Adapted Physical Education Teachers' Perspectives Towards Parents of Children with Disabilities

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by

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Before continuing my dissertation, I'd like to share the structure of it. This was a three-manuscript dissertation with all being connected to one another within the topic of parent involvement in adapted physical education (APE). The first manuscript was a systematic review of the literature regarding parent perceptions towards physical education. The next manuscript was a case study exploring the relationship between one mother, one APE teacher, and one child. The overarching question was how did a collaborative relationship occur? And finally, the last manuscript focused on the perceptions of APE teachers towards parents.

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Manuscript 1: Perceptions of Parents of Children with Disabilities Towards Physical Education: A Systematic Review

Abstract

Although it is not often seen as a physical activity intervention, physical education has a unique opportunity to support children with disabilities as well as their parents' physical activity knowledge and support behaviors. However, barriers exist that prevent parents from understanding the benefits of physical education such as limited communication from teachers. Therefore, the purpose of this systematic literature review was to synthesize published studies regarding parent perspectives toward physical education for their children with disabilities. Keyword searches from nine databases were utilized to identify studies between 1990 and 2023. A total of 19 articles met the inclusion criteria and were considered for the review. Three themes emerged which were: (a) parents' understanding of A/PE, (b) parents' expectations of A/PE teachers, and (c) parents' undeveloped relationships with A/PE teachers. Parents perceived value in physical education but did not prioritize it compared to other subjects. Additionally, there appears to be a disconnection between parent expectations of physical education teachers' teaching and their actual experiences regarding teachers' abilities to accommodate their children and develop lines of communication.

Keywords: communication, adapted physical education, physical activity, value, relationship

Parents of children with disabilities play a vital role in encouraging and facilitating their children's physical activity (PA; Healy & Marchand, 2020; Siebert et al., 2017). If parents have competence and perceive enjoyment in PA, their children demonstrate higher levels of PA participation (Ku, 2020; Ku & Rhodes, 2020 Pitchford et al., 2016). However, parents may experience barriers in providing PA which may include a lack of adequate and accessible programs and professionals or a lack of skills and knowledge to demonstrate and teach forms of PA to their children (Columna et al., 2020). Parent-mediated interventions have lessened these barriers by providing PA knowledge and professional guidance to parents of children with disabilities. As a result, there have been positive results in both parent satisfaction and increases in children's PA levels (Healy & Marchand, 2020; Prieto et al., 2023; Yarımkaya et al., 2022; Young et al., 2021). This suggests that these opportunities for parents should be initiated and maintained to support the PA of children with disabilities. One setting that offers this chance is physical education (PE). PE can be an intervention that not only teaches children with disabilities about PA but also provides parents the necessary knowledge and skills to support their children in being physically active across their lifespan. As such, PE teachers should understand parents' perceptions of PE to enhance parents' value of the subject (Sheehy, 2011). In addition, understanding how parents view PE can help PE teachers develop strategies to improve collaboration and foster ongoing engagement in PA as parents' children transition into adulthood.

In the U.S., the Individuals with Disabilities Education Act (IDEA) mandates that children with disabilities are afforded the right to participate in PE or a specialized form, adapted physical education (APE). PE provides children the opportunities to develop lifelong PA skills, which in turn can foster healthy lifestyles (Bailey, 2006; IDEA, 2004, Sec.300.39 (b)(2)). Not only is PE focused on improving children's PA skills, but it can also extend into the home

environment to help parents learn about PA and how to provide PA opportunities for their children. For example, PE teachers can demonstrate skills taught in class to be reinforced at home, provide parents with PA opportunities in the community, or hold PA events to teach parents how to modify a particular activity at home (Forbes & Block, in press). When examining the overall views parents have towards PE, Graham (2008) found that parents of children without disabilities generally have positive views towards PE and value its importance. He concluded that these positives views may be due to parents recognizing the long-term benefits of regular PA for their children that can be taught and obtained within PE. Similarly, Coulter et al.'s (2020) survey found that 81% of parents of children without disabilities considered PE as very important or important within their children's education. Both studies can encourage the idea that a significant portion of parents recognize and appreciate the lasting advantages of PA which can derived from PE, hinting at the need to keep parents well-informed of PE participation to enhance their child's PA involvement (Coulter et al., 2020).

Parents of children with disabilities also understand the benefits of PA (Columna et al., 2017; McGarty et al., 2021; Obrusnikova & Miccinello, 2012) and to some degree, PE (e.g., An & Goodwin, 2007; Perkins et al., 2013). Valuing the benefits of PA can act as a motivator for parents to pursue and support PA opportunities for their children (Chaapel et al., 2012; Columna et al., 2020). However, numerous studies indicate a knowledge gap among parents of children with disabilities about the context of PE and the appropriate channels for PA-related information (e.g., An & Hodge, 2013; Leet et al., 2020) which may prevent them from adequately supporting their children's PA. Thus, fostering early relationships between parents and PE or APE teachers could potentially enhance PA knowledge and behaviors, benefiting their children's wellbeing. Such relationships, especially from a young age, can act as a sustained intervention, aligning

with the duration of the children's individualized education program (IEP) and paving the way for meaningful PA opportunities into their adulthood. When critically examining the potential of PE to provide guidance to parent's PA support behaviors, it is important to better understand parents' perspectives towards PE for their children with disabilities. This step is critical if PE is to support the development of parents' PA behaviors, thereby creating opportunities for their children with disabilities to participate in regular PA later in life. Therefore, the purpose of this systematic literature review was to synthesize published studies regarding the perspectives of parents toward PE for their children with disabilities.

Method

Scope of Study and Search Strategy

The following databases were utilized to conduct the search: (a) ERIC, (b) MEDline with full text, (c) SPORTDiscus, (d) APA PsychInfo, (e) Web of Science, (f) SocINDEX, (g) Education Research Complete, and (h) Education Full Text in May 2023. Databases were selected as they were commonly used in PE and adapted PA (APA) research in addition to being readily available to the authors through their respective universities. The search for publication date was set to 2000 to 2023. To determine the necessary articles, the search criteria included four separate groups of primary search terms: (a) parents; (b) child with disab*[1]; (c) physical education; and (d) perspectives. Within each primary term, sub terms were included to further identify articles in the review: (a) families, caregivers, guardians, parental; (b) children with disab*, students with disab*, disabled children, disabled students (c) special physical education, adapted physical education, inclusive physical education, integrated physical education, and (d)

[1] A truncation symbol to identify different word endings based upon the root of disab

attitudes, perceptions, beliefs, satisfaction, relationship. The three primary terms were combined using the word "AND" while the sub terms were combined using "OR" to form one search.

Inclusion and Exclusion Criteria

The inclusion criteria for articles selected in the study were: (a) English language, (b) peer reviewed journals between 2000 and 2023; (c) full text; (d) focused on parents, caregivers, families, or guardians of children with disabilities in preschool to 12th grade; and their (e) perspectives towards PE or specialized form (e.g., APE). Inclusion criteria included studies that focused on PA since PA can be performed in a community or school setting such as PE. Exclusion criteria for articles were: (a) not in English language; (b) book, book chapter, literature review, conceptual manuscript, or systematic review; (c) focused only on children without disabilities or other stakeholders; and (d) focused only on PA. The detail of inclusion and exclusion criteria was selected to provide meaningful and accurate information regarding the perspectives of parents of children with disabilities towards PE.

Study Selection

The initial search of the databases produced 612 articles. Duplicate articles were removed to total 476. The first two authors independently reviewed the remaining articles. First, the title and abstracts were examined using the key search terms. If the title and abstract included the key terms, the article was saved into the reviewers' reference management system. Through the initial review of the titles and abstracts, 87 articles were identified for further evaluation to determine inclusion or exclusion for the systematic review. Of the 87 full-text articles, 70 were excluded due to reasons of only focusing on PA in general that did not include PE, other stakeholders were only included (e.g., students, teachers) rather than with parents, or were conceptual manuscripts such as professional opinions. Any disagreements between the first two

authors were discussed using the inclusion and exclusion criteria until a consensus was made. Through the initial search, 16 articles were included within the review. An additional search was conducted through reference checking which yielded two additional articles to include in the review. One of the articles was published in 1999. After review of that article which met the inclusion criteria, it was agreed to change the year criteria to include articles dating back from 1990-1999. The reason for beginning in 1990 was that the federal special education law was reauthorized that year with the name of the law changed from the Education for All Handicapped Children Act to IDEA. As such, an additional search was conducted from 1990-1999 using the same search terms. A total of 40 articles were reviewed but ultimately excluded due to either being duplicates from the one found in reference checking or did not include PE settings. Lastly, through literature searches, one additional article was identified, reviewed, and met inclusion. Thus, a total of 19 articles were included in the systematic review (Figure 1). All authors agreed upon the selection of articles.

Data Extraction and Analysis

Study characteristics were extracted to include the purpose of the study, participant information, research design and theoretical framework, method of data collection, method of data analysis, and country of origin (Table 1). In order to synthesize findings across studies, thematic synthesis was used as suggested by Thomas and Harden (2008). Thematic synthesis involves line-by-line coding of the study results to infer new information about a given phenomenon. This synthesis follows three stages which are: (1) coding the text, (2) developing descriptive themes, (3) generating analytical themes.

First, the results or findings of studies were examined and coded independently by the first two authors through an open and inductive method. Throughout this process, codes were

examined across studies to identify any new emerging codes. Additionally, reviewers checked codes for clarity, coherence, and consistency of interpretation among each study's findings sections. Next, reviewers looked for similarities or differences among codes to start grouping and shifting them into descriptive themes. Discussions surrounding this step were completed to agree upon these themes, capturing and articulating the findings of this review. Lastly, these descriptive themes were used to answer the review's research question of parents' perceptions towards PE for their children with disabilities. Both reviewers independently examined themes and met to discuss them. This included reflective notes during the thematic synthesis that included author's initial thoughts, ideas, themes, and bias towards the reviewed articles. All authors agreed upon the themes presented and discussed.

Results

A total of 19 published studies that examined the perspectives of parents towards PE or APE for their children with disabilities were selected for review. The list of studies is presented in Table 1. For continuity and clarity, when discussing both settings, A/PE will be used in reference to adapted and general PE and then separated when explicitly referring to one setting.

Study Characteristics

Study Participants

The perspectives captured in the studies included in this review come predominantly from the perspectives of mothers (14 studies; $n = 157$) or fathers (12 studies; $n = 55$). To a lesser degree, both parents (mother and father) were included (2 studies; $n = 5$) as well as guardians (1 study; $n = 2$). On the other hand, five studies only referred to their participants as parents without major descriptions. In the case of the disabilities included, there was a range considered in the studies reviewed. For example, four studies specifically explored the perspective of parents of

children with visual impairments (VI), two studies on children with autism, and one study on children with Down syndrome. This was followed by the inclusion of a range of disabilities (e.g., Down syndrome, autism, VI) in five studies. Additionally, parents of children with CHARGE syndrome were explored in two studies and physical disabilities (e.g., spina bifida) in two as well. Other studies did not include specific inclusion criteria related to the disability of the participants' children and only referred to children with disabilities (3 studies).

Country

The most prevalent country to conduct research pertaining to the perspectives of parents of children with disabilities towards PE was the U.S. (n = 15). Two studies were conducted in Norway, one study in the Czech Republic, and one in Indonesia.

Design and theoretical framework

The primary research methodology used in the articles included for review was qualitative (n = 13). Within these qualitative studies, two explicitly utilized a phenomenological approach, five a basic qualitative design, three through phenomenology and ecological systems theory, one phenomenology and positioning theory, and two using grounded theory. On the other hand, six studies included quantitative methodology mainly through a survey approach.

Strategies to Data Collection

Within the qualitative studies, the primary strategy to data collection utilized was semi-structured interviews (n = 13). Other data included artifacts (e.g., IEPs; photographs of participation in PE; notes from A/PE teachers) and researchers' field notes (e.g., An & Goodwin, 2007; Lee et al., 2020). The quantitative studies utilized a survey method approach. More specifically, the Parent Perceptions Towards Adapted Physical Education Teachers (PPTAPET) was the most common instrument used (Lee et al., 2017; Malambo & Daďová, 2021). Further,

adaptations from Subjective Task Value Inventory (Stuart et al., 2006) and Booth Index of Inclusion (Wilhelmsen et al., 2021) were explicitly used. Lastly, Downing and Rebollo (1999) and Lieberman et al. (2012) utilized instruments constructed, developed, and validated for those studies exclusively.

Quantitative Analysis

Within the review, six studies used quantitative methodology to better understand parent perceptions towards A/PE that revolved around their satisfaction with A/PE teachers' abilities to teach their children and build rapport with them (Lieberman et al., 2012; Lee et al., 2017; Malambo & Daďová, 2021) or related to factors that would create successful inclusion in PE (Downing & Robello, 1999; Stuart et al., 2006; Wilhelmsen et al., 2021). In using the PTTAPET survey, Lee et al. (2017) found that more than 56% of parents were satisfied with APE teacher qualification, rapport, and communication. Malambo and Daďová (2021) found that parents were satisfied with APE teacher rapport. However, differences between mothers and fathers regarding teacher communication and qualification were reported with mothers being more satisfied with qualification and fathers more satisfied with communication (Malambo & Daďová, 2021). Lieberman et al. (2012) surveyed parents who reported that 55% of modifications made in PE were successful for their child with 83% satisfied with their child's PE placement. Downing and Robello (1999) indicated that parents ranked class size as the most critical factor for successful integration in PE with PE teacher support, parent support, and motivation as highly ranked factors. When examining factors that hinder children's PA, Stuart et al. (2006) found that parents perceived PE teachers' inability to teach their children as a barrier. Lastly, Wilhelmsen et al. (2021) surveyed parents who had positive attitudes towards inclusion in PE with high

satisfaction in social and pedagogical inclusion. In addition, they found that PE-related information was associated with parent satisfaction of both types of inclusion.

Thematic Synthesis

From thematic synthesis (Thomas & Harden, 2008), themes were drawn from 13 qualitative studies that focused on parental perspectives towards the PE their children received whether in an inclusive or self-contained setting. Three themes emerged which were: (a) parents' understanding of A/PE, (b) parents' expectations of A/PE teachers, and (c) parents' undeveloped relationships with A/PE teachers. When appropriate, quantitative studies that provide more depth to the themes will be included.

Parents' Understanding of A/PE

Parents recognized the benefits of A/PE for their children in both school and sometimes in community settings, yet they often did not find PE as important as other academic subjects. To have a better understanding of this theme, two subthemes were extracted from the synthesis: (a) awareness and knowledge of A/PE and (b) appreciating the benefits of A/PE but....

Awareness and knowledge of A/PE

When asked about A/PE services for their children, parents were not aware that these services existed (Chaapel et al., 2012; Columna et al., 2008; Lane et al., 2021; Lee et al., 2020; Wilhelmsen & Sørensen, 2019). Through their unfamiliarity with A/PE, they wanted to learn more about A/PE (Columna et al., 2008; Chaapel et al., 2012; Lane et al., 2021) or how to support their children at home through PA (Columna et al., 2008). Columna et al. (2008) examined the perspectives of Hispanic parents towards APE in a US context. They found that some did not have much information regarding these services while others did not fully understand the benefits that could help their children access community recreation. One reason

was due to challenges in receiving consistent information and communication about APE in Spanish. On the other hand, five studies reported that parents held an awareness and knowledge of activities involved within A/PE which were mainly displayed as perceived barriers for their children's participation (An & Goodwin, 2007; An & Hodge, 2012; Kwon et al., 2021; McNamara et al., 2021; Perkins et al., 2013). Mothers of children with spina bifida in An and Goodwin (2007) relayed one barrier was accessibility during PE activities. They mentioned that equipment modifications such as using a shorter stick during a hokey unit did not occur. Additionally, PE occurring in alternate locations such as a weightroom or grass field impacted their children's ability to access these environments and to participate successfully in PE.

