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Comprehensive School Physical Activity Program and Physical Literacy: Exploring Preservice Elementary Classroom Teachers' Perspectives

Joonyoung Lee[1], Tao Zhang[1*], Tsz Lun (Alan) Chu[2], Xiaoxia Zhang[3], Karen H. Weiller-Abels[1], Jean Keller[1]

[1]Department of Kinesiology, Health Promotion and Recreation, University of North Texas, Denton, USA
[2]Department of Psychology, University of Wisconsin, Green Bay, USA
[3]Department of Kinesiology, University of Texas at Arlington, Arlington, Texas, USA
Email: *Tao.Zhang@unt.edu

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Abstract

This study aimed to examine preservice elementary classroom teachers' perceptions of the comprehensive school physical activity program (CSPAP) and physical literacy (PL). Participants were 192 preservice elementary classroom teachers enrolled in a public research university in the US. Three themes were found between the CSPAP and the psychomotor domain of PL: 1) improving physical fitness (PF) and motor skills; 2) increasing physical activity (PA) time; and 3) promoting a healthy lifestyle. The CSPAP contributed to the PL's cognitive domain through three themes: 1) learning knowledge about PA benefits; 2) improving academic performance; and 3) teaching the importance of PA/PF to social agents. In the affective domain of PL, the four CSPAP themes included: 1) increasing PA enjoyment; 2) building social skills; 3) improving self-esteem; and 4) promoting social agents' support and value. The findings underline the important role of the CSPAP in developing preservice elementary classroom teachers' physical literacy.

Keywords

Physical Activity, Physical Literacy, Physical Education, Learning Domains, Preservice Classroom Teachers

1. Introduction

In recent years, concerns have been raised about school-aged children's physical

inactivity and sedentary behavior, which has led to unhealthy risk factors for obesity (Fakhouri, Hughes, Brody, Kit, & Ogden, 2013), cardiovascular disease (Institute of Medicine, 2013), and psychosocial and cognitive impairment (LeBlanc et al., 2012). The growing research evidence indicated that total physical activity (PA) is positively associated with physical, cognitive, psychosocial health outcomes in children and youth (Chaput et al., 2016). To promote school-aged children's PA, national policy and federal/state legislation have established PA promotion programs, such as the *Let's Move* campaign and the *National Physical Activity Plan*. Comprehensive school physical activity program (CSPAP) has been highlighted in recent research, which used a comprehensive approach to provide a variety of PA opportunities for students in and around school settings (Erwin, Beighle, Carson, & Castelli, 2013).

1.1. The Comprehensive School Physical Activity Program (CSPAP)

The main goal of the CSPAP is to encourage school-aged children to participate in at least 60 minutes of moderate-to-vigorous physical activity (MVPA) each day in order to achieve lifelong PA and wellbeing (Centers for Disease Control and Prevention [CDC], 2013). The CSPAP uses a multicomponent approach to promote PA in and around schools (SHAPE America, 2015b). The CSPAP includes five components: 1) physical education; 2) PA during school; 3) PA before and after school; 4) staff involvement; and 5) family and community engagement.

Each of the five CSPAP plays a unique role in promoting student PA. Specially, physical education is the cornerstone of the CSPAP providing school-aged children with quality curriculum and instruction that includes knowledge, skills, and confidence to be physically active for their lifetime (Rink, Hall, & Williams, 2010). PA during school can be incorporated into classroom PA, recess time, or drop-ins at lunch. Previous studies have demonstrated PA in classroom settings could contribute to school-aged children's physical and cognitive health outcomes (Donnelly & Lambourne, 2011). PA before and after school includes before and after school initiatives, PA clubs, intramural activities, and interscholastic sports that provide numerous opportunities for school-aged children to engage in PA (Erwin et al., 2013). Staff involvement establishes opportunities for social agents in schools (i.e., teachers, administrators, school counselors, school staff) to become positive role models who can motivate students to be physically active and healthy (Erwin et al., 2013). Family and community engagement plays an important role in providing school-aged children with PA opportunities. Families (e.g., parents, siblings, relatives) can have positive effects by shaping children's PA habits and interests, and community partners (e.g., non-profit organizations such as scouts and Boys and Girls Clubs, universities, foundations, parks, and recreation centers) offer valuable resources for PA promotion (Castelli, Centeio, Beighle, Carson, & Nicksic, 2014). As the largest membership organization of health and physical education specialists, the Society of Health and Physical Educators, working under the name SHAPE America, has emphasized

