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Aims: The aims of this study were to explore perceptions of school-based physical therapists (SBPTs) about professional development and effective practice and to create a conceptual framework to help understand how SBPTs become effective practitioners who continue to learn and grow professionally as clinicians in an educational setting.

Methods: Twenty school-based physical therapists completed a demographic questionnaire and a semi-structured interview. Guiding interview questions focused on SBPTs' perceptions of roles and responsibilities, professional development, barriers, and recommendations.

Results: Participants identified roles and personal qualities of effective SBPTs. Three concepts for the process of professional development were developed: educational context and culture, barriers to effective practice, and strategies for professional development.

Conclusion: The development of effective practice for SBPTs is a multifaceted, iterative process involving a unique set of knowledge, skills, and behaviors that allow them to fulfill their roles. The process takes time and effort to understand the self within the educational context and culture, recognize barriers to effective practice, and develop strategies for success. A conceptual framework was developed to assist SBPTs in implementing a plan for professional development that leads to effectively providing services to students and functioning as essential members of the educational team.

Key words: school-based physical therapy, educational setting, professional development, physical therapy services, qualitative study

The Individuals with Disabilities Education Act (IDEA) defines physical therapy as a related service provided to students with disabilities by a qualified physical therapist (PT) (IDEA, 2004). The American Physical Therapy Association (APTA) further defines a school-based physical therapist (SBPT) as a related service provider who "designs and performs therapeutic interventions, including compensation, remediation, and prevention strategies and adaptations, focusing on functional mobility and safe, efficient access and participation in educational activities and routines in natural learning environments" (APTA, 2016). Furthermore, the Academy of Pediatric Physical Therapy (APPT) describes SBPTs as team members who work within a school culture to improve student function in the least restrictive environment (LRE) based on educational legislation and regulations that emphasize student independence, participation, inclusivity, and academic achievement (APPT, 2012).

The ability to function as an effective practitioner is predicated on the attainment of competency, defined by the APTA as "The possession and application of contemporary knowledge, skills, and abilities commensurate with an individual's (physical therapist or physical therapist assistant) role within the context of public health, welfare, and safety" (APTA, 2012). The APTA also emphasizes the importance of upholding the ideals described in the Core Values of the profession (APTA, 2019), the Guide to Physical Therapist Practice (APTA, 2014), the Standards of Practice for Physical Therapy (APTA, 2020a), and the Code of Ethics (APTA, 2020b) as important components of physical therapy practice that contribute to the highest level of care for clients (APTA, 2012).

Similar to other health care professional organizations, the APTA stresses the importance of a well-structured professional development plan (PDP) for continuing professional development (CPD) to regularly update knowledge and skills necessary for providing safe,

effective care to clients (APTA, 2012; Manley et al., 2018). Goal-oriented PDPs that include a variety of educational and other professional activities to enhance competency and facilitate professionalism, accountability, team building, and interpersonal communication (Filipe et al., 2014) allow physical therapists, "to critically review their skills and knowledge, and continuously keep up to date with changes in practice," (French & Dowds, 2007). In addition, PDPs promote lifelong learning and encourage clinicians to explore additional PT roles and social responsibilities that may extend beyond their foundational entry-level education (O'Loughlin et al., 2005). Relative to physical therapy practice in schools, the Academy of Pediatric Physical Therapy (APPT) created the *Professional Development Plan for SBPTs* (referred to as the *APPT Plan* in this paper) in 2018 to "identify a skill-based pathway to become competent…" (APPT, 2018b). The document includes nine content areas, with accompanying competency-related statements, related clinical skills, a self-rating scale, professional development opportunities and resources, and a method for documenting evidence for achievement (APPT, 2018b).

Multiple barriers to professional development of SBPTs exist. For example, entry-level education primarily prepares graduates to practice as generalists in medical settings (Hansen, 2006; McEwen, 2003; Rapport, 2003), rather than specialty areas, such as school-based practice; and post-entry-level professional development opportunities are limited due to insufficient continuing education opportunities, lack of research about school-based physical therapy, lack of motivation to explore resources, and lack of awareness of resources or how to access them (Hansen, 2006; Jeffries et al., 2018; Schreiber et al., 2008; Wynarczuk et al., 2017). As a result, SBPTs new to practicing in schools often perceive themselves as unprepared and report relying primarily on on-the-job training to gain competence (Hansen, 2006; Rapport, 2003).

