, but for actual things that we weren't . . .

aware of before.

Preservice teachers. When reflecting on skills for successful collaboration,

preservice teachers had similar views to those of the inservice teachers. Most participants

were able to properly identify special education-related professionals they may need to

collaborate with in the future. The preservice teachers reported that some of the other

disciplines that they would need to collaborate with include speech language pathologists,

school psychologists, general educators, and behavior therapists. The main skills for

successful collaboration mentioned were flexibility, open communication, open-

mindedness, respect and being a team-player. For instance, when describing skills needed

for collaborating Participant 7 stated: "Being on the same page, listening, critical

thinking, [and] problem solving." When discussing important measures for collaboration,

participants mentioned consistent communication via emails, in-person meetings, texts,

and IEP planning as effective modes of communication. For instance, participant 15

stated: "[We can] have weekly meetings…[to] meet with these professionals and the

principal to discuss high profile cases, or we [can] meet [with] them when we are

assessing a student for services." Overall, preservice and inservice teachers mentioned

communication and flexibility as the key attributes for effective interdisciplinary

collaboration with OTs.

Discussion

The purpose of this study was to find the perspectives of educators on the role of

OT in schools and determine if there were any differences between the amount of

knowledge between preservice and inservice teachers on school-based OT. The results of

this study indicated that both preservice and inservice teachers held limited knowledge of the scope of practice of school-based OT. Occupations of students include education and social participation, in which school-based OTs utilize meaningful activities to support occupational performance (AOTA, 2019). Sensory integration, mental health, emotional regulation, academic success, or school-related activities of daily living are all areas of focus for school-based OT; however, they were not mentioned by most of the participants (AOTA, 2019).

The results supported that special education teachers knew more about school-based OTs scope of practice than general education teachers; previous research indicated this may be due to more training given to special education teachers on related special education services like OT (Harvey et al., 2010; Jenson, 2018). General education preservice teacher programs often lack any training on inclusion and collaboration in their curriculum (Harvey et al., 2010). Focus group survey responses showed that the special education preservice teachers reported learning about inclusion, related services for students with special needs, and interprofessional collaboration yet, only a small number had learned specifically about OT. Although special education teachers are learning about related services for students with special needs, the special education curriculum does not cover OT in depth. Based on this result, it appears that special education teachers learn more about OT through their experience working with OTs in the classroom rather than through any training or curriculum.

Limited knowledge about the scope of practice of OTs in the schools and not knowing how to identify the OT needs of students may lead both inservice and preservice teachers to be less likely to refer their students for OT services. School teachers are the

primary professionals to refer students to OT services, and therefore their understanding

of the scope of school-based OT services directly impacts student academic success and

access to a fair and appropriate education (Caidor, 2015). Lack of knowledge about OT

may also affect teachers' understanding of the services already being provided to their

students by OTs. Not understanding the student goals and treatment plan can result in a

lack of carryover of skills practice in the classroom, thereby negatively affecting the

students' progress.

Inservice teachers indicated multiple barriers that inhibited collaboration with

OTs including lack of time to effectively communicate, limited opportunities for face-to-

face encounters, large class sizes, large caseloads (i.e., number of students with IEPs),

and multiple responsibilities. Barnes and Turner (2001) found that teachers remain unable

to meet with OTs to collaborate on goals with students due to time constraints and large

caseloads. Systematic barriers combined with lack of available support and structure led

many inservice teachers to report overall negative perceptions towards inclusion in their

classrooms. These negative perceptions towards inclusion may further separate general

education and special education students, thereby decreasing the number of opportunities

for special education students to learn in the general education environment. The results

support the literature that negative attitudes towards inclusion results from teachers

feeling inadequately prepared and trained (Jenson, 2018; Gehrke & Cocchiarella, 2013).

Research suggests that negative perceptions impact the quality of services delivered to

students, and therefore, prevents them from accessing a fair and equal education (Hunt et

al., 2012; Sepanski & Fisher, 2011). Without addressing these negative perceptions,

school-based OTs might encounter more bias from teachers that hinders collaboration

between the two disciplines and ultimately, prevents students from reaching their academic potential. To address systematic barriers, OTs may need to offer more support in the classroom setting and find other ways to compensate or adapt for the lack of resources given to teachers for inclusion. Furthermore, school administration (i.e., principal, vice-principal, district administration, etc.) should play a role in addressing the barriers experienced by educators in order to foster better collaborative practices.