the CSPAP as the best approach to achieve the "50 Million Strong by 2029" campaign (SHAPE America, 2015a). In addition, researchers suggested the significant role of CSPAP in developing children's physical literacy (Castelli et al., 2014).

1.2. Physical Literacy as Learning Outcomes

An increasing research interest on physical literacy has been thrived in physical education, sports participation, and PA contexts (Durden-Myers, Whitehead, & Pot, 2018; Shearer et al., 2018). Developing "physically literate individual" has been set as the ultimate goal of the national standards for K-12 physical education programs (SHAPE America, 2013). While SHAPE America (SHAPE America, 2016) holds the concept that physical education is the avenue to develop individuals' physical literacy by providing students with gaining the knowledge, skills, confidence, and desire to be physically active across lifespan, recent concept of physical literacy includes a broad variety of definitions, elements, and objectives rather than only physical education or engagement in PA (Roetert, Ellenbecker, & Kriellaars, 2018; Shearer et al., 2018). However, notably, physical literacy has been recognized as an important goal to achieve within and beyond education (Durden-Myers, Green, & Whitehead, 2018).

Given the fact that developing physically literate individuals is a major goal of school physical education programs (SHAPE America, 2013), three learning outcomes (i.e., psychomotor, cognitive, and affective) are key components to provide theoretical support for physical literacy as learning outcomes (Bailey et al., 2009; Farren, 2017; Stork & Sanders, 2008). More specifically, with physical literacy, the psychomotor domain of learning outcomes is linked to physical fitness, PA, and motor skills competence; the cognitive domain of learning outcomes is related to knowledge and understanding; and the affective domain of learning outcomes is associated with self-efficacy, motivation, and self-esteem (Farren, 2017). Throughout this study, we applied these three learning outcomes as a holistic approach influencing an individual's physical literacy.

The multicomponent concept of CSPAP may be a logical avenue to improve physical literacy in school-aged children (Doherty, Lee, Keller, & Zhang, 2019; Castelli et al., 2014). Considering that the goal of the whole school approach is to promote healthy lifestyles and PA opportunities that can provide knowledge, motor competence, and adherence to regular PA across the life span (Institute of Medicine, 2013), the CSPAP may play a pivotal role in the development of physical literacy in school-aged children.

1.3. The Significant Role of Elementary Classroom Teachers

Elementary classroom teachers play a crucial role in incorporating PA in both the classroom and school by collaborating with physical education teachers, administrators, families, and other school staff (Hall, Little, & Heidorn, 2011; Russ, Webster, Beets, & Phillips, 2015). Several studies have emphasized that physical

education teachers should be the leaders in implementing CSPAP in schools (Webster, Nesbitt, & Lee, 2017; Webster et al., 2016; Zhang, Gu, Zhang, Keller, & Chen, 2018). Nevertheless, to successfully synergize the CSPAP, assorted efforts and roles by teachers, parents, administrators, and school staff are essential in addition to physical educators' roles (Doherty et al., 2019; Heidorn & Centeio, 2013; Webster, Beets, Weaver, Vazou, & Russ, 2015). Elementary classroom teachers, in particular, can be vital facilitators to promote the CSPAP adoption for young children in schools (Goh et al., 2014; Russ et al., 2015; Webster, Erwin, & Parks, 2013). Specifically, elementary classroom teachers not only can provide healthy dietary information, but also can integrate PA into academic lessons and recess time in and out of the classroom as well as serve as role models (McKenzie & Kahan, 2008). Previous intervention studies demonstrated that PA in a classroom can occur in a variety of settings (e.g., classroom curriculum about healthy eating behaviors, PA in the classroom) with classroom teachers' assistance (Caballero et al., 2018; Williamson et al., 2007). In a recent study applying a CSPAP intervention to classroom teachers, Jordan and colleagues (2018) showed that elementary classroom teachers could be successful to promote PA in a classroom with active interactions with other teachers, administrators, and guardians/family. Given the fact that elementary classroom teachers have more opportunities to spend time with school-aged children, they would serve an important role in successfully implementing CSPAP in schools leading to developing children's physical literacy (Castelli et al., 2014; Jordan et al., 2018; McKenzie & Kahan, 2008; Webster et al., 2015).

