

SPECIAL EDUCATION

Satisfaction of Parents of Children With Autism Spectrum Disorder Toward Physical Education Teachers

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Abstract

This study explored the satisfaction of parents of children with autism spectrum disorder (ASD) toward physical education/adapted physical education (PE/APE) teachers using the Parent Perceptions Toward Adapted Physical Education Teachers (PPTAPET) survey (Columna, Cook, Foley, & Bailey, 2014) and examined the influence of related variables. Forty-one parents completed the PPTAPET. Most parents were satisfied or strongly satisfied regarding items associated with communication ($n = 23$, 56%), qualification ($n = 23$, 56%), and rapport ($n = 25$, 61%) subtests. Instructional placement of the child was correlated with communication ($p = .012$), qualification ($p = .015$), and rapport ($p = .009$). In addition, parents reported lower satisfaction in communication ($p = .009$), qualification ($p = .017$), and rapport ($p = .011$) when their child was educated in fully inclusive PE/APE compared to non-fully inclusive PE/APE. These results suggest that teachers should account for parent satisfaction when making decisions for instructional placements for children with ASD. More research is suggested to further analyze the satisfaction of parents of children with ASD.

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For all children, physical activity (PA) is an important element to promote and maintain health, fitness, and well-being. Developing a physically active lifestyle at an early age has been recommended to decrease the chances of developing health-related issues (e.g., obesity, anxiety, and depression) throughout the life span (Sothorn, Loftin, Suskind, Udall, & Blecker, 1999). However, children with autism spectrum disorder (ASD) tend to participate in less PA compared to their typically developing peers (e.g., Pan & Frey, 2005; Tyler, Macdonald, & Menear, 2014). Specifically, Curtin, Anderson, Must, and Bandini (2010), in a nationally representative study in the United States, indicated that the prevalence of obesity in children with ASD was 30.4%, compared to 23.6% for children without ASD. More recently, Phillips et al. (2014) examined a national sample of adolescents with ASD in the United States and found that 31.8% of them were obese. Because children with ASD tend to be more sedentary, they are also more likely to experience health-related issues such as higher rates of obesity and lower fitness levels than their typically developing peers (Curtin et al., 2010; Srinivasan, Pescatello, & Bhat, 2014; Tyler et al., 2014).

For children with ASD, deficiencies in social-communication and motor domains may negatively influence PA levels and in turn increase health-related issues such as obesity (e.g., Srinivasan et al., 2014). Fortunately, research suggests that children with ASD who participate regularly in PA can decrease their chances of developing childhood obesity (Rimmer, Rowland, & Yamaki, 2007). School-based physical education (PE) and adapted physical education (APE) programs are the most likely environments for students with disabilities, including those with ASD, to participate in and learn about PA (Pan, Frey, Bar-Or, & Longmuir, 2005). In the United States, PE/APE must be made available as part of special education for students with disabilities as per Public Law 108-446, also known as the Individuals With Disabilities Education Improvement Act (IDEA). Furthermore, IDEA stipulates that instruction should be adapted to meet students' unique needs when necessary. According to regulations associated with IDEA (Office of Special Education and Rehabilitative Services, 2006), PE/APE is a means to develop students' physical and motor fitness; fundamental motor skills and patterns; and skills in aquatics, dance, individual and group games, and sports to maintain a physically active and healthy lifestyle.

IDEA requires that special education services, including PE/APE, be conducted in the least restrictive environment (Winnick, 2011). That is, students with disabilities are to be educated in instructional placements with students without disabilities to the maximum extent appropriate, and special classes (e.g., separate schooling or the removal of children with disabilities from general education environments) occur only when the nature or severity of the disability is such that education in general education classes (with aids and services) cannot be achieved satisfactorily (Block & Krebs, 1992; Winnick, 2011). Furthermore, IDEA mandates that public agencies (i.e., schools) ensure the availability of a continuum of alternative instructional placements to meet the needs of children with disabilities, including in PE/APE (Block & Krebs, 1992; Education of Handicapped Children, 1977). Examples of instructional placements that are typically offered for PE/APE services along this continuum include (a) full-time individualized classes, (b) full-time separate classes with peers with disabilities, (c) part-time inclusion classes, and (d) full-time inclusion classes (Winnick, 2011).