Inservice teachers addressed several suggestions to improve interdisciplinary collaboration with OTs. The first suggestion included more transparent and flexible communication between teachers and OTs. Increased communication with OTs will allow teachers to have a better understanding of their students' individual treatment plans and how occupational interventions are being utilized to reach educational goals. Inservice teachers expressed a need for OTs to be respectful of class time by finding a mode of communication that works best for the teacher (i.e. email, text, etc.) to prevent interruptions during instruction; this also includes collaborating on appropriate times to provide push-in or pull-out services. Enhancing communication between teachers and OTs provides more opportunities for collaborative interactions, leading to an overall more successful partnership between the disciplines and a higher chance for student success. Inservice teachers with little knowledge on school-based OT also suggested short training sessions in the beginning of the school year that covered introductions to the school's OT, background on the scope of practice of school-based OT, and when to refer students to the OT. The school administration could support these suggestions by facilitating training sessions at the beginning of the school year with the collaboration of

OTs. OTs should consider the teachers' suggestions and find a way to incorporate them into their practice in order to strengthen their interdisciplinary relationship.

Limitations

Our study faced several roadblocks that hindered the data we were able to collect and affected the generalizability of our results. One limitation of the study was the three-month time frame to recruit participants, conduct focus groups, receive survey responses, and transcribe and analyze the data. To recruit inservice teachers, we originally contacted an Orange County Department of Education employee; this employee sent out an informational email for our study to various school teachers in districts all over Orange County. However, no inservice teachers followed up with this email and the department employee was unable to contact more teachers. We also contacted four school districts in Orange County and one school district in Los Angeles County, yet all these school districts declined our invitation to participate in our research study because they informed us that all of the teachers would have no time to participate. To find our participants, the researchers had to reach out to acquaintances that worked in elementary schools and found nine teachers to participate. Overall, due to the compressed time frame, the researchers were unable to continue reaching out to colleges and schools for the recruitment process.

To recruit preservice teachers, ten Southern California universities were contacted at least three times each, through both phone and email, but only four universities responded. Out of the four colleges, two declined the request to conduct the study, one of them showed interest but did not follow up, and only one was willing to participate in this study. Our original intent was to include general education and special education

preservice teachers in the study. However, due to the lack of availability of general

education preservice teachers, we were limited to 18 special education preservice

teachers only. Consequently, the results may only be applied to the perspectives of

special education preservice teachers.

Time constraints also affected the data collection for the preservice teacher group.

A focus group for the preservice teachers was not conducted and instead, we

implemented the original demographic survey and an additional survey that included the

intended focus group questions to collect data. At the request of the college professor, a

time limit of 20 minutes was allotted to the preservice teachers because the rest of class

time was reserved for lecture. The 20-minute time allotment included the explanation of

the purpose of the survey, providing consent forms, and the preservice teachers

completing the survey. As a result, the restricted amount of time provided to explain and

complete the survey may have resulted in lower quality responses to the questions (i.e.,

the students may have felt rushed to complete the survey). Additionally, due to the format

of the survey questions (i.e., closed-ended questions, providing example answers), the

participants were unable to give conclusive answers about their knowledge of topics such

as IEPs and interprofessional collaboration.

Using personal contacts to find inservice teachers to participate in the study may

have introduced response bias to the data. Three of five participants from one elementary

school were former colleagues of one of the researchers. One of four participants from

the other elementary school was an acquaintance of another researcher. Response bias

may have occurred from the participants that were also personal contacts because they

may have felt obligated to give more positive feedback since there was a personal

connection with the OT student researchers. This might have swayed the data and may not accurately reflect their honest opinions on school-based OT. The previous working relationships between the student researchers and the inservice teachers may have also influenced the extent of knowledge the teachers had on school-based OT. However, the data was sufficient enough to support the themes that were relevant to this study. The information gathered from this study provides some insight into the perspectives of preservice and inservice teachers on school-based occupational therapy.