Appreciating the benefits of A/PE but…

Within nine studies, parents generally acknowledged the positive benefits of A/PE for their children, such as enhancing physical, social, and health aspects (An & Goodwin, 2007; An & Hodge, 2013; Chaapel et al., 2012; Columna et al., 2008; Kwon et al., 2021; Lane et al., 2021; McNamara et al., 2021; Perkins et al., 2013; Widyawan et al., 2021). Parents perceived its role in fostering social skills (An & Goodwin, 2007; McNamara et al., 2021) and community involvement through sports (Lane et al., 2021; Perkins et al., 2013). Asian parents, for example, felt A/PE helped their children learn skills to overcome challenges in other academic areas or functional skills such as concentration (Kwon et al., 2021). However, despite recognizing these benefits, seven studies reported that parents did not always prioritize A/PE, considering other subject areas more essential for their children's development like speech and language acquisition (An & Hodge, 2013; Chaapel et al., 2012; Kwon et al., 2021; Lane et al., 2021; Lee et al., 2020; Widyawan et al., 2020; Wilhelmsen and Sørensen, 2019). According to Lee et al. (2020), Korean parents specifically felt that children without physical limitations did not require

A/PE, preferring to concentrate on communication skills instead. Parents in Lane et al. (2021) were more concerned about addressing their children's medical needs, overshadowing the importance of A/PE. Interestingly, there was a divergence in perspectives between fathers and mothers in Kwon et al. (2021). Fathers tended to view A/PE more positively, valuing its role in social integration and skill development for sports. In contrast, mothers perceived it as a potential obstacle to academic progress.

Parents' Expectations of A/PE Teachers

This theme related to what parents expected from their children's A/PE teachers. Parents wanted teachers to demonstrate knowledge of teaching children with disabilities that included providing appropriate modifications. In addition, parents expected teachers to communicate with them on updates during A/PE. If A/PE teachers met these expectations, parents would be in a better place to provide their children with support at home (Chaapel et al., 2012; Kwon et al., 2021; Lane et al., 2021; Perkins et al., 2013). To better understand this theme, three subthemes captured the meaning of what parents expected from A/PE teachers: (a) exhibiting knowledge of disability and of parents' children, (b) developing consistent communication, and (c) extending collaboration and facilitating parent involvement.

Exhibiting knowledge of disability and of parents' children

Seven studies found that parents expected A/PE teachers to have knowledge regarding their children's disability and characteristics (An & Goodwin, 2007; Chaapel et al., 2012; Columna et al., 2008; Lane et al., 2021; Perkins et al., 2013; McNamara et al., 2021; Wilhelmsen & Sørensen, 2019). In some cases, when teachers did not appear knowledgeable, parents expressed that teachers should find resources to become familiar with their child's disability such as speaking with parents or their child (Lane et al., 2021). Disability knowledge was also linked

with parents expecting A/PE teachers to provide the most appropriate and individualized support to help their children succeed in movement contexts (e.g., An & Goodwin, 2007; An & Hodge, 2013; Columna et a1., 2008). More specifically, parents wanted A/PE teachers to provide appropriate modifications to activities or equipment (Perkins et al., 2013) that would increase and create safe and successful participation (An & Goodwin, 2007; An & Hodge, 2013). Perkins et al. (2013) reported that parents wanted PE teachers to include nontraditional activities within their programs such as goal ball and beep baseball while making equipment modifications like using auditory equipment to increase their children's participation.

Developing consistent communication

In seven studies, parents expected teachers to display ongoing communication with them on updates during A/PE, expressing more information about A/PE and contact with A/PE teachers (An & Goodwin, 2007; Chaapel et al., 2012; Columna et al., 2008; Kwon et al., 2021; Lane et al., 2021; McNamara et al., 2021; Perkins et al., 2013). This expectation seems to arise from a perceived gap of parental understanding and awareness of A/PE. Parents mentioned they were unaware of the activities happening during A/PE classes (Chaapel et al., 2012; Perkins et al., 2013) and faced challenges in obtaining this information (Columna et al., 2008; Lee et al., 2020). For example, parents in Lee et al. (2020) mentioned that APE information was not found in their child's IEP. An additional barrier was understanding APE as a special education service within a US context. They believed improved communication would allow them to be more engaged in A/PE, helping them to select appropriate activities at home and foster environments beneficial to their children's wellbeing (Chaapel et al., 2012; Columna et al., 2008; Kwon et al., 2021; Lane et al., 2021; Perkins et al., 2013). Recognizing their limited knowledge in this area, parents were eager for guidance from A/PE teachers (Chaapel et al., 2012; Columna et al., 2008).

Specifically, parents within Chaapel et al. (2012) wanted APE teachers to share information about community recreation such as dates, contact personnel, locations, and accessibility. They felt that this would allow them to better provide "fun and exciting" play environments for their children (p. 191).

Extending collaboration and facilitating parent involvement

Although some parents saw A/PE as a low priority compared to other subjects, eight studies reported parents still wanted to be involved within this setting (An & Goodwin, 2007; An & Hodge, 2013; Chaapel et al., 2012; Columna et al., 2008; Kwon et al., 2021; Lane et al., 2021; Perkins et al., 2013; Wilhelmsen & Sørensen, 2019). Most of this involvement revolved around parents and A/PE teachers working together to support their children at school (An & Goodwin, 2007; An & Hodge, 2013; Chaapel et al., 2012; Perkins et al., 2013). Parent explicitly wanted A/PE teachers to welcome and value their support and involvement (Chaapel et al., 2012; Columna et al., 2008; Lane et al., 2021; Perkins et al., 2013). This was important to parents as some felt that they could help A/PE teachers learn about their children so teachers could provide appropriate and relevant modifications or accommodations (An & Hodge; Wilhelmsen & Sørensen, 2019). Moreover, other parents demonstrated a high level of interest to become knowledgeable about A/PE to better support their children at home (An & Hodge, 2013; Chaapel et al., 2012; Columna et al., 2008).

Parents' Undeveloped Relationships with A/PE Teachers

This theme explored the relationships parents had with A/PE teachers that revolved around their (non)interactions with teachers. Three subthemes emerged to capture the overall meaning of this theme: (a) experiences of communication, (b) perceived A/PE teacher competence, and (c) IEP presence of A/PE teachers.

Experiences of communication

Among the studies within this review, there were mixed experiences regarding communication and interactions. Five studies found parents were satisfied with the level of communication from A/PE teachers that included both qualitative and quantitative methods (An & Goodwin, 2007; An & Hodge, 2013; Chaapel et al., 2012; Lee et al., 2017; Wilhelmsen & Sørensen, 2019). Parents that shared positive interactions with A/PE teachers found that they were pleased with the level of communication they received from teachers (Lee et al., 2017; Wilhelmsen & Sørensen, 2019). For example, it was expressed that A/PE teachers invited parents to observe A/PE classes at school (An & Hodge, 2013), or A/PE teachers sent PA resources at home (Chaapel et al., 2012). In addition, parents in An and Goodwin (2007) and An and Hodge (2013) felt that PE teachers were approachable to communicate any questions or bring up concerns. One mother in Chaapel et al. (2012) shared that her child's APE teacher often communicated through a take-home folder that included APE materials for her to practice with her child at home.

On the other hand, nine studies reported that parents received limited or absent communication from A/PE teachers that also included both qualitative and quantitative methods (Chaapel et al., 2012; Columna et al., 2008; Kwon et al., 2021; Lane et al., 2021; Lee et al., 2020; Perkins et al., 2013; Malambo & Daďová, 2021; McNamara et al., 2021; Wilhelmsen & Sørensen, 2019). Malambo and Daďová (2021) surveyed parents which revealed their dissatisfaction with APE teachers' communication. This dissatisfaction can be linked to A/PE teachers' inadequate involvement in the relationship as they did not share sufficient information about their children's progress in A/PE (Columna et al., 2008; Chaapel et al., 2012; Lee et al., 2020). Other parents felt that A/PE teachers were hard to reach (Kwon et al., 2021; McNamara et

al., 2021) or received limited information about A/PE (Lee et al., 2020; Wilhelmsen et al., 2019). Additionally, parents relied on more consistent professionals to communicate updates in A/PE (An & Hodge, 2013; Chaapel et al., 2012; Lane et al., 2021; Widyawan et al., 2020) such as case managers or teacher assistants. Parents in An and Hodge (2013) explicitly stated that they did not actively seek out partnerships with PE teachers as they received most information from other professionals such as classroom teachers or APE teachers. Similarly, Indonesian parents expressed more trust with classroom teachers as they perceived PE teachers as less competent in special education (Widyawan et al., 2020). Additionally, in Lane et al. (2021), parents sought out support personnel as an indirect way to understand what occurs in APE for their children.

Perceived A/PE teacher competence

There were mixed experiences from parents regarding their children's A/PE teacher's competence. Five studies stated parents were satisfied with A/PE teacher competence, making appropriate modifications for safe and successful participation that included qualitative and quantitative methods (Lee et al., 2017; Lieberman et al., 2012; Malambo & Daďová, 2021; McNamara et al., 2021; Wilhelmsen et al., 2021). These modifications were displayed in the use of equipment, tasks, and space to support their children's PA (McNamara et al., 2021). For example, McNamara et al. (2021) reported that parents related that PE teachers made modifications to activities such as the inclusion of visual and auditory stimuli and the use of peer buddies.

However, nine studies found that parents believed A/PE teachers did not demonstrate the knowledge and skills to assist their children, especially in understanding their children's disabilities or teaching them appropriately that included qualitative and quantitative methods (An & Goodwin, 2007; An & Hodge, 2013; Columna et al., 2017; Lane et al., 2021; Schultz et al.,

2023; Perkins et al., 2013; McNamara et al., 2021; Stuart et al., 2006; Wilhelmsen & Sørensen, 2019). It is important to note that most of these perceptions were towards PE teachers and in some instances, APE teachers (Columna et al., 2017; Lane et al., 2021). There was a significant concern that PE teachers were not well-prepared to educate children with disabilities (Columna et al., 2017; McNamara et al., 2021; Stuart et al, 2006; Widyawan et al., 2020), often failing to adapt equipment or activities to facilitate successful participation (An & Goodwin, 2007; Lane et al., 2021; Perkins et al., 2013). Parents noted instances where PE teachers excluded their children from activities (An & Goodwin, 2007; An & Hodge, 2013; Wilhelmsen et al., 2019), often citing safety concerns as the reason for this exclusion (Columna et al., 2017; Schultz et al., 2023). There was a perception that PE teachers sometimes assumed children could not engage in an activity due to their disabilities (Perkins et al., 2013) or failed to offer necessary adjustments to include them (Columna et al., 2017; Lieberman et al., 2012; Wilhelmsen & Sørensen, 2019). While examining perceptions towards APE teachers, parents expressed frustration that, even when the necessary equipment was available, teachers often lacked the training to use them effectively, leading to dissatisfaction with the professionals involved (Columna et al., 2017; Lane et al., 2021).

IEP presence of A/PE teachers

Although A/PE is a direct service under IDEA, seven studies within this review found that parents experienced difficulties in learning about A/PE through the IEP due to non-attendance of A/PE teachers and it often being overlooked by other school professionals (An & Hodge, 2013; Chaapel et al., 2012; Kwon et al., 2021; Lane et al., 2021; Lee et al., 2020; McNamara et al., 2021; Wilhelmsen & Sørensen, 2019). Parents noted insufficient IEP documentation about A/PE (Lee et al., 2020), and felt it was not adequately discussed in

meetings (An & Hodge, 2013; Lane et al., 2021; McNamara et al., 2021; Wilhelmsen & Sørensen, 2019). According to McNamara et al. (2021), parents perceived A/PE as a lesser priority during meetings among IEP team members with one parent having to personally advocate for its inclusion in their child's IEP. Lee et al. (2020) found that Korean parents particularly struggled to find A/PE information in IEP documents, mainly due to unfamiliar terminology or complex document structures. Moreover, parents frequently reported the absence of A/PE teachers at IEP meetings (Chaapel et al., 2012; Lane et al., 2021; Lee et al., 2020) which was a source of frustration for some (An & Hodge, 2013). Even when teachers attended, their participation was often minimal (An & Hodge, 2013; Chaapel et al., 2012; Kwon et al., 2021; Lane et al., 2021). Recognizing the significance of IEP meetings, parents desired greater involvement from A/PE teachers to foster better communication and support for their children (Chaapel et al., 2012; McNamara et al., 2021).

Discussion

The purpose of this review was to understand the perceptions that parents of children with disabilities have towards PE. From the results, there were mixed perceptions with some parents having positive views but the majority having negative views. Parents expressed high expectations of A/PE teachers, which revolved around demonstrating competence in accommodating their children in A/PE, providing ongoing communication, and facilitating their involvement. However, parents experienced minimal participation of A/PE in their children's education regarding communication, competence, and IEP attendance. For some, it provided a means to view A/PE as a low priority compared to other academic subjects. And for others, it caused concern regarding their intentions to learn more about how they can support their children

at home within PA. However, other parents held positive perceptions towards A/PE teachers in their abilities to successfully accommodate their children and develop lines of communication.

Parents widely acknowledge the benefits associated with their children engaging in movement (Early & Fleet, 2021; Lago-Ballesteros et al., 2019; Na, 2015). However, despite this recognition, there exists a notable gap in parents' understanding of the significance of A/PE which aids in the development of their children's physical, social, and psychological development. This disconnection may lead parents to be misinformed and/or deprioritize A/PE as evidenced from the studies included within this review. As perceived by parents, A/PE teachers' limited communication and minimal participation in IEP meetings were factors that impacted their abilities to learn about A/PE. This gap is also expressed by parents of children without disabilities who felt they did not receive much information from PE teachers (Sheehy, 2006). Since A/PE teachers are part of children's special education team, it is alarming that most parents experienced limited engagement. As such, A/PE teachers should start facilitating communication with parents as sharing more A/PE-related information can be a means to increase their opportunities to understand the subject and their satisfaction (Wilhelmsen et al., 2021). To exemplify this, Coulter and colleagues (2020) argue that "[parents] need to know what their child[ren] [are] learning and the activities they participate in during physical education" (p. 441), which might increase their interest in A/PE and perhaps influence the PA levels of their children outside of the school environment.

A further element that influenced parents' understanding of A/PE can be linked to their value of it. Although parents recognized the benefits of A/PE, similar to studies involving children without disabilities (Early & Fleet, 2021; Lago-Ballesteros et al., 2019; Na, 2015), these benefits did not necessarily translate into stronger support and involvement in A/PE. Na (2015)

examined the parent perspectives of PE and youth sport for their children without disabilities. Parents felt that PE was an important subject that promotes physical health and social development, however, sport was perceived as a more valuable learning environment for which they were more involved. One potential reason for deprioritizing A/PE may be due to parents' past experiences in PE (Sheehy, 2011). Lago-Ballesteros et al. (2019) reported that parents who had negative experiences in PE led to negative beliefs about PA with low levels of PA participation during adulthood. Some parents within Strean (2009) expressed an avoidance of PA as adults due past PE experiences of humiliation, unenjoyable activities, or an absence of teacher support. Although not explicitly examined in the studies within this review, past PE experiences may be a reason for the differences that parents had regarding A/PE. This can be an important factor that A/PE teachers should be conscious of when working with parents of children with disabilities. These past experiences may influence parents' perceived competence and enjoyment in PA which may in fact, influence their children's PA opportunities. Additionally, they may also provide inaccurate portrayals of A/PE that further lends itself to parents' deprioitization (Sheehy, 2006). Further, parents' reliance on receiving A/PE updates from other IEP team members may not provide the most accurate information since IEP team members may have vague understandings of the role of A/PE (McNamara et al., 2022; Samalot-Rivera & Lieberman, 2017). This may lead to parents holding unclear or misinformed views about A/PE that influences their knowledge and priority.

