

**JYX**



**This is a self-archived version of an original article. This version may differ from the original in pagination and typographic details.**

**Author(s):** Vidoni, Carla; Soini, Anne; Ferraz, Osvaldo L.

**Title:** Perceptions of physical education in early childhood teacher education courses

**Year:** 2023

**Version:** Published version

**Copyright:** © 2023 Carla Vidoni, Anne Soini, and Osvaldo L. Ferraz.

**Rights:** CC BY-NC 4.0

**Rights url:** <https://creativecommons.org/licenses/by-nc/4.0/>

**Please cite the original version:**

Vidoni, C., Soini, A., & Ferraz, O. L. (2023). Perceptions of physical education in early childhood teacher education courses. *Journal of Early Childhood Education Research*, 12(1), 32-53.  
<https://journal.fi/jecer/article/view/116997>



# Perceptions of physical education in early childhood in teacher education courses

---

*Carla Vidoni<sup>a</sup>, Anne Soini<sup>b</sup> & Osvaldo L. Ferraz<sup>c</sup>*

<sup>a</sup> University of Louisville, USA, corresponding author, e-mail: [carla.vidoni@louisville.edu](mailto:carla.vidoni@louisville.edu),  
<https://orcid.org/0000-0002-7977-2913>

<sup>b</sup> University of Jyväskylä, Finland, <https://orcid.org/0000-0001-9168-9437>

<sup>c</sup> University of São Paulo, Brazil, <https://orcid.org/0000-0003-4397-1010>

**ABSTRACT:** The engagement in movement skills in early childhood education care is a key component of promoting a healthy lifestyle. However, the literature shows that early childhood teachers' insufficient training and lack of policies to support physical education (PE) negatively impact children's education on movement activities in their early years (Sharma et al., 2014). The aim of this case study was to describe teacher educators' (TE) perceptions from three different countries regarding the purpose of PE in early childhood teacher education (ECTE) program. One TE from each of Brazil, Finland, and the USA was invited were the participants of this study. Data were collected through interviews and PE course syllabi. Data extracted from the interviews were analyzed inductively via an individual case and cross-case (Patton, 2001). The results showed TEs' similarities in providing preservice teachers with a better understanding of the importance of movement skills and clarifying misconceptions inherited from their past experiences. Challenges found in some ECTE contexts involved: (a) allocation of time in the ECTE curriculum is not always consistent with other academic disciplines, (b) PE courses in ECTE do not always include practicum activities, and (c) PE in ECTE sometimes is not seen as an academic subject.

**Keywords:** *physical education, teacher educator, preservice teacher, early childhood teacher education*

## Introduction

Movement skills, physically active play (PAP), physical activity (PA), and physical education (PE) (interchangeably used terms in preschool education) are perceived as key

components to promote the healthy development of young children (Rudd et al., 2020). The World Health Organization (WHO), along with research studies in early childhood (EC), make recommendations to children's current and future health that they engage in PA and develop movement skills during their early years of life (Howells & Sääkslahti, 2019; Lu & Montague, 2016; WHO, 2019). The WHO recommendations outline that young children should engage in a minimum of 180 minutes of PA and at most 60 min of screen-based sedentary time per day (WHO, 2019). Similarly, in Brazil, Finland, and the United States of America (USA), national organizations have realized the importance of PA in the early years.

In 2021, the Brazilian Ministry of Health launched PA guidelines that recommend that three to five-year-old children be active for at least three hours a day, with at least one hour of moderate to vigorous PA (Brazil, 2021). In Finland, three hours of PA per day of any intensity are recommended for children under the age of eight (Finnish recommendations for physical activity in early childhood, 2016). The US Department of Health and Human Services also recommends that preschoolers engage in daily movement activities three hours a day involving light, moderate and vigorous intensities (U.S. Department of Health and Human Services [USDHHS], 2018)

