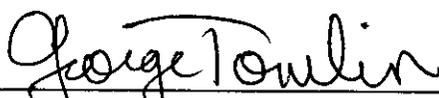Occupational Therapists Use of the School Playground to Address the Social Participation of

Preschool and Elementary School Children with Disabilities

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This research submitted by Ashley E Fletcher, has been approved and accepted in partial

fulfillment of the requirements for the degree of Masters of Science in Occupational Therapy

from the University of Puget Sound.
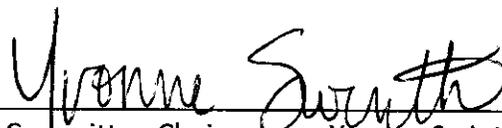
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Abstract

Objective: The purposes of this study were to: (a) learn if and how school based occupational therapists address the social participation needs of children with disabilities, (b) to learn if school based occupational therapists utilize the school playground to address the social participation of children with disabilities, (c) if so, to understand how occupational therapists utilize the school playground to address the social participation of children with disabilities; and (d) to learn what influences occupational therapists' use of the school playground to address social participation of children with disabilities.

Method: A questionnaire was mailed to 357 occupational therapists in the U.S. who were enrolled as primary members of the American Occupational Therapy Association's Early Intervention and Schools special interest section.

Results: Approximately 42% of the questionnaires mailed out were returned. Of these, 54.3% met the screening qualifications for participation. This yielded a usable response rate of 23%. Nearly 20% of school based respondents noted not addressing social participation needs of students on their caseload. Approximately 71% of occupational therapists noted utilizing the school playground to address the social participation of children with disabilities. Approximately 17% of occupational therapists reported utilizing the school playground at least once per week. Respondents noted the ability to provide treatment in a naturalistic environment and the presence of peers as factors that promoted providing intervention on the school playground. Therapists' time, environmental distractions, mobility concerns, and safety concerns acted as potential barriers.

Conclusions: The majority of respondents, who met the inclusion criteria for participation, utilized the school playground to address the social participation of children with disabilities; however, the potential barriers they encounter seem to interfere with doing so consistently. Occupational therapists' unique skills and training should enable them to overcome these barriers and thus utilize the school playground more often. Since it is seems to be one of the most appropriate environments to address the social participation of children in preschool and elementary school.

Approximately 25% of children with disabilities are socially isolated at school (Frostad & Pijl, 2007; Koster, Pijl, Nakken, & Van Houten, 2010; Odom et al., 2006). This may occur, in part, as a result of the increased difficulty children with disabilities face when attempting to facilitate and engage in peer interactions (Koster et al., 2010; Frostad & Pijl, 2007; Richardson, 2002). Children, who do not participate socially may face negative outcomes as they age (Odom et al., 2006), including poor academic performance (Eisenman, 2007; Finn, 1993), increased depression, anxiety, antisocial behaviors, and interpersonal difficulties (Laursen, Bukowski, Aunola, & Nurmi, 2007).

Participation in formal education is one of the primary occupations for children (AOTA, 2008). During the school day, one of the few opportunities for children to engage in social interactions is during recess (Jarrett, 2004; Pellegrini, 1995), which frequently occurs on the school playground (Bundy et al., 2008; Harper, Symon & Frea, 2008; Pellegrini, 1995). Pellegrini and Bjorklund (1997) define recess as "…a 'break' (either indoors or outdoors) from academic work in which children are free to choose and engage in an activity on their own terms " (p. 35). This "break" from academic studies provides children an opportunity to engage in and facilitate social interactions with peers independently (Pellegrini, 1995). These social interactions seem to promote the development of social skills essential for positive social communication with peers (Pellegrini, Blatchford, Kato, & Baines, 2004). Since recess provides an opportunity for social interaction (Jarrett, 2004; Pellegrini et al., 2004), which may influence the pursuit of education and academic performance (Eisenman, 2007; Finn, 1993), then all children, including children with disabilities, should be provided the opportunity to participate in recess.

The importance of including children with disabilities in all aspects of education is outlined in the Individuals with Disabilities Education Improvement Act of 2004 (IDEA) and in the American Occupational Therapy Association's (AOTA) Occupational Therapy Framework: Domain and Practice, 2nd Edition (OTPF II; 2008). The IDEA (2004) guides the delivery of services that provide assistance to children with disabilities. Specifically, the IDEA (2004) assures these children the right to an education and seeks to promote, "equality of opportunity, full participation, independent living, and economic self-sufficiency for individuals with disabilities" (p. 118). As a means to achieve this, the U.S. Department of Education (2004) mandates the provision of services to approximately 6.5 million children with disabilities. Such services, including occupational therapy, are provided as a means to grant a "…free and [*sic*] appropriate public education…to meet their [children with disabilities] unique needs and prepare them for employment and independent living" (Silverstein, 2000, p. 33). The IDEA (2004) encourages these services be delivered in the least restrictive environment possible, meaning that children with disabilities should be allowed to participate, when appropriate, with non-disabled children during all activities of school, including extra-curricular activities like mealtimes and recess. In agreement with the intention of the IDEA (2004), the OTPF II states that the occupational rights for children, including children with disabilities, consist of participation in formal education and social participation (AOTA, 2008). Consequently, it is appropriate that occupational therapists utilize their unique skill set to provide interventions that support the participation of children with disabilities in these occupations.

The OTPF II clarifies the dual nature of participation in formal education as including engagement in both academic (e.g. math and reading) and non-academic (e.g. recess and lunch) components of education (AOTA, 2008). In order for occupational therapists to provide intervention that attempts to ensure equitable participation of children with disabilities in appropriate school environments, it is important to understand social participation, which often occurs during recess (Jarrett, 2004; Pellegrini et al., 2004) and on the school playground (Bundy et al., 2008; Harper et al., 2008; Pellegrini, 1995), as a component of school participation. Likewise, it is critical to understand how occupational therapists can best address the social participation needs of children with disabilities during school.

Background

Social Participation and the School Environment

In a general sense, participation enables children to "…understand the expectations of society and gain the physical and social skills needed to flourish and function in their homes and communities" (Law & King, 2000, p. 10). To acknowledge this importance of participation, the World Health Organization (WHO) replaced "handicap" with "participation," in the International Classification of Functioning, Disability and Health (Forsyth & Jarvis, 2002), defining participation as "the involvement of the person in life situations" (WHO, 2001). More specifically, AOTA adopted the definition of social participation as "organized patterns of behavior that are characteristic and expected of an individual in a given position within a social system" (Mosey, 1996, p. 340 as cited in AOTA, 2008). Since life situations have many components, it is reasonable to understand how participation could be shaped by physical, cognitive,

and/or communication skills of the individual (Law & King, 2000) as well as caregiver and environmental influences (Missiuna & Pollack, 1991; Richardson, 2002).

These factors seem to influence the social participation of children with disabilities during school (Koster et al., 2010, Odom et al., 2006; & Richardson, 2002) and specifically during recess (Egilson & Coster, 2004; Ingram, Mayes, Troxell, & Calhoun, 2007; Koster et al., 2010; Prellwitz & Skar, 2007). First, Richardson (2002) described how communication skills of children with disabilities may influence their social participation, finding that school aged children with disabilities' poor timing, inappropriately interpreted attempts at interaction, and lack of interest of the potential peer often result in failure to engage peers socially. Similarly, Odom et al. (2006) found that the absence of an effective communication system contributed to the social rejection of preschool aged children with disabilities.

Second, Prellwitz and Skar (2007) noted that the design of a playground might not promote independent mobility for children with disabilities. This could possibly interfere with children with disabilities pursuit of social interaction. This rationale agreed with the findings of Egilson & Coster (2004), who utilized the School Function Assessment (SFA) and found that children with physical disabilities participate less during playground/recess than any of the other categories (Regular/Special ed. Classroom, Transportation, Bathroom/Toileting, Transitions, Mealtime) of the SFA. They reasoned that this possibly occurred as a result of the difficulty nature of attempting to adapt "…the playground environment, which is characterized by physical space, challenging terrain, and unpredictable movement of people and objects…" compared to other components of the school environment (Egilson & Coster, 2004, p. 166).