Considering many studies within this review finding most parents experiencing limited engagement from A/PE teachers, there were instances where some parents perceived positive views where they felt their expectations were fulfilled. These instances may be due to differences of value amongst male and female parents and the specific setting their child receives A/PE

services. This review identified that fathers held more positive views towards A/PE compared with mothers (Kwon et al., 2021; Malambo & Daďová, 2021). Neshteruk et al. (2020) reported that fathers tended to more positively perceive the importance of PA that provided an opportunity to strengthen child-father relationships through co-participating and facilitation of PA. Examining the role of fathers within A/PE in-depth may expand how their perspectives are different to mothers and how they perceive their roles in their children's PA. Furthermore, Lee et al. (2017) reported that the setting children receive services may influence parent satisfaction towards A/PE teachers. Specifically, they found that parents with children in non-inclusive settings felt more satisfied compared with children in inclusive settings. Although, Lieberman et al. (2012) reported that parents of children in an inclusive and combination of both settings were satisfied with the PE placement. These contradictions may further argue for more closely examining why different A/PE settings influence parents' satisfaction. Potential reasons may be due to class size, individualized instruction, and A/PE teachers' competence.

Recognizing the impact of parents being misinformed and deprioritizing A/PE, teachers should proactively involve parents by educating them rather than other IEP team members, communicating about their children's progress, and providing opportunities for teaching them how to provide PA. This has the potential to foster a deeper understanding of A/PE, thereby positively influencing children's engagement, enjoyment, self-esteem, and competency in A/PE. Interesting to note is that although parents of children without disabilities did not seek contact with PE teachers (Sheehy, 2006), this review emphasized that parents of children with disabilities had a desire for more communication. This may be due to understanding their children's educational needs that encourages more parent involvement in school (Stoner et al., 2005). Since parents already have a desire to develop relationships with A/PE teachers, teachers

need only to extend that opportunity. If this does not occur, there is little to influence any changes to the perspectives of parents towards A/PE (Sheehy, 2006).

Future Research

While there are both positive and negative parental perceptions of A/PE, there is limited understanding about how to improve these perceptions in addition to the variability in beliefs, value, and intentions of parents of children with disabilities towards A/PE (Jeong et al., 2015). One way to address this is through teachers who play a crucial role in the parent-school relationship and can significantly influence parent involvement (Hindin & Mueller, 2016). Therefore, exploring the perspectives of A/PE teachers regarding their beliefs about parent involvement could contribute to the development of more collaborative relationships. Future research could delve into the perceptions of A/PE teachers towards parents of children with disabilities, connecting these insights with the expectations and experiences of parents outlined in this review. One is examining the method of communication whether using email, phone, or an application that offers parents an understanding of A/PE. Secondly, there were variabilities regarding parents' value of A/PE that may have been influenced from past PE and/or PA experiences as well as misinformation from IEP team members. To address this, a future research study could examine the content of special education programs at universities, assessing the essential components and the extent to which A/PE is discussed. This investigation could provide insights into what influence this has on parents' understanding and value of A/PE. Further, a study could explore the differences of value and priority of A/PE among parents with positive and negative PE and/or PA experiences. And finally, if parents play an important role in the PA of their children, exploring the family unit within A/PE and how these relationships develop as well as outcomes for teachers, parents, and children.

Conclusion

The purpose of this systematic review was to synthesize published studies regarding the perspectives of parents toward A/PE for their children with disabilities. Understanding the perspectives of parents of children with disabilities toward A/PE provides a starting point to review the status of involvement of parents regarding children with disabilities' participation or not in PE. Parents perceived limited engagement with A/PE teachers in their children's education that provided a means for being misinformed and seeing it as a non-priority. Discussion regarding parent past PE experiences and misinformation from IEP team members were also potential factors to parents' perspectives. In addressing the multifaceted challenges of parental perceptions, a comprehensive approach is needed to elevate the status of A/PE within schools and enhance parents' understanding of its pivotal role in their children's holistic development.

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Tables and Figures

Figure 1. Flowchart for article selection process.

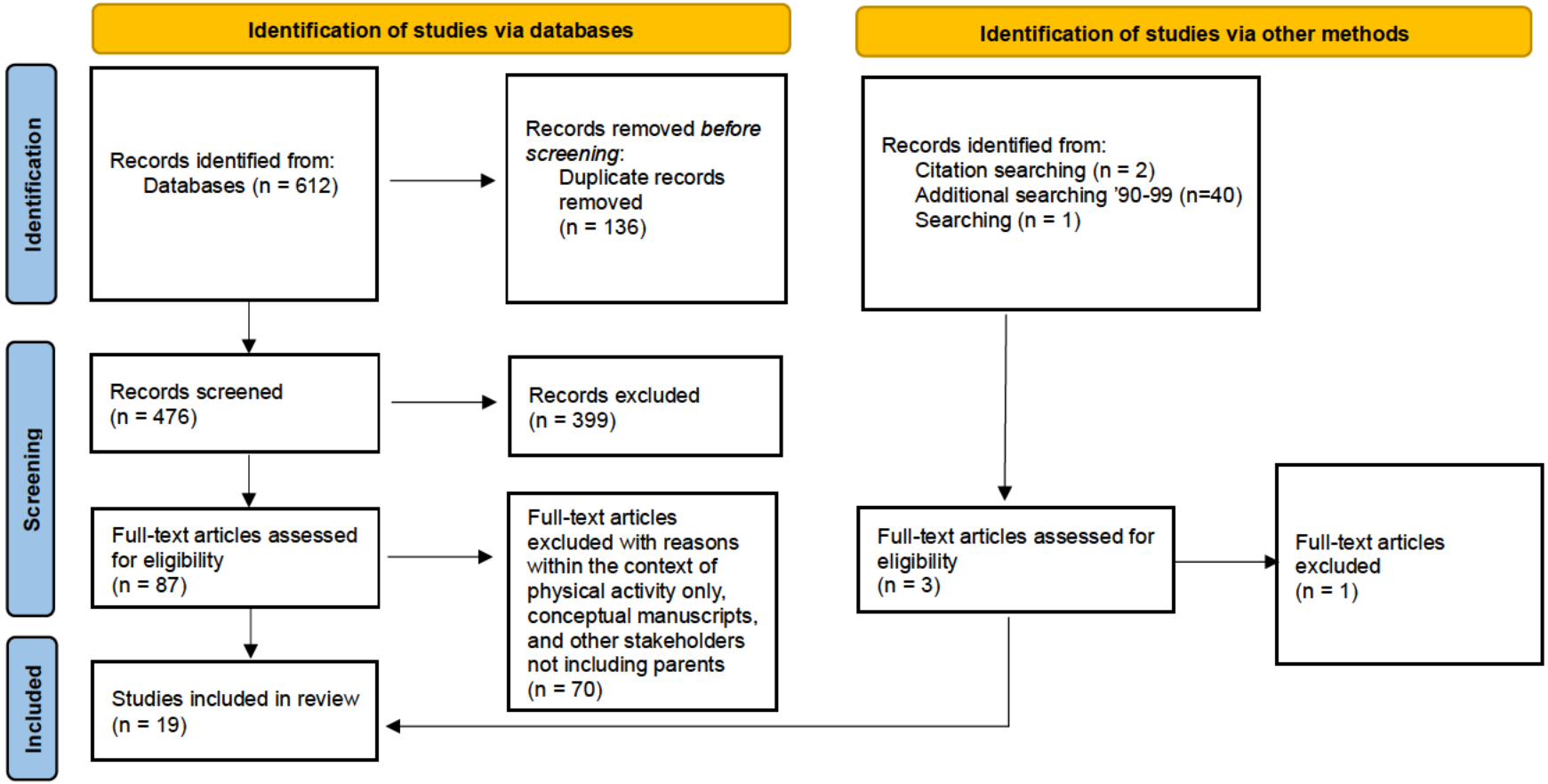

Table 1

Study Characteristics

Author	Purpose	Participant	Research Design/Framework	Data Collection Method	Country	Research Analysis
An & Goodwin (2007)	Understand parents' perspectives of children's experiences in inclusive PE	Six White mothers of children with spina bifida ages 8-15	Qualitative Phenomenology	Semi-structured interviews, artifacts of IEPs, report, cards, and a communication book, and field notes	United States	Thematic analysis
An & Hodge (2013)	Understand the experiences of parents towards PE, their roles within PE, and partnerships with PE teachers	Eight White parents (7 mothers, 1 father) of children with developmental disabilities ages 8-17 including autism and Down syndrome	Qualitative Phenomenology Ecological Systems Theory	Semi-structured interviews, artifacts of photographs of participation in PE/PA and copies of emails, newsletters, or notes from GPE/APE teachers, and reflective notes	United States	Thematic analysis
Chaapel et al. (2012)	Explore the expectations of parents towards APE	Ten parents (9 mothers, 1 father) of children with congenital or acquired disabilities receiving APE services	Basic qualitative	Semi-structured interviews	United States	Constant comparative analysis
Columna et al. (2008)	Explore the perspectives of Hispanic parents towards APE	11 Hispanic parents (7 mothers, 2 fathers, 2 both) of children with congenital or acquired disabilities ages 4-14. In adapted aquatics program or receiving APE services	Qualitative Phenomenology Ecological Systems Theory	Semi-structured interviews	United States	Constant comparative analysis
Columna et al. (2017)	Understand parents' perceptions regarding PA experiences	Ten parents (9 mothers, 1 father) of children with VI ages 4-12	Qualitative Descriptive	Semi-structured interviews	United States	Thematic analysis

Table 1 ***(continued)***

Author	Purpose	Participant	Research Design/Framework	Data Collection Method	Country	Research Analysis
Downing & Rebollo (1999)	Identify parental perspectives of the factors essential for teaching elementary children in integrated PE classes	75 parents of children with physical disabilities attending GPE	Quantitative	Survey	United States	Rank order and factor analysis
Kwon et al. (2021)	Understand the perspectives of Asian parents towards APE	Eight Asian parents (5 mothers, 3 fathers) of children with autism and VI ages 8-14	Basic qualitative	Semi-structured interviews	United States	Thematic analysis
Lane et al. (2021)	Explore perspectives of parents towards PE experiences	Ten mothers of children with CHARGE syndrome ages 7-23	Qualitative Grounded theory	Semi-structured interviews	United States	Thematic analysis
Lee et al. (2017)	Explore satisfaction of parents towards PE/APE teachers	41 parents of children with autism ages 3-18+	Quantitative Cross-sectional	PPTAPET Survey	United States	Descriptive and inferential statistics of the relationship between child's PE placement and communication, qualification, and rapport of PE/APE teachers

Table 1 ***(continued)***

Author	Purpose	Participant	Research Design/Framework	Data Collection Method	Country	Research Analysis
Lee et al. (2020)	Explore South Korean immigrant parents' roles, responsibilities, and obligation towards PE	Five South Korean parents (4 mothers, 1 father) of children with autism ages 5-17	Qualitative Phenomenology Positioning theory	Semi-structured interviews, educational documents (IEP documents), and field notes	United States	Thematic analysis
Lieberman et al. (2012)	Determine the status of PE provided to children with CHARGE syndrome	26 parents of children with CHARGE syndrome ages 6-19	Quantitative	Survey	United States	Descriptive statistics and thematic analysis of open-ended questions
Malambo & Daďová (2021)	Explore the satisfaction of parents towards inclusion in PE	27 parents (19 mothers, 8 fathers) of children with disabilities including autism, ADHD, ADD	Quantitative Cross-sectional	PPTAPET Survey	Czech Republic	Descriptive statistics
McNamara et al. (2021)	Outline development of advocacy checklist for parents to address PE within IEPs	Seven parents (6 mothers, 1 father) of children with VI ages 4-17	Basic qualitative	Semi-structured interviews	United States	Inductive category development
Perkins et al. (2013)	Explore parents' perceptions of PA	11 parents (3 mothers, 2 fathers, 3 both) of children with VI ages 3-18	Basic qualitative	Semi-structured interviews	United States	Thematic analysis

Table 1 ***(continued)***

Author	Purpose	Participant	Research Design/Framework	Data Collection Method	Country	Research Analysis
Shultz et al. (2023)	Identify factors that influence PA	11 guardians (5 mothers, 4 fathers, 2 guardians) with children with Down syndrome ages 7-25 and 11 professionals	Qualitative Grounded theory	Semi-structured interviews	United States	Iterative approach with open, axial, and constant comparison
Stuart et al. (2006)	Examine relationship between parent and child variables towards PE and self-identified barriers and solutions to PA	50 parents of children with VI ages 10-12	Quantitative	Adaptation from subjective task value inventory	United States	ANOVA and bivariate correlations
Widyawan et al. (2020)	Experience of parents towards their children's participation in PE	5 parents of children with disabilities	Qualitative Phenomenology Ecological Systems Theory	Semi-structured interviews, artifacts (photos, school documents), and field notes	Indonesia	Thematic analysis
Wilhelmsen et al. (2021)	Explore parents' satisfaction with inclusion in PE	72 parents (51 mothers, 21 fathers) of children with disabilities including autism, VI, ADHD	Quantitative Cross-sectional	Adaptation from Booth index of inclusion	Norway	t-test and ANOVA, OLS, Pearson correlation
Wilhelmsen & Sorensen (2019)	Experience of home-school collaboration among parents and PE	26 (16 mothers, 10 fathers) parents of children with disabilities including cerebral palsy, autism, and VI	Qualitative Hermeneutic phenomenology	Semi-structured interviews	Norway	Thematic analysis

Note. ADD = attention deficit disorder; ADHD = attention deficit/hyperactivity disorder; APE = adapted physical education; GPE = general physical education; IEP = individualized education program; PA = physical activity; PE = physical education; PPTAPET = Parent Perceptions Towards Adapted Physical Education Teachers Survey; VI = visual impairment.

Manuscript 2: A Mother's Positive Experiences in Adapted Physical Education

Abstract

Purpose: To explore the experiences of one mother's involvement in adapted physical education (APE) regarding the factors that contributed to her value, knowledge, and relationship

Method: A qualitative case study approach was utilized. Semi-structured interviews with the mother, child with Down Syndrome, and APE teacher were conducted.

Results: Four themes were extracted from the data that captured the mother's experiences in APE: (a) "[APE] is perfectly normal" – Value of APE, (b) "Education is power and key" – The importance of understanding, (c) "Whatever it takes to be a part of Sam's day" – Involvement in APE and PA, and (d) "Know your tribe and love them hard" – Building strong relationships.

Discussion: Findings suggest that parental value and importance towards APE, sharing visualizations of what occurs at school, and developing trustful relationships influence levels of parent involvement.