### **Importance of PE in the early years**

With the support of families, early childhood education and care (ECEC) settings serve an essential role in implementing PE (e.g., increasing PA levels and promoting young child's holistic development) (Park & Park, 2019; Soini, 2015). A study shows that the main purposes of PE, identified by the different stakeholders (e.g., pupils, teachers, school principals, parents, and teacher educators) were being physically active and learning physical, social, and emotional skills (Ní Chróinín et al., 2020). However, there is dramatic variance in how PE is prioritized and implemented (Ní Chróinín et al., 2020). Furthermore, the existing literature shows that EC teachers' insufficient training and weak policies to support PA or PE programs are some of the factors that negatively impact the importance of movement in the early years (Sharma et al., 2014; Trost et al., 2010).

The enhancement of EC teachers' knowledge of children's motor development can influence higher PA levels in children (Jones et al., 2020). Nevertheless, a child can have remarkably different gross motor experiences even within the same setting and facility based on their teachers' beliefs, creativity, and engagement level (Copeland et al., 2011). Additionally, Lu and Montague's (2016) research highlighted that teachers' involvement and enthusiasm significantly affected a child's PA participation. Children's PA levels are also higher when PE classes are taught by more highly educated (Trost et al., 2010) and physically active teachers (Cheung, 2020). Although teacher-led activities are positively

related to children's PA levels (e.g., Brown et al., 2009; Gubbels et al., 2012), EC teachers rarely organize or encourage children to engage in PAPA.

### **PA in EC educational documents**

Considering the increase in global and local perception of the PA's positive role in EC, several educational organizations have included PA in national documents. The Brazilian Ministry of Education established a compulsory national core curriculum (a.k.a. Base Nacional Curricular Comum [BNCC]) in 2017 (Brasil, 2017) that determines essential skills and knowledge for preservice teachers (PST) to develop from EC to high school. The EC section of the BNCC indicates that movement experiences should promote opportunities for young children to explore a wide range of skills and concepts. Although the term PA and PE terminology are not included in this document, its content explains that children's movement repertoire should be developed through various physical expressions, including body and space awareness, motor abilities during a game and PAPA, music, and dance activities. The document states that the role of the EC teachers is to plan, implement and assess its learning objectives, and it emphasizes that caring for children should be embedded in the educational process.

Finnish ECEC is implemented in compliance with the several regulating national documents (i.e., the Act on ECEC, 580/2018, Basic Education Act, 628/1998; Finnish National Agency for Education, 2014; 2022), and therefore, also the documents are taught in higher EC teacher education (ECTE). In ECEC, every child is entitled to the planned, goal-oriented, and diverse PE and adequate daily PA supporting their holistic development, wellbeing, and helping them experience of the joy of movement. The daily activities can be structured; however, children's spontaneous free PAs indoors and outdoors in different seasons are also required (Finnish National Agency for Education, 2022).

While Finland and Brazil have adopted national curricula with specific goals and content concerning PA and movement experiences to be covered in ECEC programs, in the USA, multiple standards and guidelines have been published to promote guidance to EC teachers, parents and caregivers. State and national standards indicate that movement and PAPA are part of the development of the whole child (e.g., National Association for the Education of Young Children [NAEYC], 2010), but they overlook specific information about the development of fundamental motor skills and implementation of structured and unstructured PA time in ECEC settings. In contrast, the Society of Health and Physical Educators (SHAPE) America (SHAPE America, 2020) have recommended specific guidelines for teachers, parents, and caregivers addressing national and international recommendations for preschoolers to participate in activities that promote the development of manipulative, non-locomotor, and locomotor skills.

Vidoni, Soini & Ferraz.