Inconsistencies in practice patterns due to lack of SBPT confidence; differences in service delivery between new and experienced therapists; differing interpretations of federal and state laws and guidelines due to a lack of or variations in the description of roles, responsibilities, and guidelines for the provision of SBPT services (APPT, 2018a; McEwen, 2009; Vialu & Doyle, 2017); lack of team cohesiveness; and reliance on colleagues and supervisors rather than formal preparation or evidence-based research are also seen as barriers (Ferro & Quinn, 2020; Holt et al., 2015; Kaminker, et al., 2004; Schreiber, et al., 2008; Thomason & Wilmarth, 2015; Wiley et al., 2022). Conflicts between federal and state education laws and physical therapy state practice acts and regulations can also create challenges when working in an educational setting (APPT, 2014).

Several authors have identified the need for professional development and eliminating barriers to effective practice for SBPTs (Effgen et al., 2007; Rapport, 2003). Understanding SBPTs' perceptions about how they develop professionally could facilitate growth for PTs working in schools, and ultimately enhance the quality of physical therapy services for students with disabilities in the educational environment. The aims of this qualitative study were, therefore, to 1) explore perceptions of school-based physical therapists (SBPTs) about professional development and effective practice, and 2) create a conceptual framework to help understand how SBPTs become effective practitioners who continue to learn and grow professionally as clinicians in an educational setting.

Methods

Participants

This study was approved by the sponsoring institution's Institutional Review Board. To be included in this study, participants were required to be SBPTs from Michigan with at least

one year of experience working in schools. SBPTs working only in Early Intervention were excluded since they typically provide services in the home. To best address the research question and professional development experiences of SBPTs of different ages, years of experience, geographic areas (urban, suburban, and rural), and school districts of different sizes throughout the state, initial recruitment was through the Michigan Alliance of School Physical and Occupational Therapists (MASPOT). Because MASPOT is a statewide organization that supports school therapists, this was felt to be an effective way to recruit a diverse group of participants. An invitation to participate in the study was posted on MASPOT's listserv, asking interested SBPTs to contact the principal investigator. Emails describing the study were then sent to those members who expressed an interest. In addition, convenience and snowball sampling were used to identify other SBPTs interested in study participation. Each participant signed an informed consent and was assigned a unique identifier for identity protection.

The twenty female SBPTs who participated in the study provided services across all special education certifications (e.g., Severely Multiply Impaired, Autism Spectrum Disorder, Early Childhood Special Education). Mean age was 48.3 years ($\pm$8.8), mean number of years of experience was 23.3 ($\pm$8.2), and mean number of years as a SBPT was 11.2 years ($\pm$8.2). Although the mean SBPT experience of 11.2 years indicates that participants had numerous years of practice as SBPTs overall, there was a wide range of experience (1.5 to 31 years), with 7 participants having less than 5 years of experience, 8 having 6-15 years, and 5 with over 15 years. This broad range of experience allowed for diverse perspectives on SBPT practice and professional development. Participants also had a variety of entry-level degrees and post-entry level education/training; worked in rural, suburban, and urban settings as both employees and

contracted staff; and had variations in caseload numbers. See Table 1 for demographic data for each participant.

Procedure

Participants completed a demographic questionnaire and participated in an individual interview. The demographic questionnaire consisted of closed-ended questions about gender, age, entry-level education, post-entry-level degrees or certifications, experience, geographic setting, type of employment, and caseload. Guiding open-ended questions for the semi-structured interviews were developed using current literature and the experiences of the authors who had worked as SBPTs and/or had experience conducting qualitative research. Guiding questions focused on four areas: roles and responsibilities (e.g., What do you think is the primary purpose of school-based physical therapy?), development (e.g., Tell me about some of the things that helped you develop as a SBPT?), barriers (e.g., Do you feel there were/are any barriers or obstacles to becoming a knowledgeable and effective practitioner as a SBPT?), and recommendations (e.g., Do you have any specific advice you would give to an entry-level/new graduate PT who was interested in working as a SBPT?).