Keywords: value, knowledge, communication, trust

Parents of children with disabilities typically understand the importance of physical activity (PA) as it relates to the health benefits of weight management, reduction in health risks, and mental health (An & Goodwin, 2007; An & Hodge, 2013; Chaapel et al., 2012; Columna et al., 2008; Lee et al., 2020; Perkins et al., 2013). In addition, they have a desire for their children to be physically active and learning how to provide them with PA opportunities (Columna et al., 2008; Columna et al., 2019; Obrusnikova & Miccinello, 2012). However, many parents do not know the connection of adapted physical education (APE) to PA regarding the potential to facilitate their PA support behaviors and PA knowledge (Chaapel et al., 2012; Columna et al., 2008; Lane et al., 2021; Lee et al., 2020). Studies have presented potential reasons why parents may not have the opportunities to learn and be involved within their child's APE that includes their lower priority compared to other subjects and limited engagement from APE teachers (e.g., Columna et al., 2008; Lee et al., 2020). Others have suggested strategies that teachers can use in developing relationships with parents such as sending a beginning-of-school-year introduction letter/email or sharing a questionnaire about parent experiences, interests, and goals from APE (Columna et al., 2009; Forbes & Block, in press). Although both provide the opportunities for APE teachers to examine their relationships with parents, it does not underline the specific factors that facilitates parent involvement in APE for their children. Understanding this aspect may help support APE teachers to identify ways to develop stronger connections with parents of children with disabilities by discovering approaches that promote the development of parental knowledge, involvement, and relationships in APE.

Parents of children with disabilities draw on multiple experiences and resources in their interactions with schools and school professionals including teachers, administrators, paraprofessionals, and service providers such as physical therapists (Barton et al., 2004). When

parents are active in their children's education, this can positively influence student learning, motivation, attendance, self-concept, and effort (Boonk et al., 2018; Watson, 2012). Parent involvement has become an important part of the educational planning of schools, which has been mandated by specific laws such as Every Student Succeeds Act (ESSA, 2015). Specifically in the Individuals with Disabilities Education Act (IDEA, 2004), parents of children with disabilities have the right to be involved in their children's education with regards to developing, reviewing, and revising individualized education programs (IEPs) and communicating with school staff about educational placements and other school services. Parents are an important part of a multidisciplinary educational team since they have a deep understanding of their child's needs (Stuart et al., 2006). As such, they can share strategies and information about their child to help teachers develop meaningful connections and learning for their children (An & Goodwin, 2007; An & Hodge, 2013). Children will have more success inside and outside of school if teachers and parents work together.

Although parents of children with disabilities can play an active role in their children's education, there are many potential inhibitors that impact their involvement within the special education process. These include home-school communication, the need to understand legal and educational procedures (Dinnebeil et al., 1996; Stoner et al., 2005; White, 2014), and understanding educational services such as APE. Parents are often not aware that these services existed for their children that drove them to learn more about it (Chaapel et al., 2012; Columna et al., 2008; Lane et al., 2021; Lee et al., 2020). When parents wanted to understand more about how APE can support the PA needs of their children with at-home or community PA opportunities (Chaapel et al., 2012; Columna et al., 2008; Kwon et al., 2021), however, these opportunities did not exist. Communication was a large factor that was missing, negatively

impacting parents' abilities to learn about APE, understand the services, and how to help their child participate in PA. Additionally, this lack of communication from APE teachers also deterred parents from seeking out APE specific information or interacting with APE teachers (Chaapel et al., 2012). Many parents also felt APE was not a priority compared with other academic subjects which were given more precedence (Chaapel et al., 2012; Kwon et al., 2021; Lane et al., 2021). Overall, this research suggest that parents acknowledge the value of APE, yet communication and academic prioritization are inhibitors to their involvement.

To strengthen parent-APE teacher relationships, parents' strongest preference was for APE teachers to have ongoing communication with them (Chaapel et al., 2013; Columna et al., 2008; Kwon et al., 2021; Lee et al., 2020). When APE teachers can develop communication, parents come to understand what occurs at school. A key component in facilitating communication is building parental trust and involvement. Within special education literature, parents trust teachers more when teachers demonstrate competence, respect, and genuine care (Stoner et al., 2005; Stoner & Angell, 2006). In the absence of a strong home-APE relationship, parents may not be able to engage in APE or support PA for their children with disabilities outside of school. In other words, this can create a disconnect within the relationship, create mistrust, and ultimately negatively impact their children's PA development.

Most of the current literature on parent perceptions in APE have reported on negative experiences regarding limited opportunities for APE involvement. However, there is currently no study that specifically explores factors that contribute to and develop parental involvement in APE. Understanding these aspects can be a means to provide APE teachers with an alternate perspective on the parent-APE teacher partnership and further enhance the development of parental involvement within APE. Particularly, how does parental knowledge of APE form and

how do relationships develop. To understand this further, the experiences of one parent of a child with a disability who has access to APE involvement, knowledge of APE services, and a collaborative relationship with an APE teacher were explored. In addition, the following research questions were examined in relation to this parent's experiences:

1. What factors influence the parent's understanding of APE?
2. What factors influence the parent's involvement in APE?
3. What factors influence the parent's collaborative relationship with the APE teacher?

Method

To better understand how parents may become involved, a qualitative case study approach was used to explore the experience of one mother's involvement within APE. Case studies aim to understand one thing well, a bounded system that involves a single entity such as a person, program, or community. It involves examining cases through detailed, in-depth data collection and reporting to search for meaning and understanding of a particular case (Merriam & Tisdell, 2015). In addition to the mother's experiences, the APE teacher's experiences were also explored in relation to how he facilitated the development of a relationship with the mother. Further, the mother's child was also explored as part of this case to capture what outcomes from this relationship are provided to the child. A case study approach provided the means to deeply understand a successful APE teacher-parent relationship to explore how a positive relationship developed and what outcomes it provided to the mother's child regarding PA.

Participants

A purposeful sampling was used to identify a possible candidate to participate in this study. The eligibility criteria for parent participants were a) have a child with a disability; b) have

a child who is currently or had received APE services; c) are or were actively involved within APE and understand the purpose and definition of APE; and d) have or had a collaborative relationship with the APE teacher. Similar to the recruiting method in Kwon et al. (2021), using a university APE program alumni email list, emails were sent to APE teachers requesting assistance in identifying parents. Within the email, APE teachers were asked to first identify parents that they perceived were involved in APE and that have a collaborative relationship. Then, they were asked to either print out or forward the email with an information sheet and self-checklist to the parents whom they identified. The information sheet detailed the intentions of the study, a basic description of the study, and an explanation of commitment requirements. As part of the information sheet, a self-checklist was created for parents to complete so that investigators could determine inclusion criteria of a potential participant. The self-checklist included the following questions: 1) Do you know your child's APE goal? 2) Do you know how many APE service hours your child receives? 3) Do you often contact your child's APE teacher throughout a school year outside of IEP meetings? 4) Is it important to provide physical activity opportunities for your child? 5) Is your child's APE teacher someone you can depend on and trust? 6) Is your child's APE teacher someone that lets you know what occurs at school for your child? If participants indicated yes on all six questions, they would then send an email to the primary investigator (PI) about their interest in participating in the study.

After six months of active recruitment, one parent responded to the email. This parent was contacted over the phone to discuss the self-checklist to determine if she fit the eligibility criteria for which she did. Furthermore, the study and commitment requirements were explained for which she gave consent to participate. Additionally, to capture this case in depth, the APE teacher and her son were included within the study to better understand her experiences from

different perspectives. Consent was received from all participants. Pseudonyms will be used for the mother, son, and APE teacher.

Slone is a White mother with a 27-year-old son with Down syndrome. She works at a hair salon that provided her flexibility in supporting her son's education by attending school events, IEP meetings, and volunteering. The focus for her son's education was for him to have the best opportunities to succeed. Slone is married with one child, Sam. Sam, received APE services from kindergarten until he turned 21 within a school district located in the Southeast region of the United States. He attended public school while receiving APE services in a self-contained setting throughout K-12. In addition, Sam participated in Special Olympics (SO) swimming and attended practices and state games. Sam's APE teacher was Mike who worked with Sam through his K-12 experience, supporting him in APE. Mike has been an itinerant APE teacher for 23 years in the same county. He was the SO coordinator in his region as well as Sam's coach in swimming. Mike was also involved in having SO as a lettered high school sport for which Sam received one for swimming.

Data Collection

Primary data was collected through one-on-one semi-structured interviews conducted by the PI. After an extensive literature review, draft interview questions were developed based on survey and interview questions used in previous studies examining parental perspectives or satisfaction towards APE and of APE teachers (Chaapel et al., 2012; Columna et al., 2008; Kwon et al., 2021; Lee et al., 2017; Lee et al., 2020) as well as on themes from these studies that focused on knowledge, involvement, and relationships. To ensure content validity, a panel of professionals, including professors of APE, reviewed the questions. Based upon their feedback, interview questions were edited to provide clarity. Additionally, a pilot of the survey was

conducted with three parents of children with disabilities to obtain feedback on the clarity, relevance, and quality of the questions. From the pilot survey, questions were modified, and additional questions added to provide a deeper exploration into this study's purpose. Regarding the interviews with Mike and Sam, questions were adjusted to capture their perspectives on Slone's involvement in APE and what outcomes came from this.

After verifying the appropriateness of the interview questions through the panel of professionals and pilot survey, participants were interviewed on separate occasions through Zoom. Slone and Mike were interviewed individually while Sam was interviewed with Slone so she could provide support in answering questions when needed. Interviews started with broad questions about Sam's APE such as the first time Slone learned about APE services. Thereafter, an interview guide was followed that explored questions related to her experiences of APE knowledge, involvement, and relationships. The initial interview with Slone lasted for about one hour and 30 minutes. Two additional interviews with Slone were conducted, lasting about one hour and 30 minutes and 30 to 45 minutes. One interview was conducted with Sam and one with Mike which lasted about one hour each.

Data Analysis

In relation to understanding Slone's experiences in APE, Braun and Clarke's (2006) thematic analysis was used to identify themes which seeks to describe patterns within the data. It provides flexibility in its use to bring meaning to experiences as it is not tied to any pre-existing theoretical framework (Braun & Clarke, 2006). Through the initial reads of the transcripts, the PI bracketed his experiences on thoughts, additional questions, or initial patterns in relation to the study's purpose. Next, transcripts were reread to start preliminary coding through inductive analysis where data was coded without a preexisting frame to capture feelings, interactions, and

meanings to what was shared. After, transcripts were reread and coded through deductive themes which were captured from a thematic analysis of studies that explored the negative views of parents towards APE i.e., parent knowledge, involvement and relationships (e.g., Chaapel et al., 2012; Columna et al., 2008). Lastly, codes were sorted into preliminary themes and then refined to capture Slone's experience in APE.

Trustworthiness

In qualitative research, trustworthiness refers to how well a study's design, data collection, data analysis, interpretation, and presentation are executed. It is to portray to the reader that the methods were followed faithfully (Merriam & Tisdell, 2015). To develop trustworthiness within the data, member checking was completed through additional interviews and sharing of initial summaries of transcriptions. Slone and Mike were given summaries of the preliminary findings. Slone did not have additional comments, whereas Mike provided some feedback which was edited by the PI. Thereafter, both agreed with the summary of findings, where they felt it captured their experiences. In addition, Slone was given Sam's summary of findings for which she mentioned he did not have questions. Peer debriefing was also conducted throughout the process seeking guidance from other professionals about case study research and discussing themes and interpretations with the second author to confirm or challenge interpretations of the data.

In connection to this research study, it is equally important to share the first author's positionality to be open in identifying bias throughout the research process as this may influence the interpretations of Slone's experiences. I was a previous APE teacher supporting children with disabilities. Throughout my time, I connected with a few parents but for the majority, it was mainly focused on interactions during IEP meetings. Although I understood the importance of

developing relationships with parents, it did not happen as frequently as I'd hoped. As such, I am currently conducting research on parental experiences in APE and intend to further explore this line of research.

Findings

Themes were extracted from the data which focused on Slone's understanding, her involvement, and her relationship with Sam's APE teacher. With both Slone and Mike working together, they provided the means for Sam to have opportunities to participate in PA and SO. Themes that were drawn from the data were "[APE] is perfectly normal" – Value of APE, "Education is power and key" – The importance of understanding, "Whatever it takes to be a part of Sam's day" – Involvement in APE and PA**,** and "Know your tribe and love them hard" – Building strong relationships. Mike and Sam's perspectives towards Slone's experiences are intertwined within these themes to better understand the factors that facilitated her knowledge, involvement, and relationship in APE.

"[APE] is perfectly normal" – Value of APE

Slone believed APE was "even more important than the academics" for Sam, understanding the value of PA throughout his life. APE was an essential part of Sam's day that provided many benefits throughout K-12. Slone shared that APE helped Sam with strengthening his physical self, building his self-esteem, developing his social skills, and expressing himself in a structured and safe setting. She believed that "adaptive PE [was] perfectly normal for Sam [which was] far more normal than GPE [general physical education]." Slone felt APE provided a fun environment that focused on creating success within various, modified activities based upon the individual ability levels of Sam and his peers. Furthermore, she understood that APE does not only provide services to children with Down syndrome or autism, but any child that may have

challenges in participating in a GPE setting wherein they may require more support. While discussing further, Slone mentioned:

> …there's so many variables that make adaptive PE so important because there are children who are physically perfectly capable of going into a gym and doing a regular PE class but yet, mentally, they may not be able to handle the gym…may not be able to handle just the noise…may not be able to act on their ability level…they may need some modifications.

Additionally, APE "[got Sam] out of his comfort zone" and taught him different aspects that he could not get in the classroom. One of these aspects was social interaction with his peers. Slone shared that the classroom setting often includes children working on individual, IEP-based activities wherein they are not always working in group activities. But APE provided Sam the chance to interact with others, learn social appropriateness, and work together. Sam also expressed similar outcomes from APE where he "saw lots of [his] friends" , he could "[talk] to friends" and play activities such as noodle tag to chase and "beat [his friends] up." Not only did APE focus on PA, but Slone believed that it was much more. She shared:

> It's a place that they get to express a little bit more of their true personality. It's OK to be a little bit loud. It's OK to be silly. It's OK to be giggling… A place where you can almost just like unwind but in a structured, safe setting.

"Education is key and power" – The importance of understanding

Slone firmly believed that if a parent wants to advocate for their child, they need to educate themselves to better understand their rights and their child's rights in special education. While Sam was still young, Slone took it upon herself to research special education laws, join

national and local organizations, and read information from social media. For example, the National Down Syndrome Society provided her with laymen summaries of laws that impact children with disabilities not just at the school level but in all aspects of life. Gaining these types of knowledge was important to her as Sam did not have the capabilities to fully advocate for himself. Slone felt it was her responsibility to provide the best opportunities for Sam and that advocating was the main avenue. She shared that "…knowledge is wealth and, in a situation where you have to advocate for your child and you are your child's spokesperson and you are their lifeline, you have to research for yourself."

Mike also felt that she came prepared for school engagement and understood her rights as well as Sam's. When it came to issues related to APE, he felt that Slone understood what she was advocating for. Before bringing up issues with IEP team members, Mike shared that he felt Slone was continually involved in deepening her knowledge of special education to better present a concern if it ever came up. Mike mentioned, "she knows where to find the information. If something is not being done right…she's going to do some of her own research and visit certain websites." For example, Slone shared an experience with a school administrator regarding scheduling of APE classes. She was informed that the number of students receiving APE services did not constitute APE classes being placed on the main schedule. Since Slone understood Sam's IEP, which stated that he would be receiving APE services in a self-contained setting, she had a meeting with the administrator to advocate for Sam. In the conclusion of this experience, she stood her ground, understood her and Sam's rights and advocated for APE classes to occur that school year. Slone needed to know her rights "to be able to press an issue" such as this one and saw that educating herself was the best way to do that.