Elementary classroom teachers' knowledge and perspectives toward the CSPAP are essential to support the CSPAP in schools because their perceptions of the relationship between the CSPAP and physical literacy can influence the effectiveness of CSPAP implementation. Elementary classroom teachers face a variety of barriers and challenges from curricular responsibilities and pressure on achievement tests, as well as insufficient experience in integrating PA in the classroom, which may discourage them from facilitating PA in the classroom (Goh et al., 2013; Webster et al., 2013). Studies examining the impact of elementary classroom teachers' self-efficacy about teaching PA have reported mixed findings (Fletcher, Mandigo, & Kosnik, 2013; Webster et al., 2013). For instance, Webster and colleagues (2013) showed that preservice classroom teachers' perceived barriers applying CSPAP in a school were negatively correlated with their self-efficacy and willingness to integrate PA in the classroom and school. Controversy, Fletcher and colleagues (2013) did not find significant differences between preservice elementary classroom teachers' self-efficacy and their ability to overcome barriers of teaching physical education lessons. Webster and colleagues (2013) also reported that classroom teachers' perceptions of the importance of PA promotion were a crucial resource in promoting PA even though some obstacles to achieve PA in a classroom existed. This suggests that elementary classroom teachers' positive perceptions toward children's PA may encourage them to support CSPAP (Webster et al., 2013).

Although the significant role of elementary classroom teachers has been emphasized to fulfill the CSPAP goals (Russ et al., 2015; Webster et al., 2015), a dearth of studies have examined preservice elementary classroom teachers' role in implementing CSPAP. Most studies have paid special attention to physical education teacher education (PETE) and teachers' candidates for the CSPAP role (Goc Karp, Scruggs, Brown, & Kelder, 2014; McMullen, Jahn, van der Mars, & Jahn, 2014). A few studies have explored the effects of a school-based PA promotion course for preservice classroom teachers (Webster, 2011; Webster et al., 2013). In an intervention study about the effects of a 16-week school-based PA promotion course on preservice classroom teachers, Webster (2011) found the PA promotion course positively affected an increase in their competence and attitude toward promoting PA in schools. Similarly, Webster and colleagues (2013) also demonstrated positive changes in the willingness of preservice classroom teachers to integrate PA in the classroom and in their perceived barriers to movement integration during a 16-week CSPAP course. Education and training for preservice elementary classroom teachers can promote positive beliefs and values toward the CSPAP, while their perceptions of the connection between CSPAP and physical literacy remains unclear. This study, therefore, aimed to explore preservice elementary classroom teachers' perceptions of the relationship between the CSPAP and physical literacy using a qualitative research design.

2. Method

2.1. Participants and Procedure

Participants were 192 undergraduate students (Mage = 19.85, SD = 0.06; female = 92%; they are planning to become future elementary classroom teachers) from a public research university in the southwestern United States. The majority of the preservice elementary classroom teachers was Caucasian (56%), and then followed by Hispanic/Latino (25%), Asian (7.8%), Black/African American (6%), American Indian/Alaska Native (0.5%), and two or more races (4.7%). Most of the participants in this study were juniors (63%), followed by sophomores (25%), seniors (11%), and freshmen (1%). The participants were seeking a Bachelor of Science degree in Interdisciplinary Studies leading to an elementary teacher certification.