Conclusion

This study examined preservice teachers and inservice teachers' knowledge of OT in schools and whether or not there were differences in preservice and inservice teachers' knowledge due to education, professional development, or experience. While the results highlight only a small group of teacher's perceptions, the preservice and inservice teachers in this study provided valuable insight into the education received on OT and inclusion and challenges to collaboration with OTs. Data shows that inservice teachers are aware of the limitations that hinder their collaboration with OTs, which include limited knowledge on OT, limited preparation to implement inclusive practices, and limited resources. To improve collaboration with school-based OTs, the teachers suggested methods to improve communication with OTs and more opportunities to learn about OT through professional development training. This study can act as a starting point for future research on the perspectives of preservice and inservice teachers regarding school-based OT to address gaps in knowledge or barriers to collaborative practice to further promote successful interdisciplinary relationships between educators and OTs.

Future Implications for OT

The findings from this study have several implications for school-based OTs and how they interact with teachers in order to promote an effective learning environment for their students. Many changes need to be implemented within school-based OT to support student academic success and interprofessional collaboration. These changes should be made among both preservice and inservice teachers to provide the most effective outcomes for students requiring OT services.

Findings from this study suggest that additional training on school-based OT is necessary for teachers and other school professionals (i.e., teacher aides, behavior therapists, administration, etc.). OTs should assist in disseminating information by participating in yearly staff training workshops to address school-based OT scope of practice, interventions provided by OTs, and suggestions on how teachers can create a classroom environment more suitable for students with disabilities. Additionally, OTs should also provide specific suggestions to classroom aides regarding how to provide additional support to teachers in the classroom setting (i.e., coping strategies for disruptive behaviors). Helping educators better understand appropriate interventions to implement with their students during class time can reduce disruptions and increase overall inclusive learning.

Another implication for OT is to increase the frequency and means of communication with educators. OTs should participate in teacher conferences to enable routine communication and collaboration. Moreover, OTs need to be more proactive and ask educators what the best mode of communication works for them, such as weekly emails, texts, or progress reports. Another suggestion for increased communication is for

OTs to implement a daily progress checklist for students. A progress checklist would

include what activities the students completed during their OT session, what IEP goals

those activities addressed, and comments on student engagement and progress.

Lastly, the findings from this study indicated that preservice teachers had limited

knowledge about OT services, indicating that special education credential programs are

inadequately preparing students for interprofessional collaboration. Therefore, OTs need

to advocate for their services to be included in the preservice teaching curriculum. One

way OTs can advocate for this includes developing a partnership with the Council for the

Accreditation of Educator Preparation (CAEP) through AOTA to incorporate nationwide

teaching curriculums that involve occupational therapy services (CAEP, n.d.). In doing

so, teachers will be better equipped to understand the needs of their future students and

have the ability to identify when OT services would be appropriate.

Future studies on the perspectives of teachers on school-based OT should include

both special education and general education preservice and inservice teachers. This

would allow for a more accurate representation of the views, training, understandings,

and curriculum about school-based OT. These studies should also be replicated in other

states outside of California to compare teacher preparation and perspectives of school-

based OT. Additionally, future studies should examine the outcomes of using the

suggested OT daily progress reports in order to determine the effects of increased

communication, interprofessional collaboration, and teachers' understanding of OT scope

of practice.

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Appendix A

Phone Script

Inservice Teacher Script:

Hello my name is _____. I am a Master's student of occupational therapy at Stanbridge University. My fellow classmates and I _____, _____, _____, are conducting a research study on the perspectives of teachers on occupational therapy, and the role occupational therapists play in the education system. We are looking for teachers that would be interested in participating in a group discussion about the topic. We are contacting you in order to see if you have any teaching staff members that would like to be a part of the study. You can reach us via e-mail at schoolbasedOT@my.stanbridge.edu if you have any further questions about the study.

 Thank you for your time, and we look forward to hearing from you.

Preservice Teacher Script:

Hello my name is _____. I am a Master's student of occupational therapy at Stanbridge University. My fellow classmates and I _____, _____, _____, are conducting a research study on the perspectives of student teachers on occupational therapy, and the role occupational therapists play in the education system. We are looking for students that would be interested in participating in a group discussion about the topic. We are contacting you in order to see if you have any student teachers that would like to be a part of the study. You can reach us via e-mail at schoolbasedOT@my.stanbridge.edu if you have any further questions about the study.

Thank you for your time, and we look forward to hearing from you.