Other aspects that increased her knowledge of APE were through participating in school events, observing APE classes, and learning from mistakes of other special education parents. Through her experiences interacting with Mike and attending APE classes, Slone felt that she started learning that "[in] adaptive PE, they're going to work on this. This is really important. So you just start seeing ways to strengthen your child's needs." In conversating with Mike, his first interactions with Slone were specific to IEP meetings for Sam. Mike observed how supportive Slone was with the classroom teachers where "she was always there for [them] to buy supplies [or] for helping [them] decorate their room [for events]." Mike knew she was always willing to support not only Sam but his peers in class. Over the years, this same involvement transferred into APE where Slone had opportunities to learn about APE where Mike mentioned it "helped [her] understand what [he does] as an adapted PE teacher."

Regarding learning from mistakes, Slone owns a hair salon where she conversed or overheard conversations about parents with children with disabilities, administrators, and teachers. Over the years, she learned from "their mistakes" and had "insight into the school system side of things." Not only was it special education specific but all aspects of school. From these conversations, she understood what barriers she may face in school for Sam and what ways she could intervene or advocate. Although the conversations in her hair salon were never about Sam or herself, they provided her with an opportunity of learning from mistakes and understanding the school system. When sharing one conversation she had at her hair salon with a mother of a child with Down syndrome, she concluded that:

> [she] and I do not see things the same way. Now we can have a great conversation…but I learned so much from her just handling things differently than I would have…So there were just things that I saw that she did, that I felt like she should have [done more].

"Whatever it takes to be a part of Sam's day" – Involvement in APE and PA

Throughout Sam's schooling, Slone was involved within all aspects of his school day from IEP meetings, meeting with teachers, visits to school, volunteering at school events, and advocating when something was needed. She believed that Sam's goal in school was for him to be happy, and she made sure that all school staff were there to fulfill this goal. Slone felt that being a part of the school setting was important because "the more time you can spend at your child's school, the more you know." Since her employment allowed her with scheduling flexibility, she was able to be involved at Sam's school and "wasn't going to miss a party." Slone attended Sam's classes including APE to "learn more about Sam's schedule, what they're doing, what happened." Her intention was not to "spy on [the teachers or] …disrupt whatever they were doing…or rat anybody out." She simply wanted a better picture of Sam's day to support him at home. Slone mentioned:

> I've been to adaptive PE multiple times. I would be there [at school], and I'd be like [to Sam], 'Oh, I'm gonna go to PE with you…' Because of that, you just really gain knowledge about what their day consists of…how they interact [within different settings].

It was important for Slone to communicate with teachers at school so she could prompt conversations with Sam about his day. If Slone knew what Sam's day consisted of, she could ask the right questions and give Sam the opportunity to talk about his day. For activities that occurred in APE, Slone could ask Sam, "Hey, did you love riding the turtle today?" or "Did y'all noodle fight?" Then they could have a conversation about Sam's time in APE. Slone mentioned that she "micromanaged his day" which allowed her to "[prompt] good conversation after school" that helped him work on his speech such as vocabulary and articulation. In APE, she received text messages of pictures or videos from Mike of activities that occurred in class and

ones that Sam enjoyed. Through these avenues of engaging with teachers, Slone was able to understand what occurs at school to conversate with Sam.

Involvement in SO

Mike noted that most of Slone's involvement was within SO where she "was always around if Sam was doing [sports]." For example, she would attend practices, state Games, competitions, and ceremonies for SO whenever they occurred. In knowing Slone's passion for children with disabilities, he came to rely on her for support within SO events such as fundraisers. He felt "she would always help out" whenever he needed assistance. For example, Mike shared a past summer fundraiser where he needed help selling tickets. He felt comfortable in calling Slone to ask for help where she was always willing to support him. In addition, Mike could not remember a time where she would say, "No, I'm sorry Mike. I can't help you out."

Slone believed it was important for Sam to be involved in PA outside of school. At the same time, she wanted Sam to have the same opportunities as typical children do but within an environment that considered his strengths and needs. SO was a program that Mike and his colleague developed which Slone thought was a "phenomenal program." Sam was involved in swimming and bowling where he attended local and state games. Slone supported Sam in attending practices and events, speaking at fundraising events for SO, and cheering Sam during events. During one competition, Slone shared, "We stay all day [at a Special Olympics competition]. I'm crazy. I scream my lungs out. Cheering for everybody and it's super super super fun." Similar to teachers relying on Slone for support at school, Slone felt that Mike relied on her to advocate for SO. For example, Slone shared the same story where Mike needed to sell tickets for a fundraising event for SO. He contacted her who was more than willing to help.

"When [Mike] called me, he knew that I would get those seven door prizes. [This] took that off his plate [to focus on other things]."

Through Slone and Mike's collaboration and support for SO, Sam was afforded the opportunities to have positive experiences that were surrounded by his connections with coaches and friends. In remembering his time in those activities, Sam mentioned his friends with and without disabilities that he participated with in different events such as the SO Friends Club at his high school. For example, during a Halloween-themed haunted house which was organized by the Friends Club, it was asked who was at that event. Sam quickly started naming the peers and teachers that were there. Both at school and within SO, Sam had a lot of friends so he could "talk [to] everybody." During state SO competitions, Sam enjoyed hanging out with friends and talking with them. During pizza parties, Sam "[got] to see all [his] friends." Slone shared that Sam made the closest friends within SO. Of all the opportunities given, when asked if his mom was a pretty cool person he said, "Yeah, she is. She's a great mother."

"Know your tribe and love them hard" – Building trusting relationships

Throughout Sam's K-12 schooling, Slone and Mike had a positive and trusting relationship that provided Sam opportunities in PA. This was due to both having a passion in providing opportunities for all children with disabilities through PA which Slone felt "immediately gave [them] a connection." She further mentioned "[This county] has been so blessed with Mike and [his colleague] as their adaptive PE teacher because not only they love their job [and] they love their students, but they're advocates for them. That's a big difference." Mike felt that Slone valued him as a teacher, advocate, and coach for all students with disabilities. He related, "I think once Slone knew that I was truly a teacher that was interested in Sam's health, physical fitness, social emotional learning…I think she really came to appreciate

me as an educator." He continued by sharing, "she considers me a true advocate I believe. And that's why she always has been supportive of me…"

Not only did Slone appreciate the knowledge that Mike had of children with disabilities and PA but taking the extra steps in "learning [their personalities], learning how to make them function the best they can possibly be, building their self-esteem, knowing their triggers and how to prevent those [triggers]." She felt he was a "talented" and "phenomenal" APE teacher with a "passion for special needs students." Mike also focused on keeping Sam active into adulthood with programs such as SO. For example, Slone shared that Mike pushed the agenda of having SO accepted as an interscholastic sport in high school where athletes letter "so these kids [could be] recognized as [participating in] their sport because it is a sport." Sam received a letterman's jacket for participating in SO swimming, which Sam presented to the PI during the interview. Furthermore, Slone felt that Mike was "extremely confident in [his] field" and took the time to understand Sam's IEP regarding accommodations, goals, and protocols. If Slone wanted to observe Sam in APE, she felt Mike "wasn't intimidated at all if I wanted to come in because he knew 100% what he was doing." She felt comfortable in asking Mike questions about information she researched such as special education laws or parental rights. Slone mentioned, "If I would read something and I would be confused, I might call Mike and be like, 'Ok, I'm reading this, and this says this…What does that mean for Sam? Or what's this law gonna change?"

Over the years, they developed a strong relationship surrounded by trust. Mike mentioned that they "had a good line of communication" and "got to a place…where there was no problem with her sending a text and I would text her back with responses… if I felt like I couldn't express it well enough via phone text, I would just call her." Slone added that "[Mike] trusted me, and I

trusted him. If I confided in him, it never went any further, and vice versa." The relationship reached to a point where Mike shared, they "[understood] how to communicate with [each other]." They did not "beat around the bush," and Mike felt Slone was "forward and frank…if [anything] was bothering her, she would always speak her mind." For Slone, she had "developed a deep sense of trust" and "honesty" with Mike "[which were] huge driving point[s] for [their] parent-teacher relationship; personal relationship; friendship." She could share her feelings about different things in private wherein Mike did not share with others or break their trust. For example, if there were any issues at school regarding APE, Slone mentioned that "Mike was going to pick up the phone and call me." She appreciated how open and honest Mike was and he did not "hide anything" from her.

Discussion

The purpose of this study was to examine one parent's involvement in APE using a qualitative case study approach. Through semi-structured interviews, themes were drawn from the data which focused on Slone's value, knowledge, involvement, and relationship within APE. The perspectives of Mike and Sam were also explored in relation to Slone's. Knowledge and value of APE as well as developing a line of communication with Mike were important factors for Slone to provide the best opportunities for Sam. From there, Sam was afforded PA opportunities in and out of school that gave him chances to be with and make friends.

McGarty and Melville (2018) and Welk et al. (2003) describe parents as gatekeepers to children's PA. In other words, if PA is important to parents, then their children with disabilities will have access to PA opportunities. Pitchford et al. (2016) examined the relationships between parental beliefs about the importance of PA and the PA levels of their children with disabilities. They found that parents with stronger beliefs reported higher PA levels of their children. This

suggests that parents may have an impactful influence on the PA opportunities their children receive. In relation to this study, Slone valued PA as she felt it would be an important part of Sam's health throughout his life, aligning with similar findings in a number of studies that explored parent perceptions towards PA (An & Goodwin, 2007; An & Hodge, 2013; Chaapel et al., 2012; Columna et al., 2008; Lee et al., 2020; Perkins et al., 2013). Not only were the benefits of PA an influence on Slone's involvement but her own values for APE and the potential it could provide for Sam. Valuing and prioritizing PA and APE were seen as factors that contributed to Slone's involvement, which opened the gate for Sam. In a similar study, parents in An and Goodwin (2007) saw that physical education (PE) was an important subject that could help their children with spina bifida feel connected to their peers at school along with obtaining the associated health benefits. From their values, some parents took action to help PE teachers and the school learn about their children's disability through sport demonstrations, identifying specialized equipment, volunteering for specific PE activities, and sharing information about local community programs. These parents as well as Slone embraced PE or APE, saw it as priorities for their children, and were involved in providing them with PA and supporting teachers. Parents that hold similar values and importance can be a means to support their involvement in APE.

Parents of children with disabilities are often unaware of what APE is or what it provides for their children (Columna et al., 2008; Lane et al., 2021; Lee et al., 2020). On the other hand, research shows that parents who have a strong understanding on the importance of APE are more involved in and outside of school (Chaapel et al., 2012; Kwon et al., 2021). Slone's experience provides another example of a parent holding a deep importance for APE. Her experience provides a glimpse into how knowledge development may occur for parents to learn about APE.

One way that facilitated her knowledge of APE was conversations that occurred at her place of work. Although these were through informal interactions, more formal settings such as support groups may offer parents the chance to have conversations surrounding special education topics such as IEPs, placement decisions, or financial aid in purchasing adapted equipment. It is a place where they can share advice or provide emotional support (Ainbinder et al., 1998; Mueller et al., 2009). In addition, guests with expertise in APE can be invited to speak on various education topics (Mueller et al., 2009). Parents would be able to share their experiences and help each other understand and, in some cases, advocate for their children.

Technology has improved the possibilities for connecting parent-teacher communication (Olmstead, 2013). Emails, newsletters, pictures, videos, websites, social media, and applications are ways that offer parents digital access to their children's progress in school. Utilizing visual means in communication may provide parents with a better understanding of what occurs at school for their children (DiJohn, 2015; Kawa'a, 2022; Toner, 2017). Kawa'a (2022) found that photos included in regular email communication helped parents visualize how their child spends their day at school and their overall progress throughout the year. They felt appreciative of teachers taking the time to communicate through both text and photos which created a sense of connection and trust with them in addition to facilitating their reciprocity in communication and engagement in the classroom. In another study, Toner (2017) found that Seesaw, a digital portfolio application focused on students sharing their progress, helped parents feel more informed about their children's learning by providing examples of their children's work. Regarding Slone's experience, she visually saw APE through pictures and videos Mike would send of Sam's progress in APE which included activities Sam participated in and ones Mike felt would be beneficial for at-home. She further extended this by observing APE classes at school

and attending SO practices and games. The visualization of APE provided the means for Slone to understand what APE services provided to Sam which in turn increased her understanding, value, and involvement. Presenting visual, digital communication with parents may provide more connections to APE and increase value for the service.

When examining the special education literature regarding levels of parental involvement, it often depends on the amount of trust parents have in professionals to support their children with disabilities (Stoner et al., 2005; Stoner & Angell, 2006; White, 2014). Trust is seen as either positive or negative depending upon a teacher's characteristics, such as their level of competence, whether they are perceived to have the best interests of their children in mind, and whether they keep their word (Stoner et al., 2005; Stoner & Angell, 2006). Regarding Slone and Mike's relationship, it revolved around trust, support, and communication that afforded Sam the opportunities for PA. When closely exploring their relationship, Mike's characteristics were a major factor that influenced their relationship wherein Slone felt he was an advocate for her and Sam. Mike's competence in teaching children with disabilities, his openness to provide Slone opportunities for involvement in APE and SO, his abilities to listen to Slone's concerns and questions, and following through with his words and actions influenced Slone's trust with him. These elements captured their relationship towards providing Sam opportunities to participate in SO and learn skills in APE. One parent in Chaapel et al. (2012) shared a similar experience to Slone's where the parent felt the APE teacher went "above and beyond" (p. 192) with their communication and in sharing accessible materials for at-home practice.

The literature on parent-teacher relationships states that it relies on both parents and teachers working collaboratively to support student learning and success (Blue-Banning et al., 2004; Chu, 2018). This study adds to the literature where Mike and Slone aligned to provide Sam

opportunities in PA. The specific variables that can facilitate parent-APE teacher partnerships observed in this study were knowledge and value of APE and developing lines of communication and trust. Slone was active in supporting Mike's goals in SO, understanding Sam's APE services, and becoming an advocate for Mike when APE services were not in compliance with Sam's IEP. Mike was also active in providing opportunities for Slone's involvement in SO and being open to her questions and concerns. Findings from this study suggest that developing collaborative parent-APE relationships occurs when both stakeholders are involved. APE teachers develop it through trust with parents in how they display their competence within the field, respect in listening to parental feedback, extending opportunities for parent involvement, and fulfilling the goals of teaching children with disabilities. In addition, parents develop it through valuing PA and APE, perceiving it as a priority for their children, and supporting the efforts of APE teachers.

Future Research and Limitations

Much of the literature in APE has explored the perspectives of parents. However, another important perspective that has not been examined thoroughly are APE teachers themselves. Mike was proactive in sharing updates of how Sam was doing in APE and supporting Slone in her understanding of this service. But the specifics as to why he took the time to develop this relationship were not examined. Future research could look at APE teachers' beliefs towards parental involvement and the potential challenges or successes in developing relationships. And more importantly, how teachers develop relationships with parents. A second study could explore how parents come to value the importance of APE and what factors lead parents to this notion.

One limitation to this study was that data collection occurred mainly through interviewing of Slone, Mike, and Sam. This may have provided only a glimpse into Slone's overall involvement in APE. For example, Slone shared some experiences with school

administrators. Their perspectives would have provided more in-depth information to better understand her involvement as the administrators may have provided information regarding her advocacy and knowledge of APE services during those interactions. Additionally, one perspective towards how parents may come to be involved in APE may not be similar to other parents' experiences. APE involvement may have developed through different means or from differing experiences such as past PA and/or PE experiences (Lago-Ballesteros et al., 2019; Sheehy, 2011). As a result, the findings from this study should be viewed with this in mind.