*Journal of Early Childhood Education Research* 12(1) 2023, 32–53. <http://jecer.org>

Considering the evident perception that PA should be part of young children's education, previous research has shown that teacher educators (TEs) are essential agents in the dissemination of knowledge and implementation of best teaching practices (McEvoy et al., 2015; 2017; Soini et al., 2021), and their voices should be heard when discussing the purposes of PE (Ní Chróinín et al., 2020). TEs' beliefs and curriculum decisions influence the legitimacy of PE as an essential school subject, and consequently, they may foster or limit children's movement opportunities in their early years (Andriamampianina & Moussa, 2005; Muros Ruiz & Fernández-Balboa, 2005; Tsangaridou, 2006; 2017).

## **Aims of the study**

The aim of this qualitative case study research is to describe TEs' perceptions from three different countries regarding the purpose of PE in ECTE. Four main research questions were addressed in this investigation:

- (a) What are TEs' perceptions of the role of PE (i.e., movement skills, physical play, PA) in ECTE?
- (b) How do TEs' beliefs impact their curriculum decisions in preparing ECTE preservice teachers?
- (c) What benefits and challenges do TEs face in teaching PE in ECTE?
- (d) What are the similarities and differences of PE courses in ECTE across three different contexts (Brazil, Finland, and the USA)?

## **Method**

### **Participants**

This study involved a purposeful sampling method. One participant from each of Brazil, Finland, and the USA was invited to participate in this study. All participants were adults (ages 43 to 52) and TEs from ECTE programs at universities in Brazil, Finland, and the USA. Each participant had an educational background in PE (e.g., master's or doctorate degrees) and had years of (ranging from 4.5 to 22) experience teaching PE courses or a related topic to ECTE's PSTs.

TABLE 1 Participants' demographics

<i>DEMOGRAPHIC QUESTIONS</i>	<i>MARIA - TE BRAZIL</i>	<i>SOPHIE - TE FINLAND</i>	<i>CATHY - TE USA</i>
Years of teaching PreK-12	9	1	25
Years of teaching in TE	22	4.5	12
Educational background	Master of Sciences in PE PhD in PE Senior Stage Univ. of Minho, PT	Master of Sciences in PE PhD in Sport Pedagogy	Master of Arts in Teaching HPE Rank 1 in PE Educational Specialist degree
Contact hours per PE course	60	36	12.5
Weeks per semester (PE course)	15	12*	5
Average amount of PSTs per semester (PE course)	50	140	33

\*In Finland, there are two PE courses, part A is taught in autumn, and part B is taught in the spring semesters. Both courses have a total of 24 weeks, with a total of 72 contact hours a year.

### ***Ethics considerations***

Ethics (i.e., Institutional Review Board) approval from researchers' universities were obtained prior to the study. Participation in the study was entirely voluntary. Each participant was asked to consent to be part of the study, to be interviewed, and to allow data to be shared with researchers from the other two countries. Participants were also encouraged to examine the privacy statement of the study. In order to protect participants' identity, the names used in this study were pseudonyms. In reporting the results, we paid particular attention to protecting the anonymity of the study participants.

### **Data collection**

This study used a qualitative method of case study research to understand TEs' perceptions from three different countries on the PE curriculum in ECTE. Data were collected through two different sources.

1. *Individual interviews.* Two researchers conducted semi-structured (open-ended) interviews with each participant using security protected video meetings (Zoom Video Communications) in winter 2022. The interviews were recorded, translated,

Vidoni, Soini & Ferraz.

*Journal of Early Childhood Education Research* 12(1) 2023, 32–53. <http://jecer.org>

and in the Brazilian case, it was transcribed into English. All three interviews lasted approximately one hour.

2. *Course syllabi*. Each participant was asked to share a copy of the course syllabus with the researchers. The description of each country's PE course curricula in ECTE is included in the paper to complement the course information provided in the interviews.

## Data analysis and trustworthiness

Data originated from the interviews were inductive via individual-case and cross-case analysis (Patton, 2001). Through a constant and detailed examination of the data, common themes and consistent patterns were identified and categorized. Throughout this process, major themes were generated. These themes were the source of the description of participants' perceptions of PE in ECTE courses. Trustworthiness was utilized to ensure that the findings were accurate. Analyst triangulation was used by all three researchers, independently analyzing the data and then comparing their analysis.