The principal researcher, who is knowledgeable about school PA promotion in the public school, delivered the CSPAP model to the study participants for 90 minutes during both 2017 spring and fall semesters. The CSPAP lecture included: 1) introduction (definition and goals) of CSPAP; 2) the role of each domain in CSPAP; 3) relationships between CSPAP and other factors (physical, cognitive, and affective); and 4) discussion how to apply CSPAP as an elementary classroom teacher. Two weeks after the lecture, participants responded to five open-ended online questions regarding their perceptions of the relationships between the CSPAP and children's physical literacy, which were developed by

three researchers who have expertise in CSPAP and school PA promotion. The questions about the participants' perspectives about the CSPAP and physical literacy aligned with the research question of this study (see Table 1). Probes for the questions were, "if you respond yes, please give an example, and if you respond no, please identify why you do not think so". To establish content validity of the questionnaires, the three researchers continually discussed and reviewed initial version of the questions regarding the association between CSPAP and physical literacy for preservice elementary classroom teachers. The pilot test was conducted at the beginning of spring semester in 2017. The university institutional review board reviewed and approved the study protocol before the data collection. Informed consent was obtained from all study participants.

2.2. Trustworthiness

To enhance credibility and confirmability in this study, researchers applied a variety of trustworthiness approaches (Elo et al., 2014; Shenton, 2004). First, two independent researchers, who are familiar with the CSPAP and school PA promotion, independently read through all participants' data and underlined important responses, and then coded about 20% of the participants' data based on each response across questions to establish inter-coder reliability (93.5% agreement). Using the data, two separate codebooks were deductively developed by two independent coders. Following this, two independent coders continually discussed the data in order to resolve the discrepancies and generate one primary codebook with regard to inductive codes created from participants' response. To minimize the bias, two other external reviewers (professors who are currently teaching courses of physical education in elementary school settings for preservice physical education and classroom teachers) continually reviewed the codebook and interpreted the developed themes.

2.3. Data Analysis

The participants' data were analyzed using thematic analysis (Braun & Clarke,

Table 1. Questions regarding the relationship between CSPAP and physical literacy.

Questions	Learning outcomes
1) Do you think there is a positive relationship between CSPAP and students' physical fitness (cardiovascular endurance, body composition, flexibility, etc.)?	Psychomotor
2) Do you think there is a positive relationship between CSPAP and students' physical activity engagement?	Psychomotor
3) Do you think there is a positive relationship between CSPAP and students' motor skill development and perceived competence?	Psychomotor, Affective
4) Do you think there is a positive relationship between CSPAP and students' academic achievements (including academic performance, attendance, etc.)?	Cognitive
5) Do you think there is a positive relationship between CSPAP and students' self-esteem, enjoyment, and motivation to participate in physical activity?	Affective

2006) to generate the final main themes regarding the relationship between the CSPAP and physical literacy. In order to generate the final themes about the relationship between the CSPAP and physical literacy, five CSPAP components (i.e., physical education, PA before and after school, PA during school, staff involvement, and family and community engagement) were categorized in relation to three learning domains (i.e., psychomotor, cognitive, and affective) of physical literacy. Figure 1 shows the procedure of generating themes and steps to enhance trustworthiness. The multiple approaches of data analysis (i.e., peer debriefing and audit trail) were conducted to avoid potential researcher bias.

3. Results

The findings revealed themes for the preservice elementary classroom teachers' perspectives on the relationship between the CSPAP and physical literacy (see Figure 2). The general relations of the CSPAP (i.e., combined five components) with physical literacy resulted in meaningful final themes for each physical literacy domain (i.e., psychomotor, cognitive, and affective). Details of each theme of explanation with the participants' responses are presented next.