Individuals interested in participating in the study were sent an email with a study description and the demographic questionnaire. Those who returned the questionnaire were contacted to schedule an online interview. The 60-90 minute interviews took place between March and June of 2020 and were recorded and transcribed.

Data Analysis

Demographic data was analyzed using descriptive statistics, and the constant comparative method was used to analyze the transcribed interviews (Merriam & Tisdale, 2016). Prior to beginning qualitative data analysis of the interviews, bracketing was conducted to identify

authors' "preconceived beliefs, values, and assumptions about the research topic" (Hays & Singh, 2012) in order to minimize any existing biases that could have impacted study outcomes. These reflective discussions continued throughout data analysis to ensure that results accurately represented the perceptions of the participants.

Transcripts were reviewed by the principal investigator and open-coded to identify keywords and phrases (Merriam & Tisdale, 2016). A Microsoft Excel Spreadsheet, created to organize and visualize the coded data, was shared with all other authors, who met to further compare, contrast and refine the open codes using an inductive process. Axial coding was then used to further review, summarize and organize participants' responses (Merriam & Tisdale, 2016) resulting in two major categories of data: 1) characteristics of effective SBPTs and 2) themes related to professional development. Selective coding resulted in further refinement of the characteristics of effective SBPTs and the development of concepts based on relationships between the themes (Merriam & Tisdale, 2016). All phases of this iterative data analysis process continued until researchers could no longer identify any "new data from subsequent reviews of participants' transcripts," indicating data saturation. (Merriam & Tisdale, 2016, p. 350). Following researcher consensus on the SBPT characteristics and themes and concepts, a conceptual framework was developed to illustrate relationships among the data.

The Standards for Reporting Qualitative Research was used to confirm the quality and completeness of the research study (O'Brien, et al., 2014, p. 417). Credibility, confirmability, dependability, and transferability support the trustworthiness of the results (Hays & Singh, 2012). Credibility was enhanced through the use of triangulation; the rich, detailed descriptions provided by participants to support themes and concepts; saturation of the data; and the use of member checks to clarify the participants' responses following data collection (Merriam &

Tisdale, 2016). Confirmability was established by having multiple researchers, with and without school-based experience, review the data. Triangulation, the use of multiple quotes, and an audit trail enhanced the dependability of the findings (Merriam & Tisdale, 2016). The description of participants, geographic settings, caseload populations, and research methods supports transferability which allows readers to determine the applicability of the findings to their work experience and settings (Hays & Singh, 2012).

Results

Characteristics of Effective School-Based Physical Therapists

Participants described professional roles and personal qualities reflective of the knowledge, skills, and behaviors that they felt were important for effective SBPT practice. Roles and responsibilities reflected behaviors associated with having the knowledge necessary for effective school practice; providing direct services to children; the importance of being a team player through consultation, collaboration, and sharing expertise with internal and external team members and families; and serving as an advocate for the profession and the children to whom SBPTs provide service. Personal qualities reflected affective behaviors related to appreciating SPBTs' positive personal attributes and fostering personal relationships. SBPT roles with responsibilities reflective of those roles; personal characteristics of SBPTs with associated behaviors; and supporting quotes for roles and personal qualities can be found in Table 2. Each role and personal quality is bolded and underlined followed by a bulleted list of respective responsibilities and behaviors.

Themes and Concepts

Based on participant responses, three concepts, with accompanying themes regarding the process of professional development for becoming an effective SBPT were developed:

educational context and culture, barriers to effective practice, and strategies for professional development (Table 3). Each concept with accompanying themes and supporting quotes is described below.