Appendix B

Introductory Email Script

Dear **insert title**,

We are Master of Science in Occupational Therapy students at Stanbridge University located in the city of Irvine. We would like to invite you to take part in a focus group (small group discussion) on insert date, time and location to learn about your perspectives on the role and effectiveness of occupational therapy in schools. The focus group should last no longer than one hour.

The purpose of this study is to help current and future occupational therapists understand the teachers' vantage and improve collaborative practices among preservice and K-12 teachers to promote student success.

If you would like to take part in the focus group on insert date, please let us know by contacting schoolbasedOT@my.stanbridge.edu

We hope that you will be able to join us and help us learn more about teachers' perceptions on the role and effectiveness of occupational therapy in schools.

Best regards,
Elina Arriaza, Dani Perkoski, Noelle Tran, Michelle Tanaka
Stanbridge University MSOT Students
schoolbasedOT@my.stanbridge.edu

Appendix C

Follow-Up Email Script

Dear **insert title**,

Thank you for expressing interest in taking part of a focus group discussion on your perspectives on the role and effectiveness of occupational therapy in the schools. To reiterate some details from our last email, the focus group discussion will take place on insert date, time and location and should last no longer than an hour.

Through this discussion, we hope to expand current knowledge on teachers' views on collaboration, IEP's, and occupational therapy's effectiveness in the schools. Our overall goal is to run group discussions with both preservice and K-12 teachers. By talking with both groups, we hope to understand the level of training teachers receive on collaboration while in school versus while on the job. It is our hope that through these discussions, occupational therapists will better understand teachers' perspectives and will use these findings to establish successful partnerships with teachers at their sites.

If you have any questions, please feel free to contact us through schoolbasedOT@my.stanbridge.edu. We are looking forward to meeting you at the discussion and hearing your thoughts!

Best regards,
Elina Arriaza, Dani Perkoski, Noelle Tran, Michelle Tanaka
Stanbridge University MSOT Students
schoolbasedOT@my.stanbridge.edu

Appendix D

Consent Form

Description: You are invited to participate in a research study on the perceptions of preservice teachers and inservice teachers on occupational therapy. You will be asked to complete a short 5-6 question demographic survey and answer questions about your experience with occupational therapy among other participants. Your answers will be audio recorded and be documented on paper. These answers will be used in a written thesis document and may be published.

Your Time Involvement: Your participation will take approximately 1 hour.

Risks and Benefits: There are no known risks to this study. The only foreseeable risk to this study is a feeling of discomfort while answering the questions. The benefits to this study are that it will increase the body of knowledge in the area of education and occupational therapy.

Payment: There will be no payment for the participation of this study.

Participant Rights: If you have read and signed this form you are consenting to participate in this study. Participation in this study is voluntary and you have the right to withdraw at any point without penalty. Your alternative is to not participate in this study. You have the right to refuse to answer specific questions. Your personal information will remain entirely confidential—names will not be used in the dissemination of this research. Your identity will not be disclosed at any time, by signing this consent form your identity will be disclosed in audio recordings. The results of this study may be disseminated at professional meetings or published in scientific journals.

Contact Information: If you have any questions about this research you may contact the researchers at: schoolbasedOT@my.stanbridge.edu.

Independent Contact: If you are in some way dissatisfied with this research and how it is conducted, you may contact the Stanbridge University Vice President of Instruction at VP.instruction@stanbridge.edu or 949-794-9090.

(If applicable, complete the following)

Indicate Yes or No:

I give consent to be audiotaped during this study.
_____Yes _____No

I give consent to be photographed for this study and for my photograph to be used in any materials (poster, video) resulting from this study.
_____Yes _____No

I give consent to be videotaped for this study and for my image to be used in any materials (poster, video) resulting from this study.
_____Yes _____No

I give consent for my identity to be revealed in any materials resulting from this study.
_____Yes _____No

Please keep a copy of this signed and dated consent form for yourself.

Signature_____Date_____

Appendix E

Demographics Survey for Preservice Teachers

Instructions:

This is an anonymous survey. Therefore, your name is not required.

This is entirely optional. Feel free to return this to the researchers if you do not feel comfortable filling this out.