3.1. CSPAP and Psychomotor Domain of Physical Literacy

The relationship between the CSPAP and the psychomotor domain of physical literacy revealed three themes: 1) improving physical fitness and motor skills; 2)

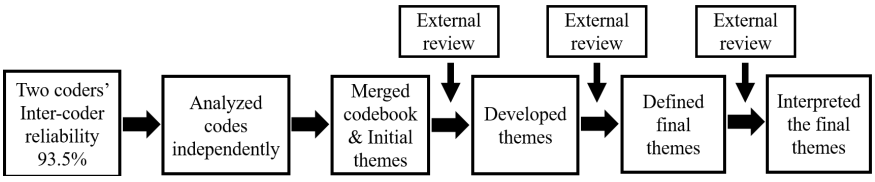

Figure 1. Procedures of developing themes and steps taken to enhance data trustworthiness.

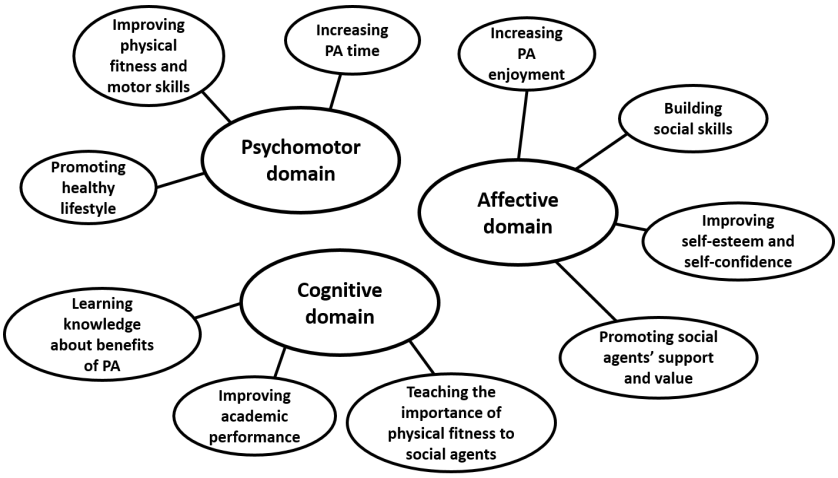

Figure 2. Final thematic map, showing final main themes regarding the relationship between the CSPAP and physical literacy categorized into three learning domains.

increasing PA time; and 3) promoting a healthy lifestyle. The preservice elementary classroom teachers believed that improved PA is associated with increasing bones and muscles and developing motor skills. In other words, the more PA time afforded to children, the more opportunity they have to develop physical fitness and motor skills. Therefore, they reported that the CSPAP could provide more opportunities for students to engage in PA, so the children's physical fitness and motor skills will gradually develop.

"CSPAP incorporates physical activity into students' everyday lives. Physical activity is important in the growth of children bones and muscles." [Respondent 77]

"More exercise would help students have better motor skills." [Respondent 21]

"The more a student in being encouraged to be physically active, the more physical activity they will receive. Thus, improving their overall physical fitness." [Respondent 78]

"With physical activity, the students are able to practice their motor skills." [Respondent 36]

Several preservice elementary classroom teachers stated that through the CSPAP, children would increase PA time in and outside school.

"It increases physical activity time." [Respondent 63]

"Students have more time to be active." [Respondent 5]

"Kids are getting the recommended 60 minutes of physical activity a day through CSPAP." [Respondent 16]

"Opportunities to participate in physical activity in and outside school." [Respondent 105]

Additionally, the preservice elementary classroom teachers described how the CSPAP can create a foundation that positively leads to students' healthy lifestyles.

"The students are introduced to a fundamental brick to living a long and healthy life." [Respondent 36]

"It will improve their overall health." [Respondent 77]

3.2. CSPAP and Cognitive Domain of Physical Literacy

The CSPAP contributed to the cognitive domain of physical literacy through three themes: 1) learning knowledge about PA benefits; 2) improving academic performance; and 3) teaching the importance of PA/physical fitness to social agents (teachers and school staff). The preservice elementary classroom teachers in this study reported that the CSPAP will provide school-aged children with knowledge about the importance and benefits of PA that can positively affect their quality of life and wellbeing.