Of the typically available instructional placements, most students with disabilities (92% of elementary-aged and 88% of secondary-aged) in the United States currently receive PE/APE services in classes with peers without disabilities (e.g., Hodge, Lieberman, & Murata, 2012). Furthermore, the percentage of students with disabilities spending 80% or more of their school day in classes with typically developing peers exceeded 60% in 2012 (U.S. Department of Education, 2014). The literature suggests that education in properly implemented inclusive PE/APE environments can positively affect social skills, attitudes, and awareness for all students involved (Grenier, Collins, Wright, & Kearns, 2014; Lieberman & Houston-Wilson, 2009). However, potential issues related to poorly conceptualized inclusive PE/APE, such as students with disabilities being bullied and experiencing social isolation, are prevalent (Haegele & Sutherland, 2015). As with most educational practices, properly implemented inclusive practices tend to yield positive effects, whereas poorly implemented practices will likely produce adverse effects (Lieberman & Houston-Wilson, 2009).

Ideally, educational placement is determined on an individual, case-by-case basis, based on assessments and decisions made by experts and family members and is ultimately linked to the stu-

dent's individualized education plan (IEP; Block, 1999). According to IDEA, parents of children with disabilities are equal members of their child's education team and are entitled to participate in planning and decision-making processes for their child's education (Turnbull, Turnbull, Erwin, & Soodak, 2006). Yet, although parent involvement in special education services is regarded as essential and can produce positive outcomes such as better problem solving and quality communication (Turnbull et al., 2006), parents of children with ASD often have communication issues with their child's school (Feinberg & Vacca, 2000; White, 2014). For example, White (2014) analyzed electronic summaries of complaints made by parents of children with ASD in special education systems from 2004 to 2009, finding that parents typically expressed dissatisfaction with IEP meetings, staff qualifications, and parent participation. White argued that infrequent and unclear communication was a key barrier in parent-school conflict, which contributed to parent dissatisfaction with special education services.

Few studies have explored parent satisfaction specifically focusing on PE/APE for children with disabilities. In a related study, An and Hodge (2013) explored the experiences and meaning of parent involvement in PE/APE from the perspectives of parents of children with developmental disabilities. They suggested that relationships between PE/APE professionals and parents in their study were underdeveloped in general and that further effort is needed to promote PA outside of schools, similar to findings in special education (An & Hodge, 2013). Columna et al. (2008) echoed this sentiment from the perspective of Hispanic parents, who also highlighted the necessity for better parent-teacher communication and collaboration and for parent involvement in PE/APE.

Although researchers have begun to explore the perspectives of parents of children with ASD, more research is needed to understand fully their satisfaction or dissatisfaction toward PE/APE. Because of the global increase in diagnosed cases of ASD, and because of the high likelihood of physical inactivity and obesity for this population, it is essential for schools to develop and provide high-quality PE/APE programs for these children. In many cases, parents act as a

catalyst for developing effective programs by providing individualized information about their child and directions to improve those experiences. Researchers have not yet explored a number of educational considerations, such as instructional placements (e.g., inclusion), that may influence parents' satisfaction with their child's PE/APE program and teachers. Therefore, the purposes of this study were to (a) determine the satisfaction of parents of children with ASD toward PE/APE teachers and (b) explore relationships between child demographic (e.g., age) and school-based (e.g., instructional placement) variables and parents' satisfaction levels. In this article, the term *PE/APE* is used because, as noted by Columna, Cook, Foley, and Bailey (2014), *adapted physical education (APE) teacher* is not a term used in all contexts or countries, and the intention of this study was to be inclusive of PE teachers who also provide services to children with ASD.

Method

Participant Recruitment Procedures

A convenience sample of this study comprised 144 parents of children with ASD. The institutional review board reviewed and approved all participant recruitment procedures. E-mail addresses of prospective study participants were obtained through a parent support group and a university program servicing children with ASD in the southern United States. An introductory e-mail was sent to the parents with a website link to an electronic survey hosted on Google Forms. At this time, participants were encouraged to respond to investigator e-mails if they no longer wanted to be included in the study (i.e., receive e-mails). A reminder e-mail with the link was sent a week later, and this process was repeated three times over 4 weeks. Of 144 potential participants who were initially contacted, 18 were excluded because their e-mail addresses were no longer active. Two weeks after the final e-mail was sent, data were downloaded from the Google Forms platform and the link was deleted. Of the 126 viable participants, 41 (33%) completed the survey. Table 1 describes the demographic information of the participants.