Educational Context and Culture

Reflecting on existing knowledge, skills, and behaviors. Participants felt that existing knowledge, skills, and behaviors, such as understanding normal development and having diverse employment experiences, broadened their perspectives and served as a foundation for gaining new knowledge, determining interventions, and engaging in critical thinking and problem-solving. One participant stated:

> So many times in my career, my medical background has been so helpful...just the knowledge I gained from diagnoses and equipment, and orthotics and prosthetics I learned from working in the medical community…if I had gone right to the school, I would have missed all that. I don't think I'd be as good at my job if I didn't have that background (P14).

Participants also emphasized the value of the positive personal characteristics they brought to the school setting and felt that qualities like patience, compassion, their love of working with children, good judgment, and flexibility enhanced their ability to be effective in the school setting. For example, they described dealing with schedule modifications (field trips, assemblies, absences); adapting to time, space, and equipment limitations; and applying different service delivery models (individual versus group intervention, "pushing-into" versus "pulling out" of the classroom) to meet the needs of individual students as issues that required flexibility. Regarding the importance of positive personal characteristics, one participant noted that SBPTs "have extremely good judgment…they're well-spoken…creative…able to work well with very little in

the way of materials and equipment… good with kids, and they're extremely good at expressing themselves in the written form" (P5). Interpersonal behaviors that facilitate becoming part of the context and culture of the educational system seemed to be as important as knowledge and psychomotor skills to participants. They stressed the importance of regular and effective verbal and written communication that allowed them to foster positive relationships with school personnel, families, students, and outside professionals, citing the importance of being able to communicate clearly with people from "all walks of life" (P15) and "translate things into layman's terms" (P13).

Understanding educational laws, regulations, policies, and personnel. Understanding educational terminology, such as the least restrictive environment and curricular goals; frequent communication with school personnel and families; and understanding the roles of IEP team members in establishing multidisciplinary goals for students were described as important components of practicing in a school setting. According to one participant, "So at the very start, if a therapist intends to work with pediatrics in the school environment, you have to know all of the laws, IDEA, what ADA [Americans with Disabilities Act] stands for…this is a very important aspect" (P15).

Comparing/contrasting the educational versus medical setting. Adapting to the "school culture" was a recurring topic throughout the interviews. For example, as compared to working in a medical setting, participants discussed how the educational service delivery model focuses on school function and curricular expectations, the need to use assessment materials that can specifically target problems within the educational setting, and eligibility criteria that reflect laws governing therapy services in schools. In addition, the influence of students' peers and the relative absence of family members were cited as important differences in the educational setting

versus the medical setting. One SBPT provided this advice to those seeking employment as therapists in a school setting:

> …start to think with a different head on. Start to think with your academic model versus your medical model and then start to see and make sure you're looking at everything through the lens of the academic model and how your role is a little bit different than it is in a medical setting. Think about treating the function in the school and not just the deficit that the child has (P4).

Embracing rewarding aspects. This theme encompassed the positive aspects of being SBPTs. Participants enjoyed observing students' long-term progress, sometimes from birth through graduation. They described the benefits of building rapport with families, teachers, staff, and students and making a positive impact on students throughout their lives, rather than worrying about insurance reimbursement as they would in the medical setting. One participant said:

> I love my students. And I love education…I love being a part of developing little people to be the healthiest, happiest, most adjusted that we can make them as adults. And I love being a part of that process…I can be a source of joy, safety, and contentment while I'm working on helping them to improve their life (P7).

Barriers to Effective Practice

Acknowledging personal and professional limitations. Participants expressed frustration with limited entry-level preparation, insufficient continuing education related to school-based physical therapy, and difficulty applying the limited scholarly literature that exists relative to school-based practice. As stated by one participant:

> …you're supposed to apply your knowledge into an educational model, into a school system, which is so different from any of the medical training that we were provided in the classroom. It's a very unique system. And sometimes I joke, it's like fitting a round peg into a square hole (P7).

Multiple participants expressed difficulty identifying continuing education opportunities about school-based physical therapy in their geographic location and applying content from continuing education courses to school practice; however, many appreciated the increased availability of online conferences, particularly due to the COVID-19 pandemic.