"Students will learn more about the importance of being physically active in their lives." [Respondent 93]

"CSPAP will give students knowledge and benefits of physical activity and how it can positively affect their life." [Respondent 8]

"CSPAP will help the child learn about how to engage in physical activity in a healthy way." [Respondent 12]

Many preservice elementary classroom teachers responded that the CSPAP will improve children's academic performance because they believed that PA has a positive effect on brain activity.

"CSPAP improves student's focus, performance, and engagement in a school." [Respondent 16]

"Physical activity has been proven to improve students' grades and academic ability." [Respondent 10]

"It will give student more time to focus during classroom." [Respondent 20]

"CSPAP helps get the children active helping them better function in the classroom." [Respondent 26]

"Physical activity increases oxygen to the brain thus improving their concentration." [Respondent 36]

Moreover, some of the participants stated that the CSPAP will teach significant information about health benefits through PA to teachers and school staff as well as to students; thus, a synergy effect of the CSPAP will be expected.

"CSPAP teaches about benefits of physical activity to school staff." [Respondent 21]

"CSPAP leads teachers to encourage young age students into physical activity and students would admire their teachers." [Respondent 14]

3.3. CSPAP and Affective Domain of Physical Literacy

In relation to the affective domain of physical literacy, the four CSPAP themes included 1) increasing PA enjoyment; 2) building social skills; 3) improving self-esteem and self-confidence; and 4) promoting social agents' (teachers, parents, school staff, and administrators) support and values. The majority of preservice elementary classroom teachers believed that the CSPAP will help students enjoy participating in PA, and teach them various exciting PA games.

"With CSPAP, students will learn to enjoy physical activity." [Respondent 24]

"CSPAP is a fun way for students to actively participle in physical activities." [Respondent 18]

"CSPAP give them opportunities to find a physical activity they enjoy." [Respondent 29]

They also stated that because the CSPAP will offer more opportunities for children to interact with each other, the children will improve their social interaction skills.

"CSPAP will improve social skills among children." [Respondent 6]

"It creates healthy fun relationships, and they have more relationships and a better view of themselves." [Respondent 12]

"They have the chance to interact with other students." [Respondent 17]

Moreover, many participants responded that the CSPAP will contribute to children's self-esteem and self-confidence because they believed that increased

PA has a positive effect on these attributes.

"Increased physical activity will increase students' self-esteem and self-confidence."

"It will give student high self-esteem." [Respondent 8]

"The more activities and games they are engaged in the more they can become confident and their self-esteem increases." [Respondent 35]

"The more motivation to be active improves, the better the child's self-esteem will be." [Respondent 10]

Lastly, given the fact that the CSPAP uses a multi-component approach requiring different social agents' efforts, the preservice elementary classroom teachers reported that the CSPAP will encourage parents, teachers, school staff, and administrators to be interested and involved in PA programs that foster children's healthy and physically active lifestyle.

"It will create interest in physical activity and create accountability because parents, teachers and other students are involved in the program." [Respondent 16]

"Having support from parents and teachers would give them more motivation." [Respondent 21]

"Reaching out to parents to be included right beside their sons/daughters in this journey." [Respondent 14]

"CSPAP will incorporate that in their home life as well." [Respondent 8]

4. Discussion

The primary purpose of this study was to investigate the preservice elementary classroom teachers' perspectives of the relationship between the CSPAP and physical literacy. Through this qualitative inquiry of preservice elementary classroom teachers, the findings revealed several meaningful themes, guided by the three domains (i.e., psychomotor, cognitive, and affective) of physical literacy. Each theme was identified consistently throughout the data, and each one represented the preservice elementary classroom teachers' beliefs and ideas about the relationship between CSPAP and each domain of physical literacy.