Finally, the social participation of children with disabilities during recess may be influenced by the fact that children with disabilities seem to require constant supervision and occasional assistance from adults during recess (Egilson & Coster, 2004; Richardson, 2002). This support is often provided by an assigned paraeducator (Werts, Harris, Young, & Tillery, 2004). Richardson (2002) noted that this type of adult support "…during recess and play times often served to remove them [the children] from the opportunity to be part of a peer interaction group and disrupted the flow of play activities" (p. 300). Consequently, children with disabilities frequently rely on adults to serve as alternate social partners while at school (Richardson, 2002); however, this adult presence tends to further promote peer rejection and social isolation of children with disabilities from their peers (Hemmingsson, Borrel & Gustavsson, 2003; Richardson, 2002; Tsao et al., 2008).

The physical, cognitive, and/or communication skills of children with disabilities (Law & King, 2000) as well as caregiver and environmental influences (Missiuna & Pollack, 1991; Richardson, 2002) seem to result in specific differences of the social participation of children with disabilities compared to typically developing children during recess (Egilson & Coster, 2004; Ingram, Mayes, Troxell, & Calhoun, 2007; Koster et al., 2010; Prellwitz & Skar, 2007). Ingram et al. (2007) found that children with disabilities engage in social play with peers less than typically developing children during recess. When compared to typically developing children who engage in social play with peers all of the time, children with autism engage in social play with peers 10% of the time and children with mental retardation engage in social play with peers 88% of the time (Ingram et al., 2007). Furthermore, children with autism and mental retardation initiated

and sustained conversations with peers much less than typically developing peers (Ingram et al., 2007). Fewer peer engagements during recess likely lends to decreased opportunity for children with disabilities to develop their social skills (Pellegrini et al., 2004). This possibly may perpetuate the peer rejection and social isolation of children with disabilities.

The peer rejection and subsequent social isolation children with disabilities sometimes face during recess, likely contributes to the fact that children with disabilities differ significantly from their peers on their ability to develop and maintain friendships (Koster et al., 2010). Specifically, Koster et al. (2010) found that students with disabilities have fewer friends than typically developing peers, have fewer interactions with peers, and are less accepted by peers. This lack of friendship could possibly affect the academic performance of children with disabilities in a negative way (Bailey, 1968; Finn, 1993; Flook, Repetti, & Ullman, 2005; Wentzel & Caldwell, 1997).

Peer acceptance seems to correlate with academic performance (Bailey, 1968; Finn, 1993; Flook et al., 2005; Wentzel & Caldwell, 1997). Poor academic performance and disengagement from school place students at an increased risk for school dropout (Eisenmann, 2007). Bailey (1968) found that peer acceptance and intelligence correlated with academic achievement at an equal magnitude. These findings indicate that peer acceptance seems to be as influential as intelligence (measured by intelligence quotient) on the academic achievement (measured by grade point average) of fifth grade children (Bailey, 1968). Likewise, Wentzel and Caldwell (1997) found that reciprocated friendships, peer acceptance, and group membership (all components of peer relationships) are significantly correlated with academic achievement in a sample

of sixth grade children. Lastly, Flook et al. (2005) found that peer acceptance accounted for one fourth of the variance of academic performance, indicating that less socially accepted children tend to perform worse academically in school.

Research indicates that social participation and peer acceptance affects the academic performance of children. Since children with disabilities seem to participate less socially during school, it seems reasonable, under the IDEA (2004), to provide intervention to address the social participation of children with disabilities in the school environment. Since the primary opportunity for children to engage in social interactions is during recess (Jarrett, 2004; Pellegrini, 1995), and often on the school playground (Bundy et al., 2008; Harper et al., 2008; Pellegrini, 1995), it seems logical that the best environment to address the social participation of children with disabilities would be the school playground; however, to accomplish this, it is first important to examine the construct of recess.

Recess provides an opportunity for children to participate socially by engaging and facilitating social interactions with peers (Pellegrini, 1995). This occurs because recess is the time during the school day when children are able to take respite from their academic day and participate in activities of their choosing (Pellegrini & Bjorklund, 1997). Children oftentimes spend recess, which typically occurs on a school playground (Bundy et al., 2008; Harper et al., 2008; Pellegrini, 1995), participating in various games (Pellegrini et al., 2004). It has been noted that children seem to use engagement in games as a means to develop social familiarity (Pellegrini et al., 2004). Specifically, Pellegrini et al. (2004) described their findings that children's recess games seemed to become progressively more complex in nature as children became more familiar with

one another over the duration of the school year. They believed that this phenomenon is indicative of the fact that it is during recess, when children can initiate and facilitate social interaction with minimal adult influence (Pellegrini, 1995), that children develop social skills through continued social participation in increasingly more complex interactions (Pellegrini et al., 2004).

It seems that the challenges faced by children with disabilities when attempting to participate during recess, which typically occurs on the school playground (Bundy et al., 2008; Harper et al., 2008; Pellegrini, 1995), make interacting socially more difficult. This lack of interaction seems to promote the social isolation of children with disabilities, and, in turn, may contribute to poor academic performance (Bailey, 1968; Finn, 1993; Flook et al., 2005; Wentzel & Caldwell, 1997) and possibly result in an increased risk of school drop out (Eisenman, 2007). As a result, it seems reasonable that services be provided to address the social participation of children with disabilities in one of the most commonly occurring sites of social participation during the school day, the school playground, as the academic performance of children is ultimately affected.

The Role of Occupational Therapists

Occupational therapists are concerned with an individual's ability to participate independently and optimally in all areas of occupation. Because the participation of children with disabilities in recess is considered to be a component of their daily occupation, which includes both formal school participation and social participation (AOTA, 2008), it seems logical that occupational therapists intervene to promote participation of children with disabilities in recess. It is reasonable that occupational therapists provide these interventions as they are skilled in their ability to adapt, modify,

and change tasks and activities to best match the capabilities of the client (AOTA, 2008). Specifically, occupational therapists are trained in identifying opportunities that promote children with disabilities mobility, use of senses, and cognition on the playground (Stout, 1988). The training and skills of occupational therapists enable them to design playground activities that match the developmental stage as well as the cognitive, physical, and social needs of the individual (Nabors, Willoughby, & Badawi, 1999). The inclusion of children with disabilities during playground activities is more likely to occur when the demands of the activity are appropriately matched to their abilities. Thus, occupational therapists can utilize their unique skill set to promote the social participation of children with disabilities.

As a means to understand how occupational therapists utilize their unique skills in addressing the social participation needs of children with disabilities, John (2009) examined the roles and perspectives of pediatric occupational therapists addressing social participation. She found that 97.4% of respondents addressed social participation of children with disabilities. Furthermore, she found that 69.2% of respondents believed the school setting to be the best environment in which to address the social participation needs of children with disabilities (John, 2009). Since the playground is one of the most commonly occurring sites that children socially interact during the school day (Bundy et al., 2008; Harper et al., 2008; Pellegrini, 1995), Knight (2003) sought to understand how and if occupational therapists use playgrounds to provide intervention. She found that occupational therapists seem to not be utilizing playgrounds to specifically address the social participation of children but rather to work on goals that specifically address needs in the areas of "…behavior, gross motor, play skills, psychosocial, sensory

integration or processing, strengthening, and other goals" (Knight, 2003, p. 14).

Although Knight's (2003) findings did not indicate that occupational therapists utilize

playgrounds to specifically address social participation goals, the goals listed above by

respondents could be considered essential elements of improving the social

participation of children with disabilities. For example, a child needs to be able to

regulate their behavior and have sufficient strength and gross motor coordination to

participate in many playground games, such as four square or kickball. As a result, as a

means to better understand how to address the social participation of children with

disabilities, it would be beneficial to more specifically understand school based

occupational therapists' use of the school playground to address the social participation

of children with disabilities.

Summary

Children with disabilities often fail to interact socially during recess (Egilson &

Coster, 2004; Ingram, Mayes, Troxell, & Calhoun, 2007; Koster et al., 2010; Prellwitz &

Skar, 2007), which often occurs on the school playground (Bundy et al., 2008; Harper et

al., 2008; Pellegrini, 1995). As a result, they may face the unfortunate consequences of

social isolation (Laursen, Bukowski, Aunola, & Nurmi, 2007). Previous research

supports the notion that the school environment is the most appropriate setting to

address the social participation needs of children with disabilities (John Thilager, 2009).