Recognizing organizational barriers. Although participants appreciated the independence their school position offered them to develop skills like efficient time management, organization and handling complex workloads, they also felt that limited interactions with colleagues, especially other SBPTs, sometimes lead to feelings of isolation as many of them worked alone, with no home base/office to congregate with colleagues. A participant stated, "Use all of your resources from other therapists that you can call on…reach out to people when you need it, so you don't feel alone. I think a lot of [SBPTs] can really feel alone" (P11). Participants described limitations in time, budget, administrative support, and understanding of the role of the SBPT. One participant stated:

> …we have to seek out all of our own continuing education and professional development as a school-based PT because our supervisors and our administration don't really know how to direct us. So, we have to be motivated to do that on our own, because we are being supervised by educators, not physical therapists (P7).

Navigating multiple inconsistencies. This theme highlighted the dissonance felt by many participants. They mentioned the evolution of newer practice patterns, such as an increase in

service provision in the classroom, and more frequent use of different functional outcome measures to establish eligibility and demonstrate progress, as issues that had to be addressed. Discrepancies between state and district guidelines, different teachers, special education programs, and school districts were also highlighted. For instance, a participant said:

> I service so many buildings. Each building…has a different feel to it. There are some where I am looked at as the resource, and there's some where they're annoyed that I'm interrupting, and they don't see the value of me pulling their kids [out of class] (P5).

Lastly, acceptance and recognition within the educational team seemed to be different for participants who were school employees versus those who were contracted, potentially leading to additional inconsistencies.

Strategies for Professional Development

Appreciating the importance of experiential learning. Participants talked about their previous experiences and on-the-job training as factors affecting their progress toward effectiveness. They attributed much of their knowledge and skills to practice over time and trial and error. Mistakes became teaching moments as they continued to gain confidence through interactions with school personnel, students, and families. As stated by one participant:

> Oh, I feel like you can always learn more, but I think I'm more competent than most just because I have made so many mistakes and looked at them as learning opportunities. And I'm not afraid to ask questions and to look stupid if it means that I'm going to learn more and do better in the future (P5).

Fostering collegial relationships. Many participants felt that embracing the educational culture through respectful interactions with educational colleagues and embracing educational values were methods that could foster collegial relationships and help pave the way to

professional growth in the school setting. They referred to themselves as team players, describing the importance of collaboration with the IEP team and other school personnel, parents, students, and outside professionals as a way to adapt and learn from others and reinforce the objectives of all team members and families. One participant remarked, "I relied on the OTs, disciplines like social work, teachers, I relied on more different disciplines to kind of guide me in what I should be doing" (P19). Mentorship was also often described as critical for achieving best practice as SBPTs: "…I think just finding yourself a good mentor, it's the best thing you can do" (P14). Several participants expressed gratitude for the guidance and support they received from professionals within and outside of the school setting and described professional association memberships as important for continued professional growth and success.

Participate in lifelong learning. A strong commitment to lifelong learning was reflected in many statements made by participants, with continuing education being the most mentioned strategy for becoming an effective SBPT. One participant reported, "My resume is like probably five pages long of continuing ed. I strongly, strongly believe in it. I think I learned way more in that than I ever did in school" (P10). Participants also noted that utilizing evidence-based practice and professional resources was an important component of lifelong learning, with one participant noting, "I think we need to stay up to date on medical information and research and understand evidence-based practice about how kids learn and apply that in a school-based setting" (P7).

Accessing the internet. The influence of the internet was described as very impactful, as therapists used the internet to access social media, network with colleagues, and access professional resources, especially during the COVID-19 pandemic. For example, many of the SBPTs appreciated the availability of professional organization websites for networking and

accessing professional associations; "…because I can access a lot of articles and stuff online. And be up to date as far as what's going on with statewide legislation" (P6). Participants also expressed enthusiasm for the use of Pinterest and Facebook groups related to the profession. One participant emphasized that social media is:

> very valuable...because there's new ideas, sharing ideas, which is very important…there are people who share research in there. I ask questions if I'm stumped. Which is very often with a kid…very important, I cannot stress enough. I've seen a lot of therapists who don't want to take that route, but I think it's a big mistake (P15).