4.1. Preservice Elementary Classroom Teachers' Perspectives toward CSPAP and Physical Literacy

Regarding the relationship between the CSPAP and the psychomotor domain of physical literacy, findings of this study indicated that the majority of the preservice elementary classroom teachers believed that the CSPAP would contribute to increased PA time, which would lead to stronger bones and muscles and develops motor skills competence, and a healthy lifestyle for school-aged children. Their beliefs and ideas about the positive influence of the CSPAP on the psychomotor consequences are supported by empirical studies showing the positive influence of PA engagement on building and maintaining bones and muscles (United States Department of Health and Human Services [USDHHS], 2018) and motor skill competence (Logan, Webster, Getchell, Pfeiffer, & Robinson,

2015; Stodden et al., 2008). Based on Stodden and colleagues' (2008) conceptual model, there is an interaction effect between PA and motor skills competence. For example, higher engagement in PA can provide individuals with more chances to develop motor skill competence, and higher motor skill competence would lead individuals to engage more often in PA-based games or sports. Given the fact that the CSPAP would provide children more opportunities to engage in diverse PA due to its multicomponent effect, the preservice elementary classroom teachers' beliefs and ideas about the positive relations of CSPAP with the psychomotor domain of physical literacy is supported because the CSPAP creates building blocks for developing children's healthy behaviors across their lifespan (SHAPE America, 2015a, 2015b).

The association between the CSPAP and the cognitive domain of physical literacy reported by the preservice elementary classroom teachers showed that the CSPAP would provide more opportunities for school-aged children to gain understanding and knowledge about the importance and benefits of engaging in PA across their lifetime. The preservice elementary classroom teachers also believed that the CSPAP would improve children's concentration, academic performance, and engagement during school time, so ultimately it will affect students' academic scores in a positive way. Through the participants' responses, the findings of this study revealed that the preservice elementary classroom teachers' beliefs were aligned with previous studies demonstrating the positive effects of acute exercise on short- and long-term memory (Labban & Etnier, 2018) and academic achievement (Burrows et al., 2014). Lastly, the preservice teachers also believed that the CSPAP provided social agents (e.g., teachers, parents, administrators, school staff) with the knowledge and awareness of the importance of being physically active. Therefore, knowing the benefits of PA may also encourage social agents to make an effort to engage in healthy behaviors such as regular PA participation, which can influence school-aged children's healthy lifestyles. This finding appears to be in line with previous study by Zecevic and colleagues (2010) that noted the importance of parental influence for increasing a child's PA. Additionally, previous studies have illustrated the effects of classroom teachers' support in incorporating PA into academic lessons on expanded elementary school children's daily PA (e.g., DuBose et al., 2008).

Through the preservice elementary classroom teachers' responses on the relationship between the CSPAP and the affective domain of physical literacy, the results suggested that the CSPAP may contribute to increasing children's enjoyment in PA because the multi-component approach of the CSPAP provides various resources for children to engage in different activities (CDC, 2013; SHAPE, 2015b). Previous studies have suggested that the CSPAP's multi-component approach offers multiple avenues to encourage children to engage in diverse PA contents, which lead to increased interest and motivation among children (Castelli et al., 2014; Goc Karp et al., 2014). Additionally, the participants believed in the contribution of the CSPAP to building social interaction skills because the

CSPAP provides children with more chances to interact with each other in schools. For example, Erwin and colleagues' (2013) study supported the preservice elementary classroom teachers' idea that PA during school can provide children with opportunities to communicate and interact with each other. Many of the preservice elementary classroom teachers in the present study also reported that the CSPAP could have positive influence on self-esteem and self-confidence. These findings are consistent with the previous studies showing that participating in vigorous sport and exercise improved mental health (i.e., confidence, self-esteem; Eime, Harvey, Brown, & Payne, 2010; Noordstar, van der Net, Jak, Helders, & Jongmans, 2016). Promoting confidence to enjoy a lifetime of healthful PA is also one of the CSPAP goals (Castelli et al., 2014). Lastly, most preservice elementary classroom teachers in this study reported that the CSPAP could promote social agents' support and values because the CSPAP requires parents, teachers, administrators, and school staff to facilitate PA and assist children to engage in diverse types of PA. As Castelli and colleagues (2014) suggested, it is necessary for the social agents to be physically literate in order to improve their own well-being and occupational effectiveness. In doing so, they can be significant role models who provide and lead PA opportunities for children.