The IDEA (2004) asserts that services should be provided in the least restrictive

environment possible; therefore, it seems most appropriate that social participation

should be addressed on the school playground since social interaction for school-aged

children typically occurs during recess (Jarrett, 2004; Pellegrini, 1995) and on the

school playground (Bundy et al., 2008; Harper et al., 2008; Pellegrini, 1995).

As a means to best know how occupational therapists can utilize the school

playground to address the social participation of children with disabilities, it seems

essential to better understand how and if occupational therapists are utilizing the school

playground to provide intervention relating to social participation. As a result, the

purposes of this study are to build on the previous research of John (2007) and Knight

(2003) and to: (a) learn if and how school based occupational therapists address the

social participation needs of children with disabilities, (b) to learn if school based

occupational therapists utilize the school playground to address the social participation

of children with disabilities, (c) if so, to understand how occupational therapists utilize

the school playground to address the social participation of children with disabilities; and

(d) to learn what influences occupational therapists' use of the school playground to

address social participation of children with disabilities.

Method

Research Design

A survey in the form of a descriptive questionnaire was distributed by mail

throughout the U.S. to school based occupational therapists. The survey aimed to better

understand their use of the school playground to provide intervention relating to the

social participation of children with disabilities. The questionnaire had four objectives:

(a) if and how school based occupational therapists address the social participation

needs of children with disabilities, (b) if school based occupational therapists utilize the

school playground to address the social participation of children with disabilities, (c) if

so, to learn how occupational therapists utilize the school playground to address the social participation of children with disabilities; (d) and what influences occupational therapists' use of the school playground to address social participation of children with disabilities.

In order to achieve the purpose of the study, it was important that a methodology was selected that extracted insight from the most appropriate individuals possible in the most appropriate manner possible. Since surveying can yield an accurate depiction of a group based on the data collected from a smaller accessible population (Portney & Watkins, 2009; Salant & Dillman, 1994), a descriptive questionnaire was chosen as the most appropriate tool, given the researcher's limited time, resources and budget. As a means to respect the confidentiality of participants, the University of Puget Sound Institutional Review Board ethical standards were adhered to.

Participants

Participants were school based occupational therapists who addressed the social participation of children; the accessible population to accomplish this intent were occupational therapists who were members of AOTA and had primary enrollment in the Early Intervention and Schools special interest section. This specific special interest section was chosen because it is "…dedicated to addressing the needs of practitioners serving in programs under Parts B and C of the Individuals with Disabilities Education Act …" (AOTA, 2010). A list of potential participants was obtained by purchasing a systematic random sample of AOTA members primarily enrolled in this special interest section. The list was limited to occupational therapists that practice in the U.S. because

this study sought to gain insight from occupational therapists working within the constructs of the IDEA.

Inclusion criteria included: (a) member of AOTA, (b) primarily enrolled in AOTA's Early Intervention and Schools Special Interest Section; and (c) reside in the U.S. In addition, initial questions screened for the following inclusion criteria: (a) currently practicing as a pediatric occupational therapist, (b) currently working as a school based occupational therapist at least part time, (c) currently has a portion of their caseload consisting of children in preschool through sixth grade; and (d) currently provides any intervention that addresses the social participation of children in preschool through sixth grade. There were no additional exclusion criteria. The sample size was 357 occupational therapists. This size was selected to achieve a 95% confidence interval of the 3,786 members of the specified special interest section.

Instrumentation

A questionnaire was developed that had five sections with 31 closed and partially open-ended questions (Appendix A). Section I of the questionnaire served to screen participants to ensure that they currently practiced as school based occupational therapists sometimes addressing the social participation needs of school-aged children in preschool to sixth grade. Section II consisted of general questions related to addressing social participation and occupational therapists' caseload. Section III aimed to gain information regarding occupational therapists' methods of addressing social participation. Section IV inquired about occupational therapists' use of the school playground to address social participation. Finally, section V asked occupational therapists to report their demographics. Types of questions included yes/no type

questions, fill-in-the blank, Likert scale based questions, questions that asked

participants to rank choices, and questions asking participants to "check all that apply."

Opportunities were provided throughout the questionnaire for respondents to elaborate

on their responses to questions by including periodic placement of empty boxes for

respondents to provide qualitative elaboration related to their quantitative response.

Procedure

First, questionnaire materials and procedures were developed under the

guidance of two experienced faculty members. Second, they were submitted to the

University of Puget Sound Institutional Review Board. Third, after receiving approval

from the University of Puget Sound Institutional Review Board, questionnaires were

piloted by two local occupational therapists with experience working in schools. The

questionnaire was then edited based on the input received from the occupational

therapists that piloted the questionnaire to correct for typographical errors, improve

clarity and readability of several questions, and verify the length of time the

questionnaire took to complete the entire questionnaire.

Finally, potential participants were sent an envelope containing the following: (a)

a cover letter, (Appendix B) explaining the purpose of the study, selection of

participants, assurance of confidentiality of response and a statement describing the

fact that a completed questionnaire was considered consent to participate in the study,

(b) a questionnaire that was uniquely coded in the lower left corner of the last page

(Appendix A); and (c) a matching uniquely coded postage paid response envelope. To

ensure confidentiality of respondents, as the primary author received the completed

questionnaires, the return envelopes were shredded and the unique code in the bottom

left corner of the last page was removed. One month after the initial mailing was sent,

another questionnaire was sent with a reminder letter (Appendix C) to those whose

initial questionnaires had not yet been received. Responses from the questionnaires

were coded and entered into a Statistical Package for Social Science (SPSS) database

for analysis. Data from the first and second mailings were analyzed separately to

determine if there were any differences between those who responded prior to the

second mailing and those who did not. Questions left blank and illegible responses were

not included in data compilation.

Data Analysis

Statistical analysis of questions was conducted using SPSS 18.0. Responses

were coded and entered into a SPSS database prior to statistical analysis. Descriptive

statistics were utilized to describe the means, variability, and frequency of responses.

Significant differences were calculated.

<div align="center">Results</div>

A total of 151 (42.3%) of the 357 questionnaires mailed to primary members of

AOTA's Early Intervention and Schools special interest section living in the U.S. were

returned, 104 (29.1%) from the first mailing and 47 (13.2%) from the second mailing.

One was returned undeliverable to sender. There were no significant differences in the

experience of respondents between the first and second mailings. Of the 151

respondents that returned questionnaires, 38 (25.2%) were excluded because they did

not work as school based therapists. Twenty-nine (19.2%) were excluded because they

worked as school based therapists, but did not address the social participation of

children with disabilities. Two (1.3%) incorrectly excluded themselves from participation. The remaining, 82 (54.3%), indicated that they currently worked as a school based occupational therapist, sometimes addressing the social participation needs of children in preschool through sixth grade, and subsequently completed the questionnaire. This yielded a usable response rate of 23%.

Demographics

Respondents, who met inclusion criteria, had an average of 19 years of practice as an occupational therapist (range 10 months to 50 years) with 16 years working in pediatrics and 14 years working in the school setting (Table 1). Table 1 displays specific information relating to the demographics of these respondents, including highest level of education obtained and practice setting. The caseload of therapists ranged from 5 to 115, with a mean caseload equal to 35.15 ($SD = 20.22$).

Occupational Therapists' Role Addressing Social Participation in the School Environment

Therapists were asked to note the number of children on their caseload that they believed could benefit from social participation intervention (62.97%) and the number of children that actually received intervention addressing social participation (40.66%). A paired samples t-test revealed a statistically significant difference between these two means, $t(77) = 7.934$, p $<$ .05. Therapists were asked the medical diagnoses of children on their caseload for which they address social participation, 92.6% of therapists noted addressing social participation needs for children with an autism spectrum disorder (ASD), followed by 71.6% for children with attention deficit disorder (ADD), and 51.9% for children with Down syndrome (Table 2).