## Results and discussion

This study examined three TEs' perceptions of the purpose of PE in ECTE. Confirming what McEvoy and her colleagues pointed out, the dialogue of TEs' perceptions, purposes, intentions, views, or values is critical to the transformation and reproduction of PE practices (McEvoy et al., 2017). Our data showed that although each TE had a different background and worked in specific higher education settings, their dialogues presented similarities and differences that are worthwhile to acknowledge. The results of this study are organized into four themes: (a) *PE in ECTE*, (b) *unique perceptions and curriculum decisions*, (c) *course management*, and (d) *importance of national guidelines*.

### PE in ECTE

Previous research (O'Sullivan, 2005; Tsangaridou, 2006) explained that teachers' views, beliefs or theories are also referred to as teacher perceptions. In this study, TE's perceptions helped us to connect with their curriculum decisions. Two sub-themes emerged from PE in ECTE that showed specific information across participants' perceptions: (a) *the role of PE in ECTE* and (b) *the value of PE in ECTE*.

### ***The role of PE in ECTE***

The participants' perceptions of the role of PE in ECTE were somewhat related. For example, children's holistic development and improvement of motor skills seem to be a common theme across participants. The similarities within this sub-theme are that the participants plan to guide PSTs to help children move and discover what their bodies can do and disconnect the adage that PE is all about competitive sports. As each one of them stated:

*I would think of the child who plays, plays and dances and, of course, he or she would develop motor coordination, but I want more than that. I want a child that produces play ... that redesigns games... Finally, this child is a cultural producer and not a reproducer of movements.*

(Maria)

*So, to support children's fundamental motor skills in a developmental manner, and give positive and supportive feedback on how to use limbs, how to use hands, how to move, transform and reproduce each is, again, stating the 'why.' Why is this important? Why PE and movement education should be embedded throughout students' school day, and throughout students' education experience. To teach PSTs the 'why,' is to give them access to resources, and some of the resources are valid and reliable, like our reading articles, so that content is in there... What is developmentally appropriate...*

(Sophie)

*The content that I teach is, again, stating the 'why.' Why is this important? Why physical education and movement education should be embedded throughout students' school day, and throughout students' education experience. To teach them the 'why,' is to give them access to resources, and some of the resources are valid and reliable, like our reading articles, so that content is in there... What is developmentally appropriate...*

(Cathy)

In addition, the participants stated their own way of showing to PSTs that contemporary PE is not exactly how some of them experienced it in their past. Maria mentioned that there is a process to demystify PE, especially for female PSTs, and this is because some of them have aversive feelings for sports or competition. Sophie pointed out that she wants her PSTs to feel competent to incorporate PE in ECEC settings holistically. In comparison, Cathy reported that she wants her PSTs to understand that PE is part of PSTs' overall education experience.

Although each TE might have their personal philosophical views about the role of PE, in general, they seemed to support the literature by pointing out that PE in ECEC teaches children to move and educates through movement (Laakso, 2003, p. 17). Additionally, TEs' socio-historical contexts (economic, political, cultural, scientific) differences did not interfere with the premise that EC teachers are responsible to teach children to move by



organizing systematic, goal- and child-focused activities that enable them to explore what their bodies can do and to develop fundamental motor skills. This finding is similar to the PE primary education stakeholders' perceptions (Ní Chróinín et al., 2020). It seems that learning about and through physical activity participation is a consensus across educators.

### ***The value of PE in ECTE***

According to UNESCO's (2015) Quality Physical Education document, PE is perceived as a contributor to the holistic development of young children (physical, mental, social and emotional). Despite the long-term notion that mind-body experience is part of children's holistic educational development (Dewey, 1928), it is not uncommon to note that PE, PA or intentional movement skills activities are not valued as other school subjects such as mathematics and languages.