Overall, the major findings of this study indicated that the preservice elementary classroom teachers' perspectives about the relationship between the CSPAP and physical literacy were linked to the holistic model showing the influence of CSPAP on physical literacy (Castelli et al., 2014). Many preservice elementary classroom teachers believed that the CSPAP would contribute to improving children's various physical literacy outcomes, which were categorized into three domains (i.e., psychomotor, cognitive, and affective). Logically, the association between the CSPAP and physical literacy may be positive because the CSPAP provides greater opportunities for PA engagement that promotes children to be physically literate.

The recent studies regarding preservice teachers' perspectives of CSPAP focused on the physical education context and the PETE program (Kwon et al., 2018; Webster et al., 2017; Webster et al., 2016). These studies suggested the importance of sufficient preparation and supplements in the PETE programs for preservice physical education teachers. However, little is known about preservice elementary classroom teachers' perspectives on the association between the CSPAP and physical literacy. Therefore, a better understanding of preservice elementary classroom teachers' perspectives toward the CSPAP and physical literacy may inform the design and success of classroom teachers' curriculum and instruction in the future.

4.2. Changing Preservice Elementary Classroom Teachers' Perspectives in PA Promotion

The traditional stereotype of elementary classroom teachers might suggest that

they are not responsible for teaching physical education or promoting PA in the elementary classroom and school; however, they actually play an essential role in educating children to be physically active and literate (Hall et al., 2011). Previous studies have demonstrated the positive contributions of PA promotion courses on preservice elementary classroom teachers' perspectives. For instance, Fletcher and colleagues (2013) indicated that preservice elementary classroom teachers who attended 12 hours of physical education methods courses positively changed their role as teachers of physical education. Additionally, Goh and colleagues (2013) showed that physical education pedagogical courses for preservice classroom teachers had a positive influence on their awareness and movement integration in schools. Apparently, PA promotion courses for preservice classroom teachers positively contribute to establishing their role in the CSPAP. However, some doubts still exist about whether preservice classroom teachers are able to apply the CSPAP in real school settings, or if the pedagogical courses changed their identities and enabled them to acquire knowledge about PA promotion strategies, theories, and concepts. Therefore, it may be necessary for preservice elementary classroom teachers to obtain the opportunity to implement CSPAP strategies and concepts in real school settings. Additionally, as Fletcher and colleagues (2013) suggested, future studies investigating the long-term effects of PA promotion program intervention on preservice elementary classroom teachers' beliefs and roles would be significant and needed.

4.3. Limitations and Future Considerations

Several limitations existed in this study. The CSPAP lectures for preservice elementary classroom teachers were delivered by only one principal researcher. This might lead to biases about the CSPAP compared to multiple instructors who could provide the CSPSP lectures. Future studies might include various approaches, such as different instructors or online-based CSPAP lectures, to compare the effects on preservice elementary classroom teachers' perspectives from a different CSPAP instructional approach. Additionally, we had difficulties developing an in-depth understanding of preservice elementary classroom teachers' perceptions via the online survey. Future research in this area is needed to conduct individual interviews and focus group interviews with multiple methods (e.g., observation, member checking, field note) as triangulation to better understand participants' deeper meaning from their responses and enhance trustworthiness.

5. Conclusions and Implications

The findings of this study provide unique insights about the relationship between the CSPAP and physical literacy from preservice elementary classroom teachers' perspectives. These meaningful findings suggest practical learning experiences, such as collaboration between the community and local schools by preservice teachers may be beneficial. Physical education pedagogical courses for

preservice elementary classroom teachers are needed to search for a connection with community organizations and local schools that enable preservice elementary classroom teachers to acquire genuine learning experiences and practical ideas by observing and integrating the CSPAP in a real context. The findings of this study underline the important role of the CSPAP in developing preservice elementary classroom teachers' awareness of physical literacy, and identify their perception of the positive relationship between the CSPAP and physical literacy.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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