Table 1

Frequency of Responses for the PPTAPET Across the Demographic Survey Items

Demographic survey items	Communication			Qualification			Rapport		
	Disagree	Neutral	Agree	Disagree	Neutral	Agree	Disagree	Neutral	Agree
Child's Age in Years									
3-4 (<i>n</i> = 3)	1	0	2	1	0	2	1	0	2
5-10 (<i>n</i> = 19)	4	6	9	4	6	9	0	8	11
11-13 (<i>n</i> = 12)	3	1	8	1	3	8	1	2	9
14-17 (<i>n</i> = 4)	1	0	3	2	0	2	0	1	3
18+ (<i>n</i> = 3)	1	1	1	0	1	2	1	0	2
Child's Gender									
Male (<i>n</i> = 33)	7	7	19	7	7	19	2	10	21
Female (<i>n</i> = 8)	3	1	4	1	3	4	1	1	6
Child's Placement									
Fully Inclusive (<i>n</i> = 15)	6	4	5	5	6	4	1	8	6
Non-Fully Inclusive (<i>n</i> = 26)	4	4	18	3	4	19	2	3	21

Note. Agree includes responses of *strongly agree* and *agree*, and disagree includes responses of *strongly disagree* and *disagree*.

Instrumentation

The Parent Perceptions Toward Adapted Physical Education Teachers (PPTAPET) survey (Columna et al., 2014) was selected as the instrument for measuring participants' responses associated with their satisfaction toward PE/APE. The PPTAPET was developed and validated to assess parents' perceptions of PE/APE teachers working with children with ASD, in the areas of (a) teacher qualification, (b) parent and teacher rapport, and (c) communication skills. The PPTAPET is a valid and reliable scale, with established alpha values of 0.89 (communication), 0.89 (qualification), and 0.92 (rapport) and calculated split-half reliability of the scale of $r = 0.90$ based on the Spearman Brown Prophecy formula. (Columna et al., 2014). The survey uses 12 items related to communication with the parents (four items), teacher knowledge (four items), and parent-teacher rapport (four items). For example, the first question for communi-

cation stated, *I am satisfied with the frequency in which I communicate with my child's APE/PE teacher*; the first question for teacher qualification stated, *I feel the APE/PE teacher is qualified to instruct children with autism*; and the first question for parent-teacher rapport stated, *The APE/PE teacher shows a willingness to learn more about my child's needs*. The parents rated their level of satisfaction on a 5-point Likert-scale design.

In addition to the PPTAPET survey, participants answered a demographic survey. Child information obtained included age, gender, verbal communication, and challenging behaviors. The demographic survey also asked parents about their child's instructional placement in PE/APE, with four options: (a) fully inclusive (always with peers without disabilities), (b) partially inclusive (sometimes with peers without disabilities), (c) segregated (usually with other peers with disabilities), and (d) individualized (educated in 1:1 environments).

Research Design

This study used a cross-sectional survey research design. This survey method permitted access to parents of children with ASD for data collection purposes. Administration of the study's satisfaction survey with accompanying demographic questionnaire allowed the researchers to collect and analyze data from the participants in a manageable and economically feasible manner. The researchers were aware of the limitations of cross-sectional survey designs, namely that it is difficult to select samples that truly represent groups of individuals and to select samples at different levels that are comparable on relevant variables (Gay, Mills, & Airasian, 2006).

Data Analysis

Data analyses consisted of descriptive and inferential statistics. First, the participants' demographic data were analyzed with descriptive statistics. The percentage and frequency of demographic survey items were calculated for each section of the PPTAPET. Next, Kendall's tau rank correlation coefficients determined if significant relationships existed between PPTAPET scores and the child demographic and school-based variables. For these analyses, the 5-point Likert scale of the PPTAPET was condensed to three categories, (a) disagree (strongly disagree + disagree), (b) neutral, and (c) agree

(strongly agree + agree), and child's PE/APE options were categorized into two categories, (a) fully inclusive and (b) non-fully inclusive (i.e., partially inclusive, segregated, or individualized). SPSS 22.0 was used for analyses. Statistical significance was set at the .05 level.