Discussion

Participants in this study described their perceptions about the roles and personal qualities they felt SBPTs needed to aspire to in order to be effective practitioners. They identified multiple factors important for professional development and effectiveness, which are reflected in the concepts of educational context and culture, barriers to effective practice, and strategies for professional development.

Based on the results of this study, a review of the literature, and APTA documents, (APPT, 2018b; APTA, 2014; APTA 2019; APTA 2020a; APTA 2020b) a conceptual framework (Figure 1) was developed to illustrate the interacting variables that influence the complex process of how SBPTs develop professionally and attain/maintain effectiveness. The bottom box, *Understand Self in the Educational Context/Culture*, reflects the first concept and its accompanying themes as shown in Table 3. These four themes form the basis for understanding what SBPTs do or do not know about the educational setting and their roles and responsibilities within that environment. Additionally, they can serve as a starting point for the creation of a professional development plan (PDP) to help SBPTs become part of the educational

context/culture and move toward effectiveness. The cyclical PDP process, as illustrated in the center of the framework, consists of (1) conducting a self-assessment relative to competencies and attributes outlined in professional documents and employment expectations to determine the SBPT's current level of understanding about working effectively in the educational setting; (2) developing goals related to knowledge, skills, and behaviors necessary for role fulfillment and effective practice; (3) identifying barriers to overcome in order to accomplish goals; (4) selecting strategies to overcome barriers; and (5) implementing the plan, including choosing the best strategies, establishing a timeline, and determining if goals have been achieved. It is noteworthy that the first step of self-assessment, also includes the word "re-assessment," as SBPTs must continually re-assess their level of competence to account for changes in themselves, the profession, and the educational setting. The top box, *School-Based Physical Therapist Effectiveness,* illustrates the ultimate objective of becoming an effective SBPT based on a successful PDP that builds upon the ability of SBPTs to understand themselves within the educational context/culture. The gray double-sided arrows illustrate the reciprocal and ongoing nature between *Professional Development* and *Understand Self in the Educational Context/Culture,* (bottom box) and between *Professional Development* and *School-Based Physical Therapist Effectiveness* (top box). Similarly, the curved arrows between *School-Based Physical Therapist Effectiveness* and *Understand Self in the Educational Context/Culture* illustrate the cyclical and ongoing nature of moving toward effective practice, as the SBPT, the profession, and the educational setting continue to evolve. Finally, the large cross-hatched arrow above *School-Based Physical Therapist Effectiveness* illustrates how using a professional development plan to become an effective SBPT can improve the quality of care provided to students in the educational environment.

The findings of this study were consistent with previous literature regarding barriers to professional development, including limited entry-level preparation, inconsistent practice patterns, conflicting legislation/guidelines, lack of awareness and use of resources, on-the-job training; and the continued need for a variety of opportunities for professional development (Hansen, 2006; Rapport, 2003; Schreiber et al., 2019; Vialu & Doyle, 2017). Our participants, however, did not discuss some of the professional development strategies recommended by the APTA (e.g. academic courses, independent study, journal clubs, professional committees) or the need for a professional development plan (APTA, 2012). Additionally, they did not emphasize the following factors found in the *APPT Plan's* Competency and Related Statements: student access to community/recreational activities, supervision of personnel and professional students, serving as a leader or manager, and participating in program evaluation and clinical research activities (APPT, 2018b). Participants did, however, provide some new insights as they (1) expanded the description of roles and characteristics of SBPTs to include educating and facilitating students' interactions with their peers; (2) emphasized the use of problem-solving, the importance of understanding the educational context/culture, and the significance of positive personal attributes for effectiveness as a SBPT, and (3) the rewarding aspects of being a SBPT.