Conclusion

APE teachers and parents working together can provide a means towards positive changes in the lives of children with disabilities pursuing PA. Without both working together, children may not have those opportunities. Knowledge, personal values, trust, and communication provided Slone the opportunity to be involved in Sam's APE programming and PA. Although not all parents will have similar experiences as Slone's, this study offered insights into the ways that APE teachers can provide accessible information to parents about these services. Furthermore, parents are also an important part of the relationship in how they value and understand APE.

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Manuscript 3: Adapted Physical Education Teachers' Perspectives Towards Parents of Children with Disabilities

In preparing pre-service adapted physical education (APE) teachers to develop children's competence in lifelong physical activity (PA) participation, the Adapted Physical Education National Standards (APENS) was created outlining fifteen standards representing the content an adapted physical educator should know to deliver quality APE services (APENS, 2022b). According to the APENS, a qualified APE teacher demonstrates effective teaching competencies that includes knowledge to accommodate children with disabilities appropriately and meaningfully in accessing PA settings, collaborating with other school professionals and parents, and competence in conducting assessments and individualized planning (for the full list of standards see APENS, 2022a). As such, master's level graduate APE programs within the U.S. have utilized these standards to train and guide pre-service APE teachers. In Nichols et al.'s (2018) review of graduate programs in the U.S., they reported that most courses focused on introductory, graduate-level APE concepts such as types of disabilities, assessment, adapted physical activity, and practicum experiences. However, one academic area that appears to be missing is collaboration with parents. Although one of the APENS's standards focuses on communication with special education team members including parents, Nichols et al. (2018) did not report coursework related to this standard in the graduate programs surveyed.

Parents bring a unique perspective and outlook regarding their children's PA, and they serve as gatekeepers in providing access to PA for their children outside of school (Healy & Marchand, 2020; Seibert et al., 2017). This is because they often understand the benefits of PA and have a desire to provide opportunities for their children whether through home, sport, or community recreation (Chaapel et al., 2012; Columna et al., 2008). Since APE focuses on

developing lifelong PA, both parents and APE teachers have similar goals where they can be mutual allies (Koutrouba et al., 2009). APE teachers can facilitate parent involvement in schools by developing collaborative relationships which in turn can help parents gain the abilities to learn more about how to provide PA opportunities for their children outside of school and as they transition into adulthood. This also aligns with the APENS standard of communication, which states that a qualified APE teacher communicates "with families and other professionals using a team approach in order to enhance service delivery" (APENS, 2022a).

Current literature on parent perceptions towards APE shows that parents expect APE teachers to have competence in providing appropriate modifications (Columna et al., 2008; Lane et al., 2021), engaging and valuing parent involvement (Kwon et al., 2021; Lane et al., 2021), and having consistent communication (Chaapel et al., 2012; Columna et al., 2008). Unfortunately, research has found that APE teachers often did not meet these expectations and did not create a collaborative partnership with parents (e.g., Kwon et al., 2021; Lane et al., 2021). There was a lack of or absence of engagement from APE teachers in their children's special education that deterred parents from understanding APE (Chaapel et al., 2012; Columna et al., 2008; Kwon et al., 2021; Lane et al., 2021; Lee et al., 2020). This also limited parental involvement where parents did not know what was occurring within APE or how to help their child succeed in PA activities outside of school. Consequently, this negatively impacted parents' perceptions of APE teachers in their abilities to teach children with disabilities (Chaapel et al., 2012; Columna et al., 2008; Lee et al., 2020). And in some instances, parents turned to other school professionals, such as case managers, for APE updates (Chaapel et al., 2012; Lane et al., 2021). In the absence of a strong home-APE relationship, parents may not be able to engage in APE thereby preventing opportunities to learn how to support the PA needs of their children with

disabilities outside of school. This can create a disconnect within the relationship and negatively impact their children's PA development. To realign the mutual goal of children's PA success, parents should be informed about APE and what it can offer, such as learning how to provide accommodations and how to access community PA resources. To this end and given the experiences of parents towards APE, APE teachers are the most influential factor in developing PA partnerships with parents.

Although it is important for APE teachers to make connections with parents, they may experience difficulties in doing so. Possible reasons are due to not having specific training to effectively engage with parents, being perceived as a misunderstood and marginalized profession, and not having sufficient time to develop relationships in itinerant roles. Pre-service teacher preparation research reports pre-service teachers believed that developing positive parent-teacher relations was critical to student success (D'Haem & Griswold, 2017; Hindin & Mueller, 2016). However, due to limited opportunities to learn specific strategies during their teacher preparation program, they also felt stress, fear, and challenges in connecting with diverse parents (D'Haem & Groswold, 2017). Furthermore, first year special education teachers also described their unpreparedness in fulfilling their roles and responsibilities which included communicating with parents (Hansuvadha, 2009). Because APE literature has often focused on the difficulties that in-service teachers have in providing inclusive opportunities for children with disabilities (Haegele et al., 2021), it can be suggested that they may also have difficulties in developing relationships with parents.

The socialization of APE teachers in the school setting is often experienced through marginalization (Richards et al., 2021; Wilson et al., 2020). McNamara et al. (2022) and Samalot-Rivera and Lieberman (2017) reported that APE teachers felt that school professionals

(i.e., administrators and individualized education program [IEP] team members) did not value or understand APE services. This led to a lack of respect and sometimes not being invited to IEP meetings. Although not from the perspective of APE teachers, some parents even mentioned that they deprioritized APE over other academic subjects (Chaapel et al., 2012; Kwon et al., 2021; Lane et al., 2021; Lee et al., 2020). This may cause APE teachers to feel isolated as they attempt to establish their worth and value among other school stakeholders including parents (Park & Curtner-Smith, 2018). Lastly, the role as an itinerant can produce difficulties in connecting with parents. As most APE teachers are itinerants, traveling to multiple schools and having larger caseloads may decrease possibilities of collaborative relationships to occur (Holland & Haegele, 2020; Richards et al., 2021; Wilson et al., 2020).

APE teachers have a unique perspective that can impact parental involvement and engagement. They should have the skills to support the PA needs of children with disabilities and provide parents with the resources and knowledge to increase their competence and comfort levels regarding PA. While other studies have acknowledged the importance of examining teacher perceptions towards parent relationships (Chaapel et al., 2012; Spann et al., 2003; Stoner & Angell, 2014), to the authors' knowledge, APE teachers' perspectives have not been investigated. Exploring the dynamics that APE teachers experience in developing relationships with parents can link parent expectations and their experiences. Therefore, the purpose of this study is to explore the perceptions of APE teachers towards parents of children with disabilities. In addition, the following research questions guided the purpose: (a) what are APE teachers' experiences interacting with parents of children they teach?, (b) what challenges and successes do APE teachers have in developing relationships with parents?, and (c) what do APE teachers believe parents understand about APE services?

Method

To understand the experiences of APE teachers regarding their beliefs, expectations, and reflections towards parents of children with disabilities, a basic qualitative approach was used as a method for the study. The central premise of basic qualitative studies is to understand and interpret lived experiences which is captured by how people interpret their experiences, how they construct their worlds, and what meaning they attribute to their experiences (Merriam & Tisdell, 2015). In exploring APE research, this approach has been used to understand parent perspectives towards PE or APE for their children with disabilities (e.g., Chappel et al., 2012; McNamara et al., 2021; Perkins et al., 2013). As this study is a first to explore and understand the perspective of teachers developing relationships with parents, a basic qualitative approach helped the researchers be open to APE teachers' experiences and how they perceive parent involvement in APE. Moving forward, parents will be used to define individuals raising and caring for a child or children with disabilities. However, this term will also include a parent(s), guardian(s), caregiver(s), family member(s), or any individual(s) raising a child with a disability to be inclusive of the many family dynamics.

Participants

A purposeful sample was used to identify possible participants for this study. The eligibility criteria were current APE teachers providing APE services to children with disabilities in any setting or a combination thereof (e.g., private, public, home, hospital, elementary, middle, and high school). In addition, APE teachers were required to have a minimum of one year of teaching experience in APE. Recruitment was conducted through three sources using a recruitment email and/or flyer. The research flyer included a description of the study, participant requirements, and the primary investigator's (PI) contact email. Interested participants responded to the PI who

shared an information sheet that provided more details about the study and explanation of commitment requirements. First, the third author's university alumni email list was used to send the recruitment flyer. Secondly, three state APE consortiums in the mid-Atlantic area were sent an email asking for assistance in sharing recruitment information to members. Lastly, the administrators of Facebook groups that focus on PE or APE for children with disabilities were contacted to ask for permission to share the research flyer within their groups.

Eleven participants responded to the recruitment email/flyer and gave consent to participate in the study. Most APE teachers were females (n = 7), and all were White. Nine teachers were itinerant and taught in a public-school setting. The number of years teaching APE ranged from 2 to 37 years within elementary, middle, high school and/or transition settings. Only five APE teachers were CAPE, out of which, four received their APE training in a master's in APE program. Out of the four, only two received specific education regarding parental involvement in APE (Jennifer and Michelle). When asked what training they received, Jennifer mentioned that it included "questions [to ask parents] regarding the level of parent involvement and knowledge of APE and [to share] what their child(ren) are doing in APE" and Michelle wrote, "Very broad. General recommendations regarding keeping parents informed about APE, but nothing like what I experienced in the school system as a teacher." Table 1 provides additional demographic information.

Data Collection

Primary data was collected through one-on-one semi-structured interviews conducted by the PI. Since there are no current studies that have interviewed APE teachers, initial draft interview questions were developed from the perspectives of parents towards APE and APE teachers as a basis (i.e., Chaapel et al., 2012; Columna et al., 2008; Kwon et al., 2021; Lee et al., 2020). For

example, interview questions were drafted that related to how APE teachers facilitate parental knowledge of APE, how they develop communication with parents, and what their perceptions are towards their relationship with parents. Other interview questions were drafted from the PI's experiences as an APE teacher and engagement within the literature. To ensure content validity, a panel of professionals, including professors of APE, reviewed the questions. Based upon their feedback, interview questions were edited as needed and additional questions and probes included. Furthermore, a pilot interview with two retired APE teachers was conducted to obtain feedback on the delivery, clarity, relevance, and quality of questions. From the pilot interviews, questions were further edited as needed with any additional questions added. Interviews were conducted over Zoom by the PI, which averaged 45 minutes each and then transcribed using Cockatoo. After initially reading through transcripts, nine participants were asked follow-up questions through written responses that averaged four questions.

Data Analysis

To identify, analyze, and report themes of APE teachers' perspectives towards parents of children with disabilities, Braun and Clarke's (2006) thematic analysis was used across transcript data to find repeated patterns of meaning. It involves six steps which are 1) familiarize oneself to the data, 2) generate initial codes, 3) search for themes, 4) review themes, 5) define and name themes, and 6) produce the report. First, transcripts were independently read by the first two authors to better understand the experiences of participants. Next, transcripts were reread while using inductive analysis through open and then axial coding to unearth perspectives that each participant had towards parents of children with disabilities. The first transcript was openly coded with proceeding transcripts coded using the same codes as the first but also included additional coding that captured new thoughts, ideas, or meanings. Next, codes were

independently grouped into preliminary larger codes or if applicable, themes. After this stage, the first two authors met to discuss codes and themes. No disagreements were made as both authors observed similar meanings to participants' experiences. Additionally, themes were more clearly defined and named which included categorizing the specific codes to each theme. Both authors agreed with the final themes and subthemes.

Trustworthiness

Before discussing the rest of the study, it is important to share the PI's positionality towards this research. He was a previous APE teacher holding some stereotypes of parents. This mainly revolved around assuming parents were satisfied with his instruction when not receiving communication from parents. As a result, he did not actively extend efforts for parent involvement within APE. He felt most parents did not care about learning more about APE or had other more important responsibilities such as caring for their children's daily living activities. Although there were a handful of parents that he connected with, most of his relationships remained in IEP meetings. The PI acknowledges how his experiences are a part of the way he interprets the meanings that APE teachers bring regarding parents of children with disabilities that will influence every part of this study. To develop trustworthiness within the data, peer debriefing was conducted with the second author independently analyzing transcripts to then discuss codes and themes with the PI. In addition, the third author served as an external reviewer who checked that the study was conducted as intended while determining if the findings were interpreted clearly in connection with the purpose of the study. Furthermore, participants were sent preliminary findings as a way of member checking to provide clarity in the interpretation of the data. Two participants provided comments which were reviewed and edited

to better capture the meanings of their experiences. Lastly, memos were used to note the PI's thoughts, reflections, or ideas throughout the study, noting any potential for bias.

Findings

Four themes were extracted from the data that captured APE teachers' perceptions towards parents of children with disabilities: (a) Importance and benefits of parent involvement, (b) Being present and "very visible" to develop parent relationships, (c) "Sometimes we're on an island" that creates barriers to develop parent relationships, and (d) Being persistent and "having the grit" to have success to develop parent relationships.

Importance and benefits of parent involvement

Nine participants shared that parents were an important part of their children's success in APE. They felt that parents "know their child better than anyone" (Jessie) and could help give "a clear picture of all the things they do at home [regarding PA]" (Phoebe). Once this occurs, an APE teacher can then "use the skills they [children] already have from their experiences at home and in the community to really build on their skills [within the school setting]" (Phoebe). Jerry also felt it was important for him to work with parents as a team by understanding their perspectives and experiences raising a child with a disability. He mentioned:

> "… [that he might not] know everything there is to know about [a] child…[and not] know everything there is to know about these skills…but having humility to know that other people [i.e., parents] can contribute as well, and being open to what they have to say back [can be a means to build collaborative relationships]."

If a child was experiencing challenges within APE, Carl mentioned that "I might send an email out [to parents] and say… 'Hey, what do they like? Songs, animals…'" to learn about better ways of engaging their children in APE.

Not only were parents seen as helpful for APE teachers to develop APE instruction but were seen as facilitators of practicing skills outside of the school setting. Jerry captured this by sharing, "…most students I see once a week at the most, maybe for 30 minutes. And to really move the needle [in student progress], the work has to carry on beyond that short amount of time that I see them" which includes parents as one part of the equation. Participants felt that developing collaborative relationships with parents provided a means for them to help their child at home in practicing skills taught in APE to increase their motor skill progress. Joe further added that it was important for parents "…to understand [APE] to support the child after school, on weekends, when their child is not in school, but even beyond school when their child exits public school" in order to increase opportunities for their PA progress.

Being present and "very visible" to develop parent relationships

To help APE teachers develop relationships with parents, they felt they needed to be an active participant within the education of their students that included communicating with parents, sharing resources and progress updates through visual means. This revolved around demonstrating care towards parents.

Communication an important part of relationships

Ten APE teachers shared that "constant communication" (Jerry) was integral in making connections with parents. Jennifer expressed that communication is the biggest part of helping parents be more involved in APE by "making sure you're letting them [parents] know what

you're doing, and then asking them questions and getting their feedback…" Participants believed that there needs to be "an open line of communication" (Justin) with parents so they can feel comfortable contacting APE teachers. For Jamie, she "love[d] being in touch with her [students'] parents" that gave her opportunities in sharing information. As Jackie shared, "[it's] really explaining what we do in class and why it's important" that can help parents better understand APE.