Therapists were asked to describe how they address the social participation of children with disabilities. Specifically, therapists were asked how often they provided intervention that addressed social participation, 71.6% of therapists reported providing intervention at least once weekly (Table 3). Therapists were asked their methods of addressing the social participation needs of children, 55.6% of therapists noted that they utilize one-on-one interventions, 86.4% of therapists noted providing group intervention, and 87.7% of therapists noted that they collaborate with other school employees (e.g. paraeducators) regarding opportunities to increase the social participation of children. Approximately 16% of therapists noted that they utilize other methods (i.e. "pair with other 'typical' students," "consultation," "whole class activities," and "collaborate with parents" to address the social participation goals of children (Table 4). More than 50% of respondents noted collaborating with special education teachers, speech language pathologists, and general education teachers (Table 5). Approximately 44% of therapists noted addressing social participation most often by means of small group interventions (Table 6). When asked to describe the most frequently used environment to address social participation, 35.2% of therapists noted utilizing the school therapy room most frequently (Table 7).

Therapists were asked about the inclusion of goals that address social participation in a child's individual education program. Means were calculated for the percentage of children on their caseload that therapists write goals relating to social participation for their occupational therapy intervention program (19.86%) and individual education program (43.36%). Approximately 29% of respondents indicated that they do not write goals for neither the individual education program nor their occupational

therapy intervention program. When asked if therapists felt supported in addressing social participation by the IDEA 2004, 74.4% of therapists agreed that they were supported in providing intervention that addressed social participation as a component of overall occupational performance, while only 19.5% disagreed with this statement (Table 8).

Use of the School Playground to Address Social Participation

Therapists were asked about their use of the school playground to address social participation. Nearly 71% of therapists noted utilizing the school playground to address social participation. When asked about the frequency of use of the school playground to address social participation, 17.2% of therapists noted utilizing the school playground once a week or more (Table 3). When asked to compare their use of the school playground to address social participation to other environments, therapists noted using the school playground 19.71% of the time compared to using other environments 80.29% of the time for children in preschool, and 18.9% of the time compared to 81.1% of the time for children in kindergarten through sixth grade. When asked about the most frequently utilized environments to address social participation, 7% of therapists noted utilizing the playground more frequently than all other environments (Table 7).

Methods of Using the School Playground to Address Social Participation

Therapists were asked about their methods of addressing social participation on the school playground. 86.4% of therapists noted providing group interventions compared to 59.6% of therapists that noted providing one-to-one interventions (Table 4). 86% of therapists noted providing intervention on the school playground by other means (e.g. establishing peer "buddy" systems, prompting students to socially interact

with peers, and positioning of students with disabilities on the school playground in order to promote inclusion) (Table 4).

Therapists were asked about writing goals relating to children's social participation on the school playground, 22.8% of therapists' caseloads had these goals included in their occupational therapy intervention program and 32.7% of therapists' caseloads had these goals included in their individual education program. 44.4% of therapists' caseloads did not include goals in either of these programs.

Influences Affecting Use of the School Playground Address Social Participation

Therapists were asked questions regarding their opinions about using the school playground to address the social participation of children with disabilities. When asked if therapists believed the school playground to be an appropriate environment to address the social participation of children, 75.3% of therapists agreed, compared to 14.8% that disagreed and 9.9% that neither agreed nor disagreed. When asked to rank factors that contributed to the appropriateness of using the school playground to address social participation, 46.8% of therapists noted the ability to provide intervention in a naturalistic environment as the top factor that contributed to the appropriateness of using the school playground, followed by 41.6% of therapists that believed the presence of peers to be the factor that contributed most to the school playground being an appropriate place to provide social participation intervention (Table 9).

Conversely, therapists' time was reported by 29.5% of respondents as the factor that interfered most with using the school playground to address social participation. 23.1% reported environmental distractions, 15.4% reported safety concerns, and 15.4% reported mobility challenges (Table 9). When asked to report on how they felt the IDEA

supported them in utilizing the school playground to address the social participation of children with disabilities, 78.8% of therapists agreed that they felt supported by the IDEA in this manner, while 11.3% of respondents disagreed (Table 8).

Discussion

This study sought to gain insight from occupational therapists to clarify how occupational therapists can best address the social participation of children with disabilities in.

Previous research suggested that the most appropriate location to address the social participation of children with disabilities is in the school environment (John, 2009) and on the school playground (Bundy et al., 2008; Harper et al., 2008; Jarrett, 2004; Pellegrini, 1995). As a result, this research aimed to: (a) learn if and how school based occupational therapists address the social participation needs of children with disabilities, (b) to learn if school based occupational therapists utilize the school playground to address the social participation of children with disabilities, (c) if so, to understand how occupational therapists utilize the school playground to address the social participation of children with disabilities; and (d) to learn what influences occupational therapists' use of the school playground to address social participation of children with disabilities.

It is noteworthy that nearly one fifth of potential school based participants were excluded from participation because they reported not addressing the social participation of children with disabilities. This seems concerning given the importance of social participation, and particularly the development of appropriate social skills, in the long-term success of individuals with disabilities. For example, an employer may be

able to provide physical adaptations and modifications to job tasks, but may lack the resources to train individuals to appropriately interact with co-workers and consumers. Occupational therapists should remember their role, as outlined in the OTPF II, in addressing the social participation needs of individuals, and specifically children, with disabilities.

Occupational Therapists' Role Addressing Social Participation in the School Environment

Although nearly 20% of respondents in this study reported that they do not address the social participation needs of children on their caseload, the majority indicated sometimes doing so. Prior research, which surveyed pediatric occupational therapists working in a variety of settings, found that approximately 97% of respondents addressed the social participation of children with disabilities (John, 2009). When comparing the results from this study to the results from John (2009), it seems that pediatric occupational therapists working within schools address the social participation of children with disabilities less than pediatric occupational therapists working in a variety of settings.

Social participation, as defined in the OTPF II, is considered to be a component of an individual's overall occupational performance (AOTA, 2008). As a result, the social participation of children with disabilities in the school environment should be considered by school based occupational therapists. This is because participation in non-academic components of education is considered to be an essential part of participation in formal education (IDEA, 2004; AOTA, 2008). Since all occupational therapists should consider addressing the social participation of children with disabilities, based on IDEA (2004)

and the OTPF II (2008), factors that may influence school based occupational therapists decision to address the social participation of children on their caseloads should be considered. More specifically, since social participation in the school environment typically occurs on the school playground (Bundy et al., 2008; Harper et al., 2008; Pellegrini, 1995), it is necessary to consider school based occupational therapists perspective and decisions relating to the use of the school playground as an intervention site to address the social participation children with disabilities.

Use of the School Playground to Address Social Participation

This study was based on the notion that the school playground may be the most appropriate location to address the social participation of children. School based occupational therapists in this study seem to agree with this idea since the majority (70.7%) of respondents noted utilizing the school playground to address the social participation needs of children with disabilities. Surprisingly, these results indicate a slight decrease from the findings of Knight (2003), who found that 77% of school based therapists utilize the playground to provide intervention. Furthermore, 48.7% of total respondents indicated that they utilize the school playground a minimum of once per month. Knight (2003) found similar results, noting that 45% of school based therapists reported providing intervention on the playground at least once a month.

Documents guiding occupational therapists' school based practice have become more concrete regarding their role in addressing the social participation of children with disabilities (IDEA, 2004; AOTA 2008). In addition, research indicates that the most appropriate location for occupational therapists to provide intervention addressing the social participation of children with disabilities within the school environment is on the

school playground (Bundy et al., 2008; Harper et al., 2008; Pellegrini, 1995). Because of

this, it seems surprising that the current practice of nearly one in five school based

occupational therapists' does not include addressing the social participation needs of

children with disabilities. Likewise, it is also surprising that the number of school based

therapists who utilize the playground has not increased. In fact, this has decreased from

Knight's study in 2003 to the present study. Furthermore, the frequency that school

based therapists utilize the school playground has not substantially changed since

Knight's study in 2003 to the present study.

This phenomenon seems surprising since improvements to public policy

advocate for the inclusion of children with disabilities and provision of services in the

least restrictive environment possible (IDEA, 2004). In addition, clarifications to the

OTPF indicate that occupational therapists should address the non-academic

components of education, including recess (AOTA, 2008), which typically occurs on the

school playground (Bundy et al., 2008; Harper et al., 2008; Pellegrini, 1995). As a result,

occupational therapists should have more clarity now, compared to previous years,

regarding their role in addressing the social participation needs of children with

disabilities on the school playground. Consequently, it seems important to understand

the influences that may affect occupational therapists' consistent use of the school

playground, since it may be the most appropriate environment in which to address

social participation (Bundy et al., 2008; Harper et al., 2008; Pellegrini, 1995).