1. What type of credential program are you in?
   ☐ Single subject program ☐ Multi subject program
   ☐ Special education program
2. How long have you been in your teacher ed program?
   ☐ 1st year ☐ 2nd year ☐ Other:
3. Are you currently student teaching?
   ☐ Yes   ☐ No
   If yes, what grade?
           ☐ Elementary   ☐ Middle   ☐ High school
4. Do you currently have a classroom assignment?
   ☐ Yes   ☐ No
           If yes, does your school have a Beginning Teacher Support and
   Assessment
           program (BTSA)?
                   ☐ Yes   ☐ No
           If yes, do any of your students require support services?
                   ☐ Yes   ☐ No
5. Check the following boxes if you have studied any of the following topics:
   ☐ Inclusion   ☐ Interprofessional Collaboration
   ☐ Related services for students with special needs
   ☐ Occupational therapy

Thank you for participating. We value your feedback, and we'll keep all of your answers confidential.

Appendix F

Demographic Survey for Inservice Teachers

Instructions:

This is an optional, anonymous survey. Therefore, your name is not required.

This is entirely optional. Feel free to return this to the researchers if you do not feel comfortable filling this ot.

1.   What county is your school located in?

     _____

2.   What grade do you teach?
        □ K-2   □ 3-5   □ Middle School   □ High School

3.   How many years have you been teaching?
        □ 1-4   □ 5-10   □ 10-15   □ 15+

4.   I have experience teaching:
        □ Special education & General education
        □ General education only
        □ Special education only

5.   Have you worked with students with special needs?
        □Yes   □No
        If yes, did your student(s) require occupational therapy services?
        □Yes   □No

6.   Have you ever collaborated with an occupational therapist?
        □Yes   □No
        If yes, in what capacity?

        _____
        _____
        _____

Thank you for participating. We value your feedback, and we'll keep all of your answers confidential.

Appendix G

Preservice Teacher Survey Questions

1. What is your definition of inclusion in a school setting?

2. How familiar are you with Individualized Education Plans (IEPS)?

3. What has your education covered regarding Individualized Education Plans (IEPs)?

4. Who could be involved in an IEP meeting?

5. Have you heard of occupational therapy (OT)?

   If yes, can you provide a definition of school-based occupational therapy (OT)?

   If no (to question #5), what is your best guess for what OT does with students

6. What was your experience with other school-based professionals? Have you learned about collaborating with other professionals in your studies?

7. What school-based professionals do you have at your school and have you/how could you collaborate with them (speech-language pathologist, psychologist, OT)?

8. What skills are important to you for successful collaboration?

Appendix H

Inservice Teacher Focus Group Questions

1. What is your definition of inclusion in a school setting?

2. What's your experience with inclusion in your classroom?

3. What training have you received during your time teaching?

4. How did you feel about your training? What else do you wish you would've learned/ feel you need to learn more about?

5. Who has experience with IEPs?

    a. What was your experience like?

    b. What other team members were involved?

    c. What are the pros and cons of collaboration?

6. What do you think are the roles of school-based occupational therapists?

    a. Is your OT on campus or district-wide?

    b. Does the OT work in your classroom or pull in/out?

    c. How often do you interact with your student's OT outside of IEPs?

7. What other services can an OT provide in addition to the ones mentioned?

    a. How did you learn about these other services?

    b. In what ways do you think OT could benefit the students in your classroom?

8. What is your experience with OTs? Can you give an example?

    a. What ways could your interdisciplinary relationship be improved?

9. Ending Question: What have you gained from this discussion?

Appendix I

What is the Role of School-based Occupational Therapy? **Brochure**

1 Who are school-based occupational therapy practitioners?

School-based occupational therapy practitioners are occupational therapists (OTs) and occupational therapy assistants (OTAs) who use meaningful activities (occupations) to help children and youth participate in what they need and/or want to do in order to promote physical and mental health and well-being. Occupational therapy addresses the physical, cognitive, psychosocial and sensory components of performance. In schools, occupational therapy practitioners focus on academics, play and leisure, social participation, self-care skills (ADLs or Activities of Daily Living), and transition/ work skills. Occupational therapy's expertise includes activity and environmental analysis and modification with a goal of reducing the barriers to participation.