There were many tools participants used to communicate with parents to keep them updated on their children's progress in APE. The most frequently used were phone, text, and email. To a lesser degree, APE teachers utilized case managers' communication formats such as communication logs or applications (i.e., Class Dojo, Seesaw, Schoology) "because [case managers] usually send out weekly emails" (Carl). Jamie and Joe used Class Dojo, an application that connects home and school via messaging and sharing materials, to "have a live conversation with parents" (Joe) which helped share information or send a message to update parents on their child's progress. In addition, it included language translation that made communication easier for Jamie as she didn't "have to wait for anybody else to translate" shared resources into parents' home languages.

Seeing APE in action

In developing ongoing communication with parents, participants felt it was important to help parents see what occurs within APE for their children. One example was inviting parents to observe APE classes to help them "see what's actually happening [so] they get a better understanding" (Justin) of the different things their child is learning. Josie felt this "really helped open the doors" in connecting with parents where "great conversations" could occur about student progress and needs in APE. Other participants planned school events or adapted sports

programs that provided the means for parents to see PE and make connections to PA. Phoebe felt the unified sports tournaments that she was a part of gave parents the chance to see their child participate in sport. She mentioned that parents are "thankful" for these programs which bring "tears in their eyes" because they get to see how much the school community "cares about their kids." Jackie also was involved in community recreation during a summer job that "was really wonderful" where she felt "that meant a lot to parents for me to take the time out of my summer to help their child" to learn new skills. Joe felt that parents "absolutely loved" the adaptive sports program he developed which helped them better understand what he did at school. The afterschool program involved teacher volunteers and parents supporting students through different sport-related skills stations which ran for four-week intervals. During a culminating skills event at the end of the school year, he mentioned:

> "…parents would come and watch their child…and cheer them on. And I think they understood what I did because they also saw me working with their child. And the wait time that I would give and the patience that we would give and the supports."

Lastly, six participants shared videos and/or pictures through text, email, or applications that helped parents see their children's progress, the "skill[s] and joy" (Jackie) their children experience in APE. To help facilitate at-home activity, Joe shared "video[s] of [himself] showing how the progression of a skill" so parents had a better understanding of how they could support their children. An application called Seesaw helped Jennifer share and upload "pictures of [students] or short videos during [APE] sessions" where parents could then "like it or comment on it." She felt that "parents loved it because they could see [a picture or video of their child and say], 'Oh, here's my kid participating in PE. Or here's my kid doing a game or skill…"

Teacher characteristics

Eight participants shared one way to develop relationships with parents was to show that they are invested in the relationship to help them feel connected to the school and APE. This was demonstrated mainly through participants' characteristics such as care, respect, and competence. One characteristic that was demonstrated by most APE teachers was care or personal regard for parents. For example, Josie mentioned, "…there's been times when I've contacted parents outside of IEP meetings to inform them of their rights and guide them through the process…" as she felt this was important for parents to be better prepared and knowledgeable during IEP meetings. To increase communication and reduce barriers, Joe would have documents or resources "translated so that the parents would know who I was and what my program was about and be able to have equal access to understanding [APE]" while Jackie tried to reduce the complexities of IEP terminology by using "language that's easy for parents to understand." In understanding parent preference of communication through text messaging and throughout the school year, Jamie would often text parents to check-in and ask, "Do you need anything? How's your kid doing at home? ... hopefully you didn't catch the current flu going around…" To a smaller extent, APE teachers shared that their competence in teaching children with disabilities helped parents understand their child's progress. Phoebe mentioned, "I think so often it's in the presentation of the professional…the way you present the [child's] growth and progress or lack of is extremely important to parents." Further, Justin felt:

> "…when [educators] are not as confident in their ability to teach kids with disabilities, [they] will kind of withhold that communication [with parents]. And that's when I think those opportunities to collaborate really are lost because there's a lot less openness on the educator's side."

Other characteristics that APE teachers felt were important when developing relationships with parents was being available at any time during and after the school day. If there were opportunities to engage with parents, most participants would take advantage. During school visits, if Justin saw a new family, "I usually kind of stop and I introduce myself to that parent and talk to them…make myself available. I give them my contact information." If there were any schedule conflicts during her virtual APE sessions where she supported students at home, Jessie would "adjust my schedule…I will put them on another day or another time if I need…" Joe mentioned the importance of being present and available during school duties especially if trying to develop a relationship with a new parent. He mentioned morning bus duty "…is a great opportunity to be welcoming to them [i.e., parents], introduce myself, and kind of not overbear them, but also kind of talk to them a little bit as you're walking into the door."

"Sometimes we're on an island" that creates barriers to develop parent relationships

APE teachers experienced challenges in developing connections with parents that spanned from the limits of being an itinerant teacher and how parents perceived APE services. These experiences led some APE teachers to have limited expectations for parent involvement. Three subthemes captured the barriers experienced by APE teachers: (a) being an itinerant, (b) APE's position among parents, and (c) limited expectation of parent involvement. The second subtheme was further broken into four themes to detail how APE teachers felt parents viewed the service and themselves as a teacher.

Being an itinerant

Although most participants felt ongoing communication was a key part of connecting with parents, they shared challenges in developing this type of communication and resulting

relationships. Specifically, participants mentioned the challenges of traveling to multiple schools or having higher caseloads of students that impacted their abilities to make connections with parents. Jamie mentioned, "…when I'm slammed [with teaching responsibilities], it's harder to do those kind of things [i.e., build collaborative relationships with parents]…based upon the schedule [caseload and schools], sometimes it's just I'm not able to do it like I would like to do it." To add, Jennifer felt APE teachers are traveling "school to school…only [in] one place for 30 to 45 minutes…and then [they're] somewhere else" which causes them to "not [being able to] invest as much time because [they] just can't." A few APE teachers mentioned the challenge of time in fulfilling their teaching responsibilities while also communicating with parents. Jerry expressed that it "does require a commitment of time" which was about 30 minutes per day for him. And Jennifer felt using Seesaw to communicate can be "cumbersome in keeping up with it" that involved creating student accounts, planning what pictures and/or videos to take, uploading them, and responding to parent comments.

APE's position among parents

Most participants felt they had positive experiences interacting with parents. However, there still existed a disconnect between what parents understood about APE and their level of involvement. Many APE teachers did not experience negative interactions with parents but more so of parents not being invested in APE as much as they would have liked.

Appreciation for APE

Participants mentioned that parents were appreciative of APE and teachers who provided their children opportunities to participate successfully. Even more so when participants went out of their way to share resources, update them outside of formal IEP progress or meetings, or being

involved with extracurricular activities. The adaptive sports program Joe developed was successful in which he felt parents "absolutely loved the extra activities I was putting together…" And in learning about the availability of APE services to their children, Jennifer mentioned, "They're just grateful …. [parents would say,] 'This is great that you can help them in PE or help them with their motor skills…" Although APE includes teaching motor skills, Jamie felt that "peer interactions and peer involvement…[was] more important than a lot of the foundational skills…" where she tended to agree by saying "what good is it to skip if you're skipping by yourself." And Jackie mentioned when discussing their children's APE progress, "[parents] are most excited/interested in what I have to share about cooperation skills, working with peers, exhibiting appropriate behaviors, attention to task, etc." more so than if they can perform gross motor skills.

Parents' understanding of APE

Seven APE teachers shared parents knew who they were at school, however, eight participants felt parents did not fully understand what they did for their children at school. Important to note is that most of these perceptions came from initial interactions with parents that were changed through ongoing conversation and being on the same IEP team for years. Among parents' first-time learning about APE, participants felt it is "not a well-known field" (Jennifer). For example, they experienced parents being confused with the differences between APE and physical therapy (PT). These services "kind of get muddled" (Jerry) where "there's a little confusion" (Carl) about the "different objectives and different standards" (Jessie) involved. Other parents were not aware that these services existed for their children. In parents finding this out for the first time from APE teachers, Josie mentioned, "parents are often shocked to find that it qualifies as an academic

service and can be a standalone service on an IEP." And "they're blown away with the information" (Jessie) that is shared regarding APE services.

Before informing parents about APE, Phoebe mentioned that parents think their children "get to play extra and have fun" but may not understand the connection of "the brain and motor development." Michelle believed that parents initially think of APE as "structured recess" with "parachutes and scooters." Justin felt that some parents perceive APE is a service that tries to "make them [i.e., their children] a better athlete or try to make them better at a certain sport…" Carl added that parents "picture typical ball sports; bouncing a ball, throwing a football, catching a ball…maybe just running around…" but they miss that APE is a "little bit bigger" (Carl) than just the motor skill development which usually takes conversations to change these perspectives.

These prior perceptions of parents' understanding of APE were changed when participants corrected them through ongoing conversations, sharing of resources, and being available to parents. Joe shared that during IEP meetings, parents "certainly 100% did know [about APE] because I would spend time explaining what we were doing in class on top of what their [child's] goal was." However, participants did not always believe that parents understood the end goals of APE and what specifically occurs to support their children. Jamie felt that "I don't know if [parents] could describe adapted PE in a sentence" with Phobe adding they may not understand "how we task analyze [motor] skills" (Phoebe). Michelle further added that parents "can review a proposed IEP [APE] goal…and believe it is a worthwhile concept to improve, but they may miss the big picture importance of that skill to their child's education." But for Jerry, he "had come to [his] own acceptance of the terminology [of APE] is not as important as the outcomes." Meaning he realized that parents may not have the complete picture of what APE is regarding the progression of skill development, but that they are "universally on

board" with understanding that "[he] helps my child with physical skills that help him or her in PE."

Parents' value of APE

Ten participants felt that APE was "not the top of [parents'] concerns" (Michelle) regarding their children's overall education. Michelle felt that parents saw APE as an "extracurricular experience instead of an essential one" where their children get to play and have fun rather than work on skills to advance their PA goals. She also felt that although parents did not explicitly say that they did not hold APE as a priority, "it's more of a body language and behavior thing" where parents might say, "Oh, we don't need to read over the APE stuff [during IEP meetings]." Phoebe added that "parents want their children talking, writing, and reading much more than they want their child to be able to throw a ball" with Jerry and Carl also feeling that parents "want to focus on the fundamentals" (Carl) that didn't always include APE.

APE teachers believed that parents misunderstood APE and felt marginalized which was a reason APE was "at the bottom of the totem pole" (Jamie). A few teachers mentioned issues "about perceptions of physical education [which was] a barrier" (Justin) where parents "don't feel that adapted PE or even PE is a worthy subject" (Josie). Through parents' perceptions of APE, Jessie mentioned that parents may question, "Why does [my child] need adapted physical education? Why do [they] need even PE if all it is is running and playing dodgeball?" During IEP meetings, Michelle felt that "parents typically come in with a long list of questions, and if anyone doesn't have a question attached to it, it's probably Adapted PE." Parents might be "more concerned about the academic or behavioral aspects of the IEP" (Jackie) with "PE [being] the last on [parents'] mind" (Carl).

Five participants mentioned the influence of parents' past PE experiences that they saw impacted the way parents perceived APE. Participants felt those experiences may not have been "a happy memory" (Jessie) with "bad [PE] practices from their childhood [being] carried over" (Justin) into their perceptions of APE for their children with disabilities. And in thinking back to those negative experiences, Jackie shared that parents might ask, "Is it like that for my child? Is it really that important for them?" Michelle further added, "[parents] are pulling from their worst fears about PE and they're almost asking for their child to not take physical education at all."

Passive involvement of parents

Although participants shared that most parents are generally appreciative of APE and APE teachers, they felt it did not always go beyond that in terms of being involved in APE. When contacting parents, six participants felt it was a challenge when receiving limited responses from parents. Jennifer felt:

> "it's discouraging, knowing that I'm doing everything I can and putting lots of energy and support into trying things with their kid and trying to make progress and working so very hard and then you don't get either anything or much [from parents] …"

There was a commonality that APE teachers felt compelled to initiate contact with parents in building a relationship and didn't necessarily expect a response back. It's more of teachers "reaching out and sharing" (Jennifer) "instead of [teachers] waiting for [parents] to ask what a child is doing or certain things they've been learning" (Jackie). Other APE teachers like Jerry, saw it as a challenge and felt "it doesn't even register with me anymore" regarding a lack of responses. To some degree, when parents were involved, their involvement was seen as passive. For example, Jerry mentioned whenever he shared detailed progress about a child and asked a

follow-up question, he gets "a smiley face emoji back" where he felt "Oh, I could have used a little [more] detail…" For Carl, he mentioned, "I always feel very frustrated [when parents don't respond back when asked for feedback]. Sometimes, usually when they say nothing, I'm okay…but it doesn't give me anything to work with."

Limited expectation of parent involvement

While most participants believed that parents were an important part of APE, four teachers shared limited expectations regarding parent involvement. These expectations arise from understanding that parents may be "overwhelmed [in raising a child with a disability] or not interested [in APE involvement]" (Jennifer). Although communication was an important aspect to help parents be connected to APE, Michelle felt that she doesn't "always expect a response" with Josie adding, "sometimes you have to be ready for rejection… [parents] just might not want to engage" with APE. Through their experiences of being an itinerant, parents disconnect with APE, and not overbearing parents with too much information, this led some participants to believe that "if parents [are] going to be involved [in APE], [they] will equally be involved" (Jennifer). For example, if a parent was interested in learning more about what their child does in APE, Michelle would try to send updates home "at the end of a unit or an activity that was particularly creative or interesting." In attempts to connect with parents but then receiving limited engagement, Carl felt his expectations for parents were unfortunately "the bare minimum, usually just getting feedback and responses" regarding what their child is interested in.

Being persistent and "having the grit" to have success to develop parent relationships

Although most participants perceived that parents did not see APE as a high priority for their children, this did not deter them from continuing to reach out to parents and educating them about APE and sharing their children's progress. They understood that APE is not the only subject children with disabilities may receive among the other aspects of life outside of school but was important enough to continue persevering in developing relationships and lines of communication with parents.

Not blaming, but understanding

Four participants had a desire for two-way communication with parents. This input would provide them the chance to better support their children with anything that might impact or "be a hinderance to PE participation or access" (Michelle). Additionally, six participants wished that parents had a better understanding of APE with Jackie mentioning she would appreciate parents "being curious about what we do and the services I provide." Although APE teachers did not experience two-way relationships with parents, they understood why this might not be. Ten participants held an understanding that parents may be overwhelmed raising a child with a disability and not have the time to invest in APE. "Sometimes they have two jobs…or working odd hours" (Joe) or taking their children to "outside therapies and childcare" (Michelle). Essentially, teachers believed that "life is difficult, and life is hard" (Jessie) for parents that might not have "the mental energy and the space" (Jennifer) to be involved within APE. Furthermore, Jamie understood that "parenting is hard no matter what" and "they have a lot going on at home" (Jackie). While understanding these challenges, Joe felt "it's all on us [APE teachers] to reach out to [parents]" and "we can't expect [parents] to [always] reach out to us."

Being advocates for APE

Although participants understood APEs disconnect among parents, seven teachers felt it was important to have persistence in advocating for services and their students as well as educating parents about APE. There was an understanding that "not all parents understand what APE is" (Jackie) so it was their responsibility to "help them understand the value of the service and what it provides for their child[ren]" (Jackie). This occurred through conversation or other means. For example, Josie mentioned, "Anytime I have a new student, before I even review the assessment, I go over what adapted PE is, and how it fits into the school day; what it looks like, and that helps with [parents'] understanding." During IEP meetings, Justin mentioned that "showing the [student] progress and then taking really, really in-depth data and showing what these kids are doing through the data" can be a way to help parents understand the importance of APE regarding motor skill development. Josie also presented her students' data visually "using pie charts or bar graphs" which she found had a "tremendous impact…that [parents] can see the concrete growth or lack of sometimes that their child is making during [APE] sessions." This helped her share detailed information about student progress where she can say to parents, "On this date, [your child was] performing really well towards their targeted goal and objectives…"

Educating parents about APE was seen as important because "…before you can even start to think about [developing a relationship]…the first thing that [parents] have to do is they have to understand what phys ed actually is…" (Justin). Once this occurs, parents start to "listen and they understand that it's much more than just playing and having fun" (Phoebe). Michelle also agreed by saying, "the more interaction I have with [parents and] the more detail the conversation gets about what adapted PE is and looks like, the more respect they have for what adapted PE services is and does." She further added:

> "…and that's where I'm stepping in [to help parents understand APE] and saying like, 'Lots of things have changed in adapted PE or in physical education…it's greatly changed in the last 10, 20 years.' But it's like quelling fears and kind of talking about what adapted PE can do to support their students to not make physical education a miserable experience."