The results of this study highlight the need for educating SBPTs about the importance of having a process for becoming effective practitioners by building on what they know and using PDPs. While the participants described some of the professional development resources and strategies they used, none of them talked about having a specific process for doing so and none mentioned the existence of the *APPT Plan.* Educating SBPTs about the contents and processes outlined in the *APPT Plan* could have an impact on their professional development and effectiveness in several ways. For example, having a detailed, specific, individualized, and

purposeful PDP as outlined in the *APPT Plan* would highlight specific areas of need and a way to measure progress toward effectiveness. Additionally, because the *APPT Plan* includes competencies and clinical skills not identified by our participants, such as leadership, management, supervising entry-level physical therapy students, clinical research, and involvement in professional activities and committees, increasing SBPTs' familiarity with the APPT Plan could help them identify areas of need that they may not have thought of as ways to improve their effectiveness through involvement in physical therapy professional organizations and the school culture, and expanding their roles as SBPTs in an educational setting. Identifying barriers to and strategies for addressing the goals reflected in the plan that are relevant to each SBPT's specific learning needs, work/licensure requirements, work-life balance, and monetary and time limitations may help them better focus their efforts to continue to develop professionally. Further, choosing individualized strategies and resources, as described in the *APPT Plan* and by the participants in this study, could help SBPTs remain patient, curious, and motivated to continue on the path toward becoming and remaining effective practitioners in an organized, efficient, and personally accountable way.

While the *APPT Plan* offers a pathway for professional development, participants in this study discussed some aspects of their professional development that are not found in that document. When creating a PDP, it may, therefore, be helpful to also consider the following ideas that participants in this study felt were important for professional development: (1) understand the educational context and culture to determine how SBPTs can best incorporate the shared values and beliefs of the educational system into their professional identity (2) emphasize the use of the internet as a resource for professional networking and accessing professional documents and the literature; and (3) incorporate affective/behavioral areas of competence

reflective of the APTA Core Values as a strategy. It should be noted that neither the *APPT Plan* nor the participants in this study specifically discussed the importance of a timeline or the application of APTA Core Values or Standards of Practice as important assessment and goal-setting tools for a PDP. Adding these factors to the use of PDPs could also prove to be helpful.

Participant responses (Tables 2 and 3) suggest that professional development as a way to become an effective SBPT is a multifaceted and complex process that does not develop overnight and requires more effort and experience than simply reading literature or participating in continuing education courses. Acknowledging and accepting the following may help decrease the frustration felt by PTs who are new to practicing in the educational setting and feel ill-prepared to do so:

- Although entry-level DPT program faculty strive for curricular improvement and their students have opportunities for SBPT clinical experiences and/or electives, entry-level education is meant to prepare students to practice as generalists, rather than for practice in specialty settings.
- Differences between the educational and medical settings exist and must be understood and considered for successful practice in schools.
- Becoming an effective practitioner and contributing member of an organizational culture in any practice area takes time and experience.
- Personal attributes (e.g. independence, flexibility, creativity) and the ability to foster interpersonal relationships, as well as APTA Core Values, are as important as knowledge and skills for effectiveness in the school setting.
- An individualized, reflective PDP that utilizes multiple strategies and resources may offer the best avenue for attaining and maintaining effectiveness as a SBPT.
- Keeping up to date with changes in the educational culture and the profession and being open to new strategies and professional opportunities (e.g. management, leadership, clinical research) that emerge from those changes are important parts of professional development.

Limitations of this study include the use of a convenience sample; participants from a single state; and use of the MASPOT listserv, as those members may not necessarily represent

SBPTs not belonging to such professional organizations. Future research could focus on effective ways to improve professional growth for SBPTs, expanding this study to include additional states, and exploring SBPT awareness and use of the *APPT Plan*.

Conclusions

The development of effective practice for SBPTs is a multifaceted, iterative process involving a unique set of knowledge, skills, and behaviors that allow them to fulfill their roles and responsibilities effectively. The process takes time and effort to understand the self within the educational context and culture, recognize barriers to effective practice, and develop strategies for success. The conceptual framework provides a model that may assist SBPTs in implementing a professional development plan for continued growth, leading to continued effectiveness as a SBPT who can successfully provide services to students and function as an essential member of the educational team.

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