Influences Affecting Use of the School Playground Address Social Participation

As a means for occupational therapists to continue to pursue best practice, it

seems appropriate to examine influences that may affect occupational therapists'

consistent use of the school playground to address the social participation of children with disabilities. First, examining factors that promote the use of the school playground may allow for occupational therapists to recognize factors in their own settings that encourage the use of the playground. Secondly, by addressing barriers that interfere with occupational therapists use of the school playground, and exploring potential ways to remediate these barriers, occupational therapists can better understand how to utilize the school playground in their own settings.

Influences that potentially promote the use of the school playground.

Opportunity to provide intervention in a naturalistic environment. Nearly half of respondents indicated that the factor that most promoted utilizing the school playground to address the social participation of children with disabilities was the opportunity to provide intervention in a naturalistic environment. This opinion seems to coincide with the fact that occupational therapists are encouraged by the IDEA (2004) to provide intervention in the least restrictive environment possible. Specifically, by providing intervention on the school playground, which is the most commonly occurring site of social interaction during the day for school aged children (Bundy et al., 2008; Harper et al., 2008; Jarrett, 2004; Pellegrini, 1995), occupational therapists may be able to promote the inclusion of students with disabilities in this environment.

Presence of peers. Approximately 40% of respondents indicated that they believed the presence of peers on the school playground to be the factor that most promoted using the school playground to address the social participation of children with disabilities. This also seems to relate to the inclusion of students with disabilities in the least restrictive environment possible or "the environment that provides maximum

interaction with nondisabled peers and is consistent with the needs of the child/student"
(Swinth, 2009, p. 595). Since nondisabled peers are present in nearly all environments
in the school setting (e.g. the classroom, lunch room, and gymnasium), it is likely that
occupational therapists are choosing the school playground to address the social
participation of children with disabilities because they are aware of the fact that it is the
most commonly occurring site of peer interaction for children during the school day
(Bundy et al., 2008; Harper et al., 2008; Jarrett, 2004; Pellegrini, 1995), and thus the
least restrictive environment.

      **Influences that potentially interfere with the use of the school playground
and potential solutions.** ***Therapist time.*** Nearly one third of respondents indicated
that therapist time was the most significant factor that acted as a potential barrier to
utilizing the school playground to address the social participation of children with
disabilities. Peer training may be a possible method for occupational therapists to
overcome this barrier since it seems to take less of the therapists' time in the long-term,
while still effectively addressing a child's social participation needs. For example, Owen-
Deschryver, Carr, Cale, and Blakely-Smith (2008) examined the effectiveness of
training typically developing peers in interacting with students with disabilities. Three
students between the ages of seven and ten with an autism spectrum disorder and four
typically developing peers participated in the study.

      Typically developing peers participated in peer training intervention that was
completed over three sessions lasting 30 to 45 minutes in length. During the first
session, a rationale for developing friendships with students with disabilities was
introduced and discussed. Students also participated in an activity that clarified the

importance of students with disabilities having friends with individuals other than their

paraeducators. During the second session, typically developing peers participated in a

discussion regarding the strengths and preferences of the participating students with an

autism spectrum disorder. During the third session, typically developing peers

participated in a discussion related to the following: (a) when to play with and talk to

students with an autism spectrum disorder, (b) potential topics of conversation to

discuss with the participating students with an autism spectrum disorder, (c) potential

activities to do with the participating students with an autism spectrum disorder, (d) how

to help students with an autism spectrum disorder learn to play; and (e) what to do if the

students with an autism spectrum disorder acts unusually or does not respond. Data

were taken during lunch and recess before and after participation in the peer training.

Results indicated that this method of peer training seemed to be an effective means to

increase social interaction of children with disabilities since both an increase in

interaction between children with disabilities with both trained and untrained peers was

noted (Owen-Deschryver et al., 2008).

   Environmental distractions. Environmental distractions were ranked by nearly

one quarter of respondents as the factor that most acted as a barrier to utilizing the

school playground to address the social participation of children. This response does

not specifically describe the challenges faced by occupational therapists, as

environmental distractions could refer to a combination of things (such as, noise, light,

presence of peers, presence of adults, etc). It seems probable that the challenges

posed by environmental distracters, likely contributes to the fact that over one third of

respondents reported most frequently providing intervention addressing social

participation in a therapy room, which is typically isolated and fairly distraction free.

The provision of services outside of the natural environment may not be

beneficial to children. Specifically, "when therapists teach skills embedded in one

context [e.g. the therapy room], the skills may not be accessible or used in other real-life

situations [e.g. recess] (Cole & Tufano, 2008, p. 177). This potential lack of transfer

from skills learned in the therapy room to the natural environment seems to be

recognized by therapists, as nearly half of respondents ranked the ability to provide

therapy in a naturalistic environment as the factor that most lent to the appropriateness

of using the school playground to address social participation. Since environmental

distractions could be considered a component of the natural environment, their

presence may in fact be beneficial to children with disabilities as their presence may

lend to improved transferability of learned skills across environments. For example, the

presence of other children engaging in a noisy game of tag may serve as a distraction

during intervention; however, learning to function in this specific noisy environment may

ultimately lend to the individual's ability to successfully perform duties in a noisy

classroom or work environment.

Safety concerns. Approximately 15% of respondents noted safety concerns to

be the factor that most acted as a barrier to addressing social participation on the

school playground. Knight (2003) also found this to be a factor that interfered with

occupational therapists use of the school playground, stating that "fear of liability may

restrict how much a therapist is allowed by her school or district to provide services on

the playground" (p. 21). Knight (2003) proposed the option of universally designed

playgrounds as a means to overcome these safety challenges. The construction of universally designed spaces is guided by the following seven principles: (a) equitable use, (b) flexibility in use, (c) simple and intuitive use, (d) perceptible information, (e) tolerance for error, (f) low physical effort; and (g) size and space for approach and use (Center for Universal Design, 1997). Each of these principles has specific underlying guidelines, many of which promote the safe use of environments. For example, guideline 5a states that elements within environments should be arranged "…to minimize hazards and errors…" (Center for Universal Design, 1997).

Universally designed playgrounds could serve as a potential means to overcome the liability and safety challenges faced by occupational therapists attempting to utilize the school playground to provide intervention; however, the construction of universally designed playgrounds can be very expensive, and may not be a realistic choice for many school districts. Furthermore, many schools already have functional playgrounds in place, and may not have the rationale or resources available to construct a new universally designed playground. As a result, a more feasible approach may be modifying and adapting the playgrounds that are already in place.

Occupational therapists' knowledge of disabilities and unique skills related to modifications and adaptations make them useful contributors to playground design. Furthermore, "occupational therapists can provide critical information to help protect children with cognitive, sensory, or physical limitations" (Stout, 1988, p. 655). Stout (1988) described possible modifications to playgrounds that may lend to increases in safety, including rounding the corners of equipment, separation of active and passive play areas, and surrounding the play area with a barrier or fence (to prevent children

from wandering to an unsafe location). Specific suggestions include, the possibility of incorporating extra wide slides so that children with disabilities could be supported by another person when sliding and the inclusion of bucket swings, which are more supportive of children with limited trunk control (Stout, 1988).

    Mobility challenges. Approximately 15% of respondents noted mobility challenges to be the factor that most acted as a barrier to addressing social participation on the school playground. As previously mentioned, universally designed playgrounds may help to overcome this challenge; however, redesigning and rebuilding playgrounds can be expensive and time consuming and many schools may lack the resources to do this.

    Another choice, which is an effective means to overcome safety challenges and mobility concerns, is the creation of a "loose parts" playground (or a playground area that has a diverse array of scrounge items). Materials are periodically changed and include items that are not typically considered to be play items (Bundy et al., 2008). Possibilities include, "…car and bike tires, hay bales wrapped in plastic, cardboard boxes, plastic barrels and water containers, lengths of tubing, pieces of fabric, sacks stuffed with foam, crates, wooden planks, trash can lids, and strips of foam" (Bundy et al., 2008, p. 524). This type of playground promotes the inclusion of children with disabilities as these items can be placed in an open play area that is accessible to all students. In addition, this type of play space allows for children to participate in play to the level that their abilities allow. Specifically, children with cognitive and physical disabilities can more easily be included in play since it promotes creative play rather

than play that involves refined physical skill or the ability to follow specific, and possibly complex, game rules.