7 How do I find an occupational therapy practitioner?

To recruit an occupational therapy practitioner, contact your local college/university occupational therapy programs, state occupational therapy associations (https:// www.aota.org/Advocacy-Policy/State-Policy/State-OT-Associations.aspx), or state licensure board. Consider posting the position on AOTA's OTJobLink at http://www.otjoblink.org/.

8 What are effective retention strategies for occupational therapy practitioners?

Some recruitment and retention strategies include offering professional development, mentoring opportunities, regular feedback on job performance, streamlined paperwork and time during the day for its completion, management support for practitioners and service delivery, electronic support for documentation and communication, teaming, and leadership opportunities. Refer to resources of the National Coalition on Personnel Shortages in Special Education & Related Services at www.specialedshortages. org. You may start a dialogue about workload issues with your staff by linking to the AOTA document "Transforming Caseload to Workload" at http://www.aota.org/Practice/ Children-Youth/Caseload-Workload.aspx

9 Where do I go to learn more?

To learn more about occupational therapy please visit our Web site at www.aota.org. The American Occupational Therapy Association (AOTA) is the professional society of occupational therapy, representing the interests of more than 140,000 occupational therapists, occupational therapy assistants, and students working in practice, science, education, and research.

AOTA The American Occupational Therapy Association, Inc.

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What is the Role of the
School-Based Occupational Therapy Practitioner?

Questions & Answers for
School Administrators

2 What services do occupational therapy practitioners provide in schools?

Occupational therapy practitioners provide a continuum of service and support to students and personnel under the Individuals with Disabilities Education Act (IDEA), the reauthorization of ESEA, most recently enacted as The Every Student Succeeds Act (ESSA), and Section 504 of the Rehabilitation Act of 1973, including:

- **Services for struggling learners in general education:**
  Practitioners can contribute in an early intervening, multi-tiered approach (i.e., Response to Intervention) within general education. Occupational therapists can assist with periodic screenings/probes (including both data collection and analysis), provide teacher training, model activities to whole classrooms or small groups, and assist with team problem solving.

- **Services for individual students in special education:**
  Evaluation services assist the Individualized Education Program (IEP) team with identifying the presence of a disability and whether there is an educational need for occupational therapy services. Occupational therapy intervention is provided directly "to the child, or on behalf of the child, and [as]...program modifications or supports for school personnel" (IDEA, 20 USC, Section 1414 (d)(1)(A) IV). This may include adapting the environment, modifying curriculum, supporting accommodations, ensuring access and participation in school activities and educational programs, and assisting in preparation for transition post-graduation. Services take place in natural school settings during the routines of the school day, and are most beneficial when they occur at the location and time that the student is experiencing challenges. Services are designed to support progress on the student's IEP.

Students who are not eligible for special education may receive occupational therapy services under a Section 504 plan. Services are designed to ensure students have equal access to all aspects of the school day and support student participation and success in general education.

- **Training and resources for school personnel and families:**
  Practitioners can provide training in typical and atypical child development and the impact of physical and mental health on learning and participation at school. Training of school personnel in lifts and transfers can ensure student safety and prevent staff back injuries. Occupational therapy practitioners can contribute to universal design for learning (UDL), support the use of assistive technology, and provide information on positive behavior interventions and supports (PBIS) including bullying prevention.

- **Participating on collaborative teams:**
  As members of IEP teams, technical assistance teams, problem-solving teams, and curriculum committees, practitioners bring their unique skills to aid students in accessing learning opportunities. They support student participation in school routines while promoting independence.

- **Partnering with districts:**
  Occupational therapy practitioners focus on helping students achieve their academic and behavior outcomes which in turn improve school districts' ability to meet state and national achievement standards (i.e., Common Core State Standards). Practitioners can help students prepare for future employment and life skills needed for community integration.

3 How are occupational therapy services funded?

Depending upon the purpose of the service, federal, state, and local funds are all sources for funding occupational therapy in public schools. In states that have pursued agreements with federal Medicaid programs, billing for the portion of occupational therapy services that is provided directly to the child on their IEP yields an additional source of funds.

4 What is the difference between an occupational therapist and occupational therapy assistant?

- **Occupational therapists** are autonomous practitioners, and are responsible for all aspects of occupational therapy service delivery including the safety and effectiveness of the service.

- **Occupational therapy assistants** must receive supervision from an occupational therapist to deliver occupational therapy services. Occupational therapy assistants deliver services under the supervision of, and in partnership with, occupational therapists.