Jessie summarizes the importance of educating parents by saying, "if I'm given an opportunity to educate and show and demonstrate what we do as APE teachers and how we make a difference, we can win [parents] over" to increase their priority for APE.

Persistence in communication

In understanding parents' potential difficulties raising a child with a disability, APE teachers felt that their communication philosophy was to continue communicating with parents until they are ready to do so or want to engage. Jerry mentioned, "…when the parent is ready, they'll engage with [my communication] or they'll pick up on it or maybe they're even acting on it in their own way." By understanding that parents may be overwhelmed in participating within their child's special education, Michelle mentioned that she lets "parents know how much they want to know on a day-to-day basis about their kid" which then guides how much communication she shares with them. Even though "it's kind of a bummer" for Jamie when not receiving responses from parents, she felt "it's not like I'm not gonna [communicate with parents], even if there's just one [parent] that likes it, I'm gonna keep doing it." Jerry believed that APE teachers should have persistence in communicating which will help parents make connections to the importance and benefits of APE for their children. He mentioned the drawback of not achieving this level of communication by saying "So [an APE teacher] might be doing fabulous things with a child, but

if nobody ever sees it or hears about it or knows [they're] working on it, it's kind of like a tree in the forest" where parents may not get a chance to learn about their child's APE.

Discussion

The purpose of this study was to understand the perspectives of APE teachers regarding their relationships with parents of children with disabilities. Participants felt parents were an important part of APE that provided improved benefits to their children's PA success. However, there existed a disconnect where APE was perceived as a non-priority for their children which hindered the development of collaborative and reciprocal relationships. But this did not deter participants in continuing to communicate with parents and showing genuine care towards educating them on the importance of APE and sharing their children's progress.

Teachers understand the importance of parent involvement such as improvements to student success in school and parental attitudes towards teachers (D'Haem & Griswold, 2017). Similarly, participants in this study felt parents were important in supporting their children's PA that could provide benefits to how they teach their students. However, the actual experiences of teachers connecting with parents are fraught with challenges such as feeling underprepared in developing relationships with culturally diverse families (D'Haem & Griswold, 2017; Hansuvadha, 2009; Hindin & Mueller, 2016). APE teachers in this study also experienced challenges through parent perceptions and involvement in APE and being an itinerant. When looking closer at participants' experiences, there are variations in how they overcame these challenges. Most APE teachers attempted to be proactive in developing relationships through a mix of different means of ongoing communication, educating parents about APE, or leading after school PA programs. Others held limited expectations for parent involvement and communication which in a sense, led to more passive engagement with parents. These variations

possibly suggest that APE teachers do not know how to effectively engage with parents which leads some to perceive lower competence and motivation. Although not specifically explored within this study, APE teachers may not have the appropriate training to make connections with parents that impacts their abilities to develop collaborative relationships. To mitigate this and in using the APENS (2022a) as a guide, APE master's programs are intended to provide pre-service APE teachers with the "necessary competencies, making them more highly qualified" (p. 2, Nichols et al., 2018) in teaching children with disabilities and collaborating with IEP team members including parents. Of the 40 programs surveyed by Nichols et al. (2018), 29 reported that their coursework aligned with the APENS. However, in this study, participants that received specific training through a master's in APE program expressed they did not have direct or in-depth pre-service education in connecting with parents, even though this is one standard in the APENS (2022b). Rather, most of their experiences came from in-service teaching instead of receiving specific training in their teacher education program to understand the dynamics involved in building relationships with parents. When comparing the experiences of APE teachers with formal training in a master's of APE program and participants that did not, there were few differences. Only one participant, Joe, expressed overall positive engagement with parents through the ways he was able to connect with parents. In light of this finding, APE master's programs that claim to prepare APE teachers for the field by aligning their coursework with the APENS appear to gloss over Standard 15: Communication, which may result in teachers not being fully prepared to effectively engage with parents.

Drawing similarities from general education literature, D'Haem & Griswold (2017) reported that in-service teachers felt there were few opportunities in teacher preparation programs to reflect on their personal dispositions towards culturally diverse parents, no strategies

discussed, and limited chances to engage with parents during student teaching. In another study, Kyzar et al. (2019) surveyed special education teacher education program faculty on specific coursework related to family-parent partnerships (FPP). They found that most FPP content was infused within other courses such as introduction to special education, but at a minimal level. Additionally, information about FPP was broader in scope focusing on general content and strategies to engage with parents rather than, for example, understanding the challenges of culturally diverse families regarding school involvement. The limitations to a dedicated FPP course at these universities were alarming to the authors who believed that "it is discouraging that FPP content is, on average, infused within policy, law, assessment, and behavior courses at such a low rate given the heavy emphasis IDEA places on parent participation…" (p. 332). From these studies (i.e., D'Haem & Griswold, 2017; Kyzar et al., 2019), there is an evident disconnection between teacher education programs and in-service teacher perspectives on being prepared to engage with parents of children with disabilities. Similarly, even though FPP APE content may be infused within other courses such as introduction to APE, master's programs in APE miss the chance to critically discuss the dynamics of school involvement for parents and how they navigate these spaces. In addition, it is equally important to discuss how parents perceive APE which can support in-service teachers in developing relationships, facilitating parent involvement, and sharing APE information. There is an obvious need for APE master's programs to reflect on how they are using the APENS to better prepare pre-service APE teachers to provide quality services to students and parents.

As pre-service APE teachers enter their first year of teaching, school environments can influence how they perceive their roles and relationships which impacts job satisfaction, teaching effectiveness, and feeling valued among other school professionals (Holland & Haegele, 2020;

Park & Curtner-Smith, 2018; Richards et al., 2021; Wilson et al., 2020). An environment that is unsupportive may increase emotional exhaustion leading to burnout while a supportive environment can facilitate positive relationships, increase resilience or perseverance, and increase perceived mattering which is characterized by how much APE teachers believe they are important within the school community and with other school professionals (Wilson et al., 2020). However, one of the challenges in becoming positively socialized and attempting to develop meaningful relationships is feelings of marginalization (Richards et al., 2021; Wilson et al., 2020). School members like administrators and IEP team members may hold prior, negative stereotypes towards PE that influences their understanding and interactions with APE teachers (McNamara et al., 2021; Richards et al., 2021; Samalot-Rivera & Lieberman, 2017; Wilson et al, 2020). The current study found similar experiences of marginalization by APE teachers but with parents of children with disabilities. When first interacting with parents, participants learned that parents held prior assumptions of PE that influenced the way APE services were perceived and how APE was prioritized. As discussed by some participants, one aspect that may have influenced parents' marginalization of APE was their past PE experiences. Sheehy (2006) reported that parents filled gaps about their child's PE with their own experiences in PE that may have been outdated or inaccurate. Parents' inaccurate assumptions may prevent them from seeking information about their child's PE progress and perceiving it as less valuable in their child's education. Parents of children with disabilities may also fill gaps about APE through their own PE experiences, which limit APE teachers' abilities to develop reciprocal relationships. In agreement with Ferry and Westerlund (2023) and Richards et al. (2018), Wilson et al. (2020) argues that "APE teacher education programs should emphasize training that prepares preservice teachers to navigate the complex, sociopolitical realities of teaching a marginalized subject area"

(p. 626). The authors in this study also agree for pre-service APE master's programs to support APE teachers in understanding the social dynamics they will encounter in their first year, especially in developing relationships with parents who may be influenced by past PE experiences. By understanding the realities of their positions in schools and among parents of children with disabilities, APE teachers can be better prepared to develop skills and strategies to facilitate more collaborative relationships and provide opportunities for parents to be active in APE.

Resilience is characterized by an individual's perseverance through stressful social environments (Yonezawa et al., 2011) which has been examined to prevent burnout and increase job satisfaction and retention (Howard & Johnson, 2004). Specific to APE, Wilson et al. (2020) found that APE teachers perceived high resilience within their workplace that improved perceptions towards their socialization within the school setting. Similarly, findings from this study found that even though they felt marginalized, APE teachers were resilient in continuing to educate parents about the value of APE and their roles on their child's IEP. This may have been influenced by participants believing parents were an important part of their child's PA development and wanting to develop collaborative relationships. Further, participants may have held higher perceived mattering due to understanding the importance of their profession by focusing on individualizing and directly teaching children with disabilities (Park & Curtner-Smith, 2018; Wilson et al., 2020) and understanding special education law (i.e., being a direct service on children's IEPs; Richards et al., 2021). However, other participants experienced additional challenges of time and the role of itinerant which impacted their abilities to develop relationships with parents. These challenges were also captured by Richards et al. (2021) and Holland and Haegele (2020) who found that this impacted APE teachers' abilities to develop

relationships and improve work conditions. Findings from the current study confirmed the difficulties of participants in developing relationships with parents as well as ongoing communication. Although there may be little to reduce the nature of the itinerant role and time, it is an opportunity to examine what strategies teachers can utilize to ease stress and allow for more communication with all members of the IEP team. Additionally, there is an opportunity for APE master's programs to do more in preparing pre-service teachers such as offering opportunities for itinerant in-service teachers to attend seminars or other classes regarding time management and ways to provide regular but quick communication with parents. These challenges can be discussed with pre-service APE teachers in a safe space to learn, make mistakes, and to receive feedback rather than learning on the job and figuring it out on their own through trial and error as participants in the current study experienced.

To establish positive partnerships among parents and teachers, communication is an important factor both through its frequency and quality (Chu, 2018; D'Haem & Griswold, 2017; Hindin & Mueller, 2016). Ongoing communication was used by participants to help parents learn more about their children's APE progress but also to educate them about the importance of APE. One way they established this was through sharing visual information which they felt better informed parents and increased their overall understanding of APE. Other literature has reported similar findings regarding the richness of visual communication of student progress with parents (Higgins & Cherrington, 2017; Kawa'a, 2022; Strickland et al., 2010; Toner, 2017). For example, Higgins and Cherrington (2017) explored parent perspectives towards using ePortfolios to communicate their children's progress which included artifacts such as student work, progress, and achievement. Parents reported that it helped them better understand their child's learning at school while also facilitating conversations with their child and teachers. In addition, Strickland

et al. (2010) found that immigrant parents felt more connected to the school community and more comfortable in interacting with teachers when provided photo narratives of their children's learning. Using visuals such as photos or videos might be more beneficial in influencing parental understanding and value for APE, thereby increasing more collaborative relationships to occur. Additionally, it may not matter how this approach is taken whether through pictures, videos, apps, or inviting parents to observe classes, but selecting appropriate media that will work for most parents while considering, as participants did, the challenges in raising a child with a disability.

Future Research and Limitations

There is growing literature that reports the positive influence parents' perceived competence and enjoyment in PA has on children's PA levels and opportunities (Ku & Rhodes, 2020). However, other studies have found that past PE experiences can lead to negative beliefs about and lower levels of PA (Lago-Ballesteros et al., 2019; Strean, 2009) that can impact the way parents perceive APE for their children with disabilities. Future research can more closely examine the influence of parent past PE experiences on parent perceptions towards APE and PA as well as what impacts this has on APE teachers' abilities to develop relationships with parents.

Findings from this study suggest that visual APE information may provide parents with better understandings of their children's progress. A future research study can compare the different modes of communication to identify which may provide more efficient information to parents. In particular, Ku et al. (2021) discussed media richness theory and its use to determine varying levels of media richness from lean to rich that influences how likely parents will understand and draw meaning from received communication. This theory can be used to frame a study in determining the richness of different APE communication strategies (e.g., picture, video,

email, application). In addition, parents can also be surveyed in terms of their preference for APE communication. Overall, this may alleviate the challenges experienced by APE teachers in developing connections with parents.

Lastly, this study drew on the premise that APE master's programs may not sufficiently prepare APE teachers to develop relationships with parents. A future study can examine what content APE master's programs include regarding the APENS Standard 15: Communication similar to the method in Kyzar et al. (2019) by surveying faculty and examining coursework. Future research should look more closely at training of APE master's programs and parent involvement, and specifically where and how this information is presented across the curriculum. It may be infused into other coursework or be a stand-alone course. Future research should also examine pre-service and in-service teachers and on how additional information about facilitating parent involvement during pre-service training translates into in-service APE teachers making greater efforts to reach out and connect with parents.

One limitation in this study was that limited data was gathered focusing on the specific training on parent involvement received by participants. This may have provided more clarity on potential disconnections from APE master's programs and preparation for developing relationships with parents. Additionally, eligibility criteria did not include participant training in an APE master's program which may have provided more evidence to the potential disconnect of the APENS and teacher preparation programs.

Conclusion

Parents of children with disabilities are an important part of their children's PA development. APE teachers are in a position to support parents in learning about how to provide PA at home

and instill the importance of PA. However, this study explored the challenges in developing relationships with parents that revolved around disconnection in understanding APE, parents' value of APE, and the role of itinerant. Aspects that may improve relationships are sharing visual APE information and developing resilience. To make a real impact, APE master's programs and health and PE programs should include content related to teachers understanding the social dynamics and perceptions stakeholders have towards APE that can facilitate more positive relationships.

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Table 1: Participant Demographics

Participant	Gender	Ethnicity	Age	Years Teaching APE	School Setting Taught	Grade Levels Taught	Primary Role	CAPE	APE Training	In Master's program, APE Training on Parent relationships	Reflections of training on parent relationships
Jennifer	Female	White American	35-44	18	Public	E, M, H	Itinerant	Yes	Master's in APE	Yes	Questions regarding the level of parent involvement and knowledge of APE and what their child(ren) are doing in APE
Justin	Male	White American	25-34	7	Special school	M, H, Transition 18-21 years old	School-based	Yes	Master's in APE	No	
Michelle	Female	White American	25-34	10	Public	E	Itinerant	Yes	Master's in APE	Yes	Very broad, general recommendations regarding keeping parents informed about APE, but nothing like what I

											experienced in the school system as a teacher
Phoebe	Female	White	45-54	24	Public	M, H	Itinerant	No	APE certificate		
Jackie	Female	White American	18-24	2	Public	E, M	Itinerant	No	Master's in APE	No	
Joe	Male	Polish, White American	35-44	18	Public	E	School-based	Yes	Master's in APE	No	
Jessie	Female	White American	55+	23	Charter and Private	E, M, H	Itinerant (virtual instruction)	Yes	APE certificate		
Jerry	Male	Caucasian	35-44	5	Public	E	Itinerant	No	PE experiences		
Jamie	Female	White American	55+	37	Public	E	Itinerant	No	Undergraduate in PE with APE authorization		
Josie	Female	White American	45-54	25	Public	E, M, H	Itinerant	No	Master's in PE		
Carl	Male	White American	25-34	5	Public	E, M, H	Itinerant	No	Undergraduate in PE with one APE course		

Note: APE = adapted physical education; CAPE = certified adapted physical education; E = elementary school; H = high school; M = middle school; PE = physical education