Results

Descriptive statistics from the PPTAPET survey revealed that most parents either agreed or strongly agreed regarding items related to communication ($n = 23$, 56%), qualification ($n = 23$, 56%), and rapport ($n = 25$, 61%) subtests. Table 1 displays the frequency of responses by parents for each subtest by child demographic and school-based information, respectively. For items regarding severity of ASD, most parents reported that their child verbally communicates ($n = 31$, 75.6%) and engages in some degree of challenging behaviors once a week ($n = 8$, 19.5%), once a day ($n = 12$, 29%), or multiple times per day ($n = 14$, 34%).

The Kendall's tau rank correlation coefficient ($p < .05$) showed a significant relationship between child's PE placement and communication ($\tau = .344$, $p = .012$), qualification ($\tau = .332$, $p = .015$), and rapport ($\tau = .361$, $p = .009$). In further analyses for the placement variables, independent t tests ($p < .05$) determined differences between two placement options (fully inclusive and non-fully inclusive) and satisfaction scores. The results confirmed significant mean score differences between the two placement options across each of the PPTAPET subscales. More specifically, significant differences were found across the two placement options in mean parent satisfaction scores with communication, $t(39) = -2.74$, $p = .009$; qualification, $t(39) = -2.50$, $p = .017$; and rapport, $t(39) = -2.66$, $p = .011$. Table 2 shows the results of inferential statistics for the PPTAPET subscales based on placement.

Discussion

This study examined the satisfaction of parents of children with ASD toward PE/APE teachers. For the most part, parents reported being either satisfied (i.e., satisfied or strongly satisfied) or neutral in regard to each aspect of the PPTAPET survey. This tendency demonstrates that parents are likely to be satisfied with the rapport, communications, and qualifications of their child's PE/APE teacher. In general, parents of children with ASD in this study perceived some

Table 2

Mean, Correlations, and t-Test Results for the PPTAPET Subsets Based on Placement

PPTAPET subtest	Placement		Correlations		<i>t</i> test	
	Fully inclusive (<i>n</i> = 15) scores <i>M</i> (<i>SD</i>)	Non-fully inclusive (<i>n</i> = 26) scores <i>M</i> (<i>SD</i>)	τ	<i>p</i>	<i>t</i> (39)	<i>p</i>
	Communication	11.3 (\pm 4.2)	14.7 (\pm 3.9)	.344	.012	-2.74
Qualification	11.8 (\pm 3.4)	15.0 (\pm 4.2)	.332	.015	-2.50	.017
Rapport	13.4 (\pm 3.1)	16.5 (\pm 3.7)	.361	.009	-2.66	.011

issues that have been discussed in previous research, such as communication issues between parents and PE/APE teachers (Lieberman, James, & Ludwa, 2004; Perkins, Columna, Lieberman, & Bailey, 2013), to be less problematic. Still, however, 24% of the parents in this study reported dissatisfaction with communication.

In addition to exploring the satisfaction of parents of children with ASD, this study also attempted to examine the relationships between the satisfaction and child demographic and educational variables. The child's PE/APE placement was the sole variable that was significantly correlated with parent satisfaction; parents in this study were more likely to report being satisfied when their child was educated in a non-fully inclusive setting, rather than an inclusive PE/APE setting. Also, the *t* tests revealed significant differences in the satisfaction scores across instructional settings. This finding is particularly interesting because advocates (particularly those in APE) have recently helped shift experiences in PE/APE from mostly segregated to predominantly inclusive, in which those with and without disabilities are educated in the same environment (Block, 1999; Hodge et al., 2012). Although inclusion has gained global acceptance (Block, 1999; Fitzgerald, 2006), it is still unknown whether an inclusive PE/APE setting is the best option for students with disabilities, including those with ASD.

For a number of reasons, parents may be less satisfied with their child's PE/APE teachers when their child is educated in an inclusive environment. For example, insufficient or unclear communication

can leave parents feeling unaware of what their child is learning in PE/APE and make parents feel unable to share their own ideas for programming with teachers (Columna et al., 2014). As reported in previous studies (An & Hodge, 2013; Columna et al., 2008; Perkins et al., 2013), lack of communication, as commonly expressed by parents of children with disabilities who are educated in inclusive instructional settings, can influence parents' satisfaction with their rapport and communication with their child's PE/APE teachers. Approximately 24% of parents in this study expressed that communication was an issue. One reason PE/APE teachers may not be able to communicate more consistently with parents is a lack of time. Specifically, although PE/APE teachers view fully inclusive classes as admirable, they report that students with disabilities need more of the teacher's time to receive the best possible educational experience in inclusive settings (Hodge, Ammah, Casebolt, LaMaster, & O'Sullivan, 2004). Because of the time needed to plan for and execute appropriate educational experiences, PE/APE teachers may have less time to actively communicate with parents.