5 How will I determine what is appropriate compensation for occupational therapy practitioners' services?

Some resources for review include other school districts, local health care facilities, the AOTA Workforce and Compensation Report, and Bureau of Labor statistics.

6 How can I verify that the occupational therapist and occupational therapy assistant are appropriately licensed/ credentialed?

Practitioners complete an accredited occupational therapy program, supervised fieldwork, and a national certification examination. These form the basis for state credentialing (usually licensure) of practitioners. You can request a copy of their current license and/or certification credentials.

Appendix J

Successful Participation at School: Strategies for All Students **Handout**

Successful Participation at School:
Strategies for All Students

School occupational therapy practitioners promote students' successful and independent participation across school-based routines and settings. Through ongoing team collaborations, including those with students, occupational therapy practitioners foster student access and progress through curricular and extracurricular activities. Occupational therapy practitioners offer evidence-based interventions that diminish or eliminate barriers to participation and build competencies required for learning, positive behavior, and social participation. Occupational therapy practitioners use data collection methods to monitor the effectiveness of interventions and supports like those suggested in this document.

Children can present with varying areas and degrees of strengths and needs. All items are written with the intent that an educator can differentiate supports and interventions to create the best fit between the student and the strategies.

As an educator, if you want to:	Consider these tips to:	An occupational therapy practitioner offers expertise to:
Improve student behavior	Prevent unwanted behaviors before they occur:[1] • Provide incentives for maintaining appropriate behavior • Provide predictability through visual daily schedules, reminders, or technology • Provide clear rules • Use a visual timer to assist students with gauging time. Infuse more movement opportunities throughout the school day:[2,3] • Add stretch breaks • Offer "helper" tasks • Promote recess • Avoid recess removal as punishment. Model and encourage expected behavior:[4] • Pair the at-risk child with a "buddy" • Use positive statements such as, "Please walk" rather than "Don't run."	Coach students to develop and follow a schedule for successful task completion. Collaborate with the educator to accommodate diverse learning styles by identifying strategies that improve attention and behavior. Teach students strategies to promote self-correction and self-advocacy (i.e., using visual reminders for cueing). Evaluate the classroom's features and layout and provide suggestions for modifications to decrease distractions and promote learning.[5] Assist the teacher in applying strategies for sensory and emotional regulation within classrooms so students are ready to learn.[6] Promote inclusiveness through activity and environmental modifications to increase curricular access and participation.[12] Incorporate friendship promotion and leisure coaching into the classroom.[13] Provide organizational strategies for individual students, groups, or whole classrooms to improve transition within and between school activities. Adapt recess activities and structures to include all children.
Improve attention to instruction and ability to work more independently	Monitor the classroom environment for student distractions, and be mindful of sensory characteristics of the room:[7] • Break tasks into small "chunks" • Use a visual timer to assist students with gauging estimating elapsed time • Reduce visual and auditory distractions with earplugs, visors, or sunglasses. Create novelty to capture attention (e.g., by varying voice inflection and volume, or varying your position in the room while providing instruction). Provide seating and positioning options and alternatives:[8,9] • Ball chairs • Seat cushions • Tables of sufficient height to work while standing • Seated work interspersed with movement.	Eliminate barriers by using Universal Design for Learning principles within classroom instruction, activities, and environment.[14] Use expertise in activity analysis to create the "just right challenge" for a student. Evaluate the classroom for distractions, and modify the classroom environment based on students' learning preferences.[15] Recommend appropriate technology and devices to promote sustained attention.[16]