Implications for Occupational Therapy

School based occupational therapists should carefully evaluate how they are providing services addressing the social participation needs of children with disabilities. Specifically, they should consider exploring whether or not their current practice aligns with the IDEA (2004), the OTPF II (2008), and incorporates evidence lending to best practice. To accomplish this, occupational therapists could pursue opportunities that increase their understanding of the IDEA (2004) and the OTPF II (2008). Furthermore, occupational therapists should be aware of research findings related to addressing the social participation of children in the school environment, as a means to ensure that the intervention they provide is reflective of best practice by incorporating related evidence.

In addition, occupational therapists should be encouraged to utilize their unique skills and training to promote and advocate for the use of the school playground in addressing the social participation of children with disabilities. Specifically, occupational therapists can educate other professionals on the importance of addressing social participation and the appropriateness of utilizing the school playground, since it is a natural environment for children, when providing various interventions. In addition, occupational therapists' specialized education and training could enable occupational therapists to overcome barriers that interfere with providing interventions on the school playground. Finally, occupational therapists may consider the supports in their settings, which may include a universally designed playground, free space to develop a "loose parts" playgrounds, and peers willing to participate in peer training programs. To do this,

occupational therapists should continue to collaborate with school professionals, including physical therapists, speech therapists, teachers, principals, paraeducators, and even mental health professionals, when addressing the social participation of children with disabilities. Collaborating with others may aid occupational therapists in providing interventions and possibly modifying or adapting the school environment in a time efficient manner; and ultimately promote the social participation of children with disabilities on the school playground.

Limitations

In order to minimize the possible threats to the accuracy of the survey, procedures followed the established methods of Salant & Dillman (1994). Although thorough procedures were followed, this study was not census based and therefore possibly faced threats to the accuracy of the findings due to measurement and sampling error (Salant & Dillman, 1994). Measurement errors may have occurred as a result of possible non-coverage, non-response, and lack of control. Specifically, these errors may have occurred as a result of geographical differences in terminology used to describe components of school based occupational therapy resulting in respondents misunderstanding questions (e.g. Q4). In addition, validity may have been compromised as individuals could refuse participation in all or part of the study. As a means to manage possible sampling error, a large sample size was utilized. It should be noted that this means of acquiring potential participants might have threatened validity of the results, as occupational therapists that are members of AOTA may not be the same as non-members.

In addition, the wording of several of the questions seemed to confuse respondents and possibly yielded inaccurate results. For example, qualitative data were not included in research findings, since many respondents seemed to misunderstand the purpose of the spaces to provide commentary that elaborated on their quantitiative responses, and oftentimes provided unrelated commentary, or commentary that simply re-stated what was already noted in the quantitative response. This resulted in data, from the qualitative components of the study, that were difficult to interpret in a meaningful way. Thus they were excluded from the study. In addition, a typographical error that was present in the fourth question of approximately one half of questionnaires mailed resulted in invalid responses and the question had to be excluded from data analysis. Finally, some of the phrasing of choices may have had multiple meanings to respondents. For example, "environmental distractions" could have referred to a combination of a number of possible choices. Likewise, "less than once a month" could ultimately have nearly the same meaning as "never" as it could refer to therapists use of the playground once in a year or even ten years.

Suggestions for Further Research

Further research should examine the social participation needs of children with specific disabilities. This study noted a large number of therapists providing social participation intervention for students with an ASD and ADD, but it is unclear whether or not this occurs because students with ASD and ADD make up a large proportion of their caseload or because children with ASD and ADD have more social participation needs compared to children with other disabilities. This information could be helpful in planning and implementing interventions for social participation, as the challenges faced by

children with physical, emotional, and cognitive disabilities when attempting to engage socially, could be drastically different.

Second, future research should aim to more specifically examine barriers and supports occupational therapists encounter when attempting to utilize the school playground for intervention. As previously mentioned, the terms used in this study were vague and could be interpreted to have many meanings. Third, future research should aim to develop effective intervention that addresses the social participation of children on the school playground in a means that is reasonable given the limited time, and oftentimes large caseload, of therapists. Finally, occupational therapists should continue to research possible modifications and adaptations to school playgrounds that promote the inclusion of children with disabilities in social interactions.

Conclusions

The majority of therapists that met inclusion criteria and participated in this study reported utilizing the school playground to address the social participation needs of children at least once a month. They reported the ability to provide intervention in a natural environment and the presence of peers to be the most influential factors contributing to the use of the school playground to address social participation needs of children with disabilities. Therapists also noted the most significant barriers to use of the school playground as being therapist time, environmental distractions, safety concerns, and mobility challenges. Because school based occupational therapists' domain of practice includes addressing the social participation of children with disabilities (AOTA, 2008) in the least restrictive environment possible (IDEA, 2004), occupational therapists

should continue to address and advocate for the social participation of children with

disabilities by promoting their participation on the school playground.

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Appendix A

Occupational Therapists Use of the School Playground to Address the Social Participation Needs of Elementary School Children with Disabilities

> We are interested in better understanding school based occupational therapists use of the school playground to provide social participation interventions to children in preschool to sixth grade. Please complete the survey and return it in the postage-paid envelope provided.
>
> **Your participation and time is appreciated!**

Definitions of the Terms Used in this Survey:
Social Participation

"Organized patterns of behavior that are characteristic and expected of an individual or a given position within a social system" (Mosey, 1996, p.340 as cited in The American Occupational Therapy Association's Occupational Therapy Practice Framework, 2009).

Section I: Participant Screening
Please answer the following questions to determine your eligibility to participate in this study.

Q1. Do you currently work as a school based occupational therapist, providing
       services for children in preschool through sixth grade?   (Check one.)
       _____Yes
       _____No

Q2.   Do you provide intervention relating to the social participation needs of children
       on your case load in preschool through sixth grade? (Check one.)
       _____Yes
       _____No

        If you answered "Yes" to both Q1 and Q2 please continue with the survey.

        If you answered "No" to either Q1 or Q2, please stop here and return the
               survey in the enclosed, postage-paid envelope to:

School of Occupational and Physical Therapy
University of Puget Sound
CMB 1070
1500 N. Warner St.
Tacoma, WA 98416-1070

Section II: General Questions
First, we will ask you a few general questions.

Q3.   Approximately how many children in preschool through sixth grade are on your caseload? _____

Q4.   What is your full time equivalent (FTE)? (Check one.)
_____.2
_____.4
_____.5
_____.6
_____.8
_____1.0*

Q5.   Of the children identified in Q3, approximately how many do you believe could benefit from intervention that addresses social participation? _____

Q6.   Of the children identified in Q3, approximately how many do you provide specific intervention that addresses their social participation? _____

Q7.   How do you feel about the following statement? (Circle one.)
The Individuals with Disabilities Improvement Act of 2004 asserts that services should, "be within a results-oriented process, that is focused on improving the academic and functional achievement of the child with a disability to facilitate the child's movement from school to post-school activities…"; therefore, occupational therapists are supported in addressing the social participation of children in preschool through sixth grade as a component of their overall occupational performance.
1   Strongly Disagree
2   Mildly Disagree
3   Neither Agree nor Disagree
4   Mildly Agree
5   Strongly Agree

Please comment on your response to Q7.

Q8.   For the children in preschool through sixth grade that you address social participation, what are their medical diagnoses? (Check all that apply.)
_____ADD/ADHD   _____Mental Retardation
_____Autism Spectrum Disorder   _____Cerebral Palsy

_____Specific Learning Disability   _____Down Syndrome
_____Spinabifida   _____Emotional Disturbance
_____Traumatic/Acquired Brain Injury   _____Genetic Syndrome
_____Visual Impairment   _____Hearing Impairment
_____Undiagnosed   _____Other _____

Section III: Methods of Addressing Social Participation
Now we will ask you questions pertaining to your methods of addressing the social participation needs of children in preschool through sixth grade.