Other results of this study were somewhat surprising. In particular, parent satisfaction, especially toward communication, was expected to show different tendencies across different age bands of children. The logic behind this assumption was derived from the child's transition planning years. According to IDEA, beginning at age 16 (unless otherwise specified by state regulations), a statement of transition is developed and added to each student's IEP. At this time, every educational area in special education (including PE/APE) begins looking at what the student needs to be successful in his or her community. During this time, parent communication is critical to the success of the transition program. However, results from this study did not demonstrate a significant correlation between satisfaction of parents and age of child. A future study should more closely explore the satisfaction of parents in relation to grade level instead of child's age.

Limitations

This first study of its kind provided new insights into satisfaction of parents of children with ASD toward PE/APE teachers. At the same time, however, it has a number of limitations. First, the participants were selected from one region (i.e., southern) in the United

States and were predominantly Caucasian. Statistically, therefore, the findings are not generalizable to parents of children with ASD in other regions or of other races/ethnicities. Furthermore, the number of participants was relatively small, which further affects generalizability. The sampling procedure of this study also affects the generalizability of the findings. Because this study utilized a convenience sample, it is unlikely that it is representative of the entire population of parents of children with ASD (Fraenkel, Wallen, & Hyun, 2012). However, because of the nature of conducting research with unique populations (e.g., those with disabilities), convenience sampling is common in adapted PA-related research (Haegele & Porretta, 2015; Karkaletsis, Skordilis, Evaggelinou, Grammatopoulou, & Spanaki, 2012). Further research is necessary to explore relationships and central tendencies in larger samples of parents of children with ASD.

Second, ASD, being a spectrum disorder, presents in many forms. Therefore, the thinking and learning abilities of individuals with ASD can range from gifted to severely impaired. It is reasonable to suggest that the severity of ASD can influence the satisfaction of parents toward educational services, such as PE. However, in this study, despite some of the items asking about communication and challenging behaviors of the child, the direct information on the severity of ASD for each of the participants was not collected. Future research may want to include data of this nature to determine if the severity of ASD is an influencing variable over parent satisfaction.

Conclusions

Children with ASD tend to be less physically active and have a higher likelihood of obesity than their typically developing peers (e.g., Curtin et al., 2010). Because PE/APE programs are the most likely environment for children with ASD to learn about and participate in PA, the importance of quality programming in this arena cannot be overstated. In addition to PA participation, PE/APE courses have additional value in promoting social interactions and community engagement (e.g., Healy, Msetfi, & Gallagher, 2013). In this study, the central tendency was for parents of children with ASD to be satisfied with or neutral in regard to their child's PE/APE experience. Acceptable satisfaction may indicate that parents are in favor of the programming that their children are receiving in schools and/or the influence that these programs have on students outside of

school. However, it is unknown whether parent satisfaction with PE/APE teachers has a direct relation to the PA participation of children with ASD. To have a more complete understanding of what factors affect satisfaction of parents of students with ASD toward PE/APE teachers, it is important for researchers to explore other variables in comprehensive research.

This study sought to explore the satisfaction of parents toward PE/APE teachers and variables that might relate to or affect those satisfactions. Although most parents in this study reported being satisfied with their child's PE/APE teachers, those whose children were educated in inclusive instructional settings were less likely to report satisfaction than others. Among the potential issues that can affect parent satisfaction include the effectiveness or perceived effectiveness of inclusive PE and the lack of time that PE/APE teachers who teach inclusive classes have to communicate with parents. Yet despite several limitations, this study was the first attempt to assess parent satisfaction toward PE/APE teachers and served as the foundation for future studies based on the limitations. In addition, the findings of this study provide important information that parents, PE/APE teachers, and administrators should consider when conceptualizing PE/APE programs for students with ASD.

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