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As an educator, if you want to:	Consider these tips to:	An occupational therapy practitioner offers expertise to:
Help a student manage his or her emotions	Incorporate stress reduction techniques prior to challenging activities such as testing:[10,11] • Deep breathing • Stretching • Meditation • Yoga. Assist students with emotional regulation: • Acknowledge the student's emotions with eye contact and calm language • Assist students to identify and gauge their emotions[18] • Help students recognize their physical symptoms associated with stress with an intensity chart • Place students who are upset in close proximity rather than in time out. Create a positive environment conducive to learning: • Set clear expectations for positive classroom behaviors • Use visual aids such as traffic lights or thermometers to monitor the classroom climate.	Conduct screenings or monitor for early signs of depression, psychosis, or anxiety, and refer for further diagnostic evaluation.[17] Assist the teacher in differentiating and addressing sensory processing challenges from other behavior issues.[21] Provide targeted early intervention strategies for students at risk of developing Mental Health challenges (e.g., provide leisure coaching for students at risk of limited leisure participation).[22] Provide intensive individualized interventions for students already identified with Mental health challenges (e.g., organize occupation-based groups to foster social, emotional, and cognitive skills). Collaborate with other school personnel to run groups about emotional regulation and conflict resolution. Provide graded activities for optimizing mental health for all students (e.g., by creating positive environments). Consider the developmental level of the students in choosing tools to engage and to provide positive behavioral supports in the classroom. Support social emotional learning with programs such as Zones of Regulation,[23] and the Alert program.[24]
Promote friendship and peer interaction	Foster opportunities for friendship development and reduction of bullying:[19,20] • Promote a buddy system, and provide opportunities for group work • Group isolated students with empathetic students during activities • Teach inclusion as part of the classroom curriculum • Offer leadership opportunities for disengaged students. • Offer bullying prevention or cultural sensitivity programs.	Assist students at recess or lunchtime in initiating opportunities for socialization through communication, play, or movement activities within the student's capabilities.[25] Recommend appropriate after-school activities based on the student's individual needs and strengths.[26] Collaborate with educators to implement programs that foster self-esteem and social skills.[27] Advocate for a Tier 1 whole school approach to promoting mental health.[27]
Promote/ improve academic performance in areas such as literacy and numeracy	Accommodate a variety of student needs: • Provide instructional accommodations that allow students to learn within the framework of the state standards • Provide alternate seating and positioning, writing tools of varying widths and sensory characteristics, and opportunities for completing work in varied positions (e.g., sitting, standing, laying on floor) • Adapt tasks for visual challenges (e.g., use larger font, higher contrast, or wider-rule paper). Provide direct instruction and adequate practice within the school day for students to develop and maintain the motor skill of handwriting:[28,29] • Letter formation • Baseline alignment • Letter sizing and spacing. Provide structure for written assignments: • Graphic organizers • Sentence starters. Provide alternate strategies for students to document their learning, such as technology, and instruct students in their use: • Smart pens • Portable word processors • Word prediction software • iPad apps • Text-to-speech programs • MyScript calculator. Use class-wide peer tutoring to improve reading skills.[30]	Analyze student function to suggest appropriate intervention strategies and accommodations to improve visual perceptual, sequencing, and other areas of performance that impact participation. Trial/implement assistive technology to enable students to participate in academic work and assessments based on state standards.[31] Advise educators on handwriting instruction techniques and strategies based on typical development and principles of motor learning.[28,32] Match technology options to students' strengths and needs. Provide techniques to optimize keyboarding instruction.[33]

As an educator, if you want to:	Consider these tips to:	An occupational therapy practitioner offers expertise to:
Improve Executive function	Assist students with organizing materials needed for classwork: • Provide for or teach ways to organize the student's desk, binder, and backpack • Teach task components such as collating, stapling, or folding paper, and inserting into appropriate files • Emphasize expectations • Fade out cues to promote independence • Break down projects into discrete steps and develop a timeline for completion • Provide predetermined spaces for the student to store materials.	Analyze classroom routines to provide a sequence of steps for task completion. Provide cues for time management, prioritizing tasks, and on-task behavior.[36] Create checklists to organize materials needed when transitioning from one class to another. Provide environmental supports, such as timers, "First/Then" cards. Adapt tasks, routines, and environments to enhance participation.[37]
Increase personal independence in daily school routines	Improve student personal independence, self-care, and hygiene: • Review/teach basic component skills of managing self and belongings when engaging in activities such as eating lunch; manipulating backpack, coat, and locker; and toileting[34] • Promote and encourage walking to school when feasible to increase overall physical activity.[35]	Coach educators to address varied components (cognitive, sensory, motor, perceptual, etc.) within activities that impact life skills.[38] Suggest activities to help all students develop the component skills for independence in self-care.[39] Promote healthy school routines through surveillance and intervention during cafeteria, recess, and transportation time. Contribute to development/implementation of self-determined formal and/or informal transition goals and plans for future independent community living.[40,41]

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