Q9. In general, how often do you provide intervention that addresses the social participation of children in preschool through sixth grade?
(Check one.)
_____Less than once a month
_____Once a month
_____Twice a month
_____Once a week
_____More than once a week

Q10. Please consider a specific child with social participation needs. When providing intervention to address these social participation needs, approximately how frequently do you provide intervention? (Check one.)
_____Less than once a month
_____Once a month
_____Twice a month
_____Once a week
_____More than once a week

Q11. What percentage of students on your case load do you write goals related to social participation that are included in their Individual Education Program (IEP)? (% should total to 100.)
_____% goals or objectives are included in children's occupational therapy intervention plan, but are not included on the IEP.
_____% goals or objectives are included in the children's IEP
_____% of students that goals or objectives are not written for either the occupational therapy intervention program or IEP

Q12. How do you address the social participation goals of children in preschool through sixth grade? (Check all that apply.)
_____ Provide one-on-one intervention addressing social participation
_____Provide group intervention addressing social participation
_____Collaborate with other school employees regarding opportunities to increase the social participation of children

_____Other_____

Q13. When addressing the social participation goals of children in preschool through sixth grade, what are the top three ways you typically provide services? (1=most often used, 2=second most frequently used, 3=third most frequently used)
_____ One-to-one service delivery
_____ Small Group Therapy (2-5-to-one)
_____ Large Group Therapy (more than 5-to-one)
_____ Collaboration with other staff/teachers
_____ Other _____

Q14. If you collaborate with service providers, what is their discipline? (Check all that apply.)

_____ Physical Therapist	_____ School Psychiatrist
_____ Speech Language Pathologist	_____ Educational Assistant
_____ School Counselor	_____ Special Education Teacher
_____General Education Teacher	_____Other_____

Q15. Please rank the following environments used to provide intervention addressing the social participation of children in preschool through sixth grade from most frequently used (1) to least frequently used. If you do not use one of the choices please leave it blank.
_____ School Playground
_____ Classroom (General Education)
_____ Classroom (Special Education)
_____ Gymnasium
_____ Lunch Room
_____ Therapy Room
_____ Other _____

Q16. Do you utilize the school playground when addressing the social participation needs of children in preschool through sixth grade? (Check one.)
_____Yes →proceed to Q17
_____No ↓ go to page 6, Q22

Q17. Approximately how often do you utilize the school playground to provide intervention to address social participation for children in preschool through sixth grade? (Check one.)
_____Less than once a month
_____Once a month
_____Twice a month
_____Once a week
_____More than once a week

Q18.   Approximately how often do you utilize the school playground to address social participation for children in preschool compared to other environments? (Please note the percentage of time spent using the school playground compared to other environments.
(Example: 30% /70%)

_____% (school playground)/_____% (other environments)

Q19.   Approximately how often do you utilize the school playground to address social participation for children in kindergarten through sixth grade compared to other environments? (Please note the percentage of time spent using the school playground compared to other environments. Example: 30% /70%)

_____% (school playground)/_____% (other environments)

Q20. For what percent of children on your caseload do you sometimes write goals or objectives related to a child's social participation on the school playground? (% should total to 100.)
_____% goals or objectives are included in children's occupational therapy intervention plan, but are not included on the IEP.
_____% goals or objectives are included in the children's IEP.
_____% of students that goals or objectives are not written for either the occupational therapy intervention program or IEP.

Q21.   How do you utilize the school playground to address the social participation of children in preschool through sixth grade? (Check all that apply.)
_____ Provide one-on-one intervention addressing social participation on the school playground
_____Provide group intervention addressing social participation on the school playground
_____Collaborate with other school employees regarding opportunities to increase the social participation of children on the school playground
_____Other_____

Q22. Do you believe the school playground is an appropriate environment to address the social participation of children in preschool through sixth grade? (Circle one.)
1   Strongly Disagree
2   Mildly Disagree
3 Neither Agree nor Disagree
4 Mildly Agree

5 Strongly Agree

Q23. What are the top three factors that may contribute to the possible appropriateness of using the school playground to address the social participation of children in preschool through sixth grade? (Please rank. 1=most appropriate)
_____ Presence of peers
_____ Opportunity to provide intervention in a naturalistic environment
_____ Ability to utilize the play structure(s)
_____Opportunity for a multi-sensory experience
_____ Federal Legislature (e.g. Individuals with Disabilities Improvement Act of 2004)
_____State Legislature
_____School Policy
_____Therapist time
_____ Other _____

Section IV: Social Participation and the School Playground
Now we will ask you a few questions pertaining to your opinions regarding use of the school playground to address the social participation of children in preschool through sixth grade.

Q24. What are the top three factors that may act as a potential barrier to utilizing the school playground to address social participation of children in preschool through sixth grade? (Please rank 1=most significant barrier)
_____ Presence of peers
_____ Presence of adults
_____ Safety concerns
_____ Mobility challenges
_____ Environmental distractions
_____ Federal Legislature (e.g. Individuals with Disabilities Improvement Act of 2004)
_____State Legislature
_____ School policy
_____Therapist time
_____ Other _____

Q25. How do you feel about the following statement?
The Individuals with Disabilities Improvement Act of 2004 asserts that intervention should be provided in the least restrictive environment possible; therefore, you are supported in providing intervention pertaining to the social participation of children in preschool through sixth grade on the school playground. (Circle one.)

1   Strongly Disagree
2   Mildly Disagree
3   Neither Agree nor Disagree
4   Mildly Agree
5   Strongly Agree

Please comment on your response to Q25.

Q26. If you utilize the school playground to address the social participation of children in preschool through sixth grade, do you believe that utilizing the school playground contributes to improvements in the social participation of these children? (Check one.)

_____ Yes
_____ No
_____ Not Applicable (I do not utilize the school playground to address social participation.)

Please describe the top three benefits of utilizing the school playground to address the social participation of children in preschool through sixth grade.

Please provide any additional comments relating to your beliefs of the school playground as a potential environment to provide intervention relating to social participation for children in preschool to sixth grade.

Section V: Demographic Information
Finally, we will ask you questions pertaining to your demographic information.

Q27. Education: Please mark your highest degree achieved.
____ BA/BS
____ Entry-level masters
____ Post-professional masters
____Entry-level OTD
____ Post-professional OTD
____ PhD

Q28. How many years have you worked as an occupational therapist? ____

Q29. How many years have you worked in pediatrics? ____

Q30. How many years have you worked as a school based therapist? ____

Q31. What best describes the location of the school(s) where you currently work?
____ Rural
____ Urban
____ Suburban
____ Other _____

Please use the space below to provide any final comments.

Please return the survey in the enclosed, postage-paid envelope to:

School of Occupational and Physical Therapy
University of Puget Sound
CMB 1070
1500 N. Warner St.
Tacoma, WA 98416

*Approximately one half of the surveys were mailed with this response incorrectly reading 1.8

Appendix B

May 11, 2010

Dear Occupational Therapy Practitioner,

You are being contacted to provide information regarding your interest in school-based occupational therapy services.

This study is being conducted so that occupational therapists can better understand how the school playground can be utilized to address the social participation of children in preschool through sixth grade. Specifically, this study will attempt to identify barriers and supports that may influence an occupational therapist's ability to utilize the school playground. Your feedback is important because it will help to provide insight into this matter. These data will potentially clarify how occupational therapists can use the school playground to address social participation.

Enclosed you will find a questionnaire asking questions about this issue as well as questions pertaining to demographic information. Completion of this questionnaire will act as consent to participate in this research study. The questionnaire will take approximately 15-20 minutes to complete. If you prefer not to answer certain questions, you may skip them.

Please be assured that your responses will be kept entirely confidential. This enclosed questionnaire and the enclosed postage-paid response envelope have an identification number that is utilized for mailing purposes only. Once the questionnaire is returned, the envelope will be destroyed and the identification number will be removed from the questionnaire. Once returned, your name or address will never appear on the questionnaire itself.

I would be happy to answer any questions that you may have about this study. Please feel free to contact me by e-mail: aeoneil@ups.edu or by phone: 206-851-5833.

Your time and participation in this study is greatly appreciated.

Sincerely,

Ashley E O'Neil, OTS

Yvonne Swinth, PhD, OTR/L. FAOTA

Appendix C

May 28, 2010

Dear Occupational Therapy Practitioner,

About two weeks ago, we wrote seeking your opinions about occupational therapists' use of the school playground or play structures to address the social participation needs of children with disabilities. As of today, we have not received your completed questionnaire. We understand that your time is valuable and likely limited, but your participation in this study would be greatly appreciated.

The study is being conducted so that occupational therapists can better understand how to overcome barriers and utilize supports that influence the ability to utilize the school playground or play structures to address the social participation needs of children with disabilities. You were selected to participate as a result of your interest in school-based occupational therapy services. You were systematically selected by a scientific process. In order for the study to be truly representative, it is critical that each person in the sample respond, even if you respond "No" to either of the first two questions.

Please be assured that your responses will be kept entirely confidential. This enclosed questionnaire and the enclosed postage-paid response envelope have an identification number that is utilized for mailing purposes only. Once the questionnaire is returned, the envelope will be destroyed and the identification number will be immediately removed from the questionnaire. Once returned, your name or address will never appear on the questionnaire itself.

In the possibility that your questionnaire has been misplaced, a replacement questionnaire has been enclosed. Your completion of the questionnaire will act as your consent to participate in this research study. The questionnaire will take approximately 15-20 minutes to complete. If you prefer not to answer certain questions, you may skip them.

Please feel free to contact me with any questions or concerns. I can be reached by e-mail: aeoneil@ups.edu or by phone: 206-851-5833.

Sincerely,
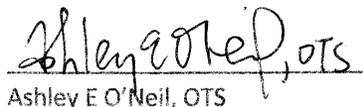
Ashley E O'Neil, OTS

Yvonne Swinth, PhD, OTR/L, FAOTA

Table 1

Demographic Information of Respondents

Characteristic	Mean (*SD*)	Frequency (Percent)
Therapists' Years of Experience		
Years working as an OT	18.97 (11.46)	
Years working in pediatrics	16.08 (10.30)	
Years working in school setting	13.77 (8.63)	
Highest Degree Achieved		
Bachelor's degree		28 (34.1)
Entry-level master's		26 (31.7)
Post-professional master's		24 (29.3)
Entry-level OT doctorate		0 (0)
Post-professional OT doctorate		4 (4.9)
PhD		0 (0)
Primary location of school(s)		
Rural		27 (35.5)
Urban		15 (19.7)
Suburban		34 (44.7)

Note. Frequency refers to the number of respondents that reported this option.

Table 2

Diagnoses of Children Whose Social Participation is Addressed (n = 81)

Diagnoses	Frequency (Percent)
Autism Spectrum Disorder	75 (92.6)
Attention Deficit Disorder	58 (71.6)
Down Syndrome	42 (51.9)
Specific Learning Disability	40 (49.4)
Mental Retardation	34 (42.0)
Cerebral Palsy	33 (40.7)
Emotional Disturbance	33 (40.7)
Undiagnosed	26 (32.1)
Genetic Syndrome	24 (29.6)
Visual Impairment	23 (28.4)
Tramatic/Acquired Brain Injury	13 (16.0)
Hearing Impairment	10 (12.3)
Spinabifida	10 (12.3)
Developmental Disability	9 (11.1)
Other[a]	9 (11.1)
Fetal Alcohol Syndrome	3 (3.7)

Note. Frequency refers to the number of respondents that reported this choice.

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[a] Including Sensory Dysfunction, multiple disabilities, Other Health Impaired, Cardio-Vascular Accident, and Seizure Disorder

Table 3

Therapists' Frequency of Addressing Social Participation

Location	School Environment[a]	School Playground[b]
	Frequency (Percent)	Frequency (Percent)
Less Than Once a Month	3 (3.7)	18 (31.0)
Once a Month	8 (9.9)	19 (32.8)
Twice a Month	12 (14.8)	11 (19.0)
Once a Week	30 (37.0)	5 (8.6)
More than Once a Week	28 (34.6)	5 (8.6)

Note. The n refers to the total number of respondents and is reflective of the number of respondents that answered each question.
[a]n=81. [b]n=58

Table 4

Therapists' Methods for Addressing Social Participation

Location	School Environment[a]	School Playground[b]
	Frequency (Percent)	Frequency (Percent)
Collaborate with Other School	71 (87.7)	39 (68.4)
Employees		
Group Intervention	70 (86.4)	39 (86.4)
One-to-One Intervention	45 (55.6)	34 (59.6)
Other	13 (15.9)[c]	49 (86.0)[d]

Note. The n refers to the total number of responses and is reflective of the number of respondents that answered each question.
[a]n=81. [b]n=57. [c] Including peer "buddy" systems, consulting, class activities, and collaborating with parents. [d]Includes peer "buddy" systems, prompting students to socially interact, and positioning.

Table 5

Therapists' Account of Disciplines of Service Providers Collaborated With (n = 81)

Discipline	Frequency (Percent)
Special Education Teacher	78 (96.3)
Speech Language Pathologist	68 (84.0)
General Education Teacher	57 (70.4)
Educational Assistant	42 (51.9)
Physical Therapist	40 (49.4)
Other[a]	30 (37.0)
School Counselor	22 (27.1)
School Psychiatrist	18 (22.2)

Note. Frequency refers to the number of times respondents reported this option.

[a] Including social worker, nurse, RSP, case manager, principal, ABA provider, focus teacher, library/music/art/physical education teachers, and CST members.

Table 6

Therapists' Most Frequently Used Methods of Addressing Social Participation

Method Often Used[c]	Most Often Used[a]	2nd Most Often Used[b]	3rd Most Often Used[c]
	Frequency (Percent)	Frequency (Percent)	Frequency (Percent)
Collaborate with staff/teachers	15 (23.4)	20 (31.3)	24 (38.1)
Large group delivery	5 (7.8)	8 (12.5)	10 (15.9)
One-to-one service delivery	17 (25.7)	12 (18.8)	19 (30.1)
Other	0 (0)	1 (1.6)	0 (0)
Small group delivery	29 (43.9)	24 (37.5)	10 (15.9)

Note. The frequency refers to the number of times respondents noted this choice as their most frequently used method.
[a]n=66. [b]n=64. [c]n=63

Table 7

Therapists' Most Frequently Used Environments Used to Address Social Participation (n

= 71)

Environment	Frequency (Percent)
Therapy Room	25 (35.2)
Classroom (Special Education)	24 (33.8)
Classroom (General Education)	9 (12.7)
Playground	5 (7.0)
Lunch Room	4 (5.6)
Other[a]	3 (4.2)
Gymnasium	1 (1.4)

Note. The frequency refers to the number of respondents that noted this environment to be the location where they most frequently addressed the social participation of children with disabilities.
[a]Included library, music room, and clinic

Table 8

Therapists' Feelings of Support in Addressing Social Participation Based on the IDEA

Opinion	Address Social Participation in the School Environment[a]	Addressing Social Participation on the Playground[b]
	Frequency (Percent)	Frequency (Percent)
Disagree	16 (19.5)	9 (11.3)
Neither Agree nor	5 (6.1)	8 (10.0)
Disagree		
Agree	61 (74.4)	63 (78.8)

Note. The frequency refers to the number of respondents that chose this option.
[a]n=82. [b]n=80

Table 9

Factors Reported to Most Influence Therapists' Use of the School Playground

Factor	Promote Use[a]	Interfere with Use[b]
	Frequency (Percent)	Frequency (Percent)
Ability to Use the Play Structures	3 (3.9)	
Environmental Distraction		18 (23.1)
Federal Legislature		
Intervention in Naturalistic Environment	36 (46.8)	
Mobility Challenges		12 (15.4)
Opportunity for a Multi-Sensory	3 (3.9)	
Experience		
Other	1[a] (1.3)	2[b] (2.6)
Presence of Adults		
Presence of Peers	32 (41.6)	1 (1.3)
Safety Concerns		12 (15.4)
School Policy	1 (1.3)	6 (7.7)
State Legislature		
Therapist Time	1 (1.3)	23 (29.5)
Weather		4 (5.1)

Note. Frequency refers to the number of respondents that reported this factor to be the most significant influence to use of the school playground.
[a]n=77. [b]n=78. [c] Included goal achievement. [d] Included teacher cooperation.

Acknowledgements