In this study, each participant reported different stories about how they perceived the value of PE within their ECTE programs and by their PSTs. Maria shares some episodes to illustrate her perception of the value of PE in her ECTE program:

*For example, I am with a group of PSTs doing a body experience in a room that is behind an auditorium. All of a sudden, my whole class laughs. That's because someone comes from the auditorium and says: 'what a fuss is this? We are in a lecture! Stop this mess!' Then I tell the instructor that I'm here teaching, this is a class. The instructor then says: 'It is not possible, there we have something serious.' So, my interpretation is that she thinks that my class is not a serious subject. This is a discourse that clearly reveals how body practices and the study of body practices are not valued in the education curriculum.*

(Maria)

Maria adds more about her experience in the ECTE program:

*I'll tell you more, the clothes we wear are questioned. I've already felt embarrassed walking into faculty meetings in yoga pants and sneakers. Because they comment: 'Hey, the teacher who arrived was playing ball with the children.' But I was teaching, and even my clothing is saying in between the lines that this is a symbolic code that reveals a 'non-place' of this important area of knowledge. Because in the faculty meetings, everyone is well dressed, and the women are wearing high heels. So, the idea is that I wasn't suited for that space. I think this reveals the answer that PE is not valued.*

(Maria)

Cathy adds that PE, in general, is not considered a core school subject:

*PE is not considered as important as the core areas like math, science, and English Language Arts, but I think we need to switch this narrative to get people to understand that it is just as valuable, but you can combine everything together.*

(Cathy)

In contrast to Maria and Cathy's perception, Sophie's states that PE in ECTE in Finland is equivalent to other school subjects:

*The PE role in EC is important... its position is quite known, and it is regulated by the government, and it is valued... It is important. I think it's valued. It's equally valued as are the other subjects.*

(Sophie)

In addition to perceptions of ECTE, participants reported how PSTs perceive the inclusion of PE, PA or structured movement activities in their curriculum. Previous research indicates that instruction about PE in ECTE courses positively influences PSTs' values, perceptions, and perceived competencies towards the subject (Bruijns et al., 2021; Mavilidi et al., 2021; Sevimli-Celik, 2020; Soini et al., 2021). A more recent study, for example, revealed that PSTs who enjoyed PE during their school years reported perceptions of higher competence to teach PE than those with lower levels of previous PE enjoyment (Soini et al., 2021).

Below are some examples of how PSTs expressed their value of PE in ECTE programs to TEs. Maria shared an episode of a PST who changed her perception about PE throughout the semester:

*The PSTs arrive on the first day of class and I make a joke: 'What do you think you will learn in this course? The PSTs think that they are going to play games, that they are going to learn some basketball rules... In short, they respond distorted things about what we are going to learn. However, when we walk along the course, this tone changes. They get intrigued and I'll tell you something a PST told me this week: 'Maria I've become a pain in the ass, and you're to blame for that!' [Maria] 'How so?' [PSTs] 'Before, I thought it was great when I went to the school where I work and saw the teacher placing lots of objects and equipment for the students to play in station activities. Today I think it's all nonsense because he does this every day.' Then my PSTs started to bring examples of concepts learned in our classes. (...) That's what I mean in relation to your question, do they value? Initially, no. They think they won't learn anything. As the semester progresses, they come to understand that PE has a lot to teach, has a lot to study, and has a lot to contribute to the whole education of children. Oh, they give another value, they give new meaning to the understanding of PE.*

(Maria)

Sophie also describes an authentic situation where her PSTs reported their value for PE in the ECTE program:

Vidoni, Soini & Ferraz.

*Journal of Early Childhood Education Research* 12(1) 2023, 32–53. <http://jecer.org>

There are authentic situations with my PSTs when they say that: 'Oh, now, I just realized that fundamental motor skills are important for children's holistic development, and to develop a physically active lifestyle.' And these are spontaneous situations with my PSTs. And of course, when we do the learning diary... or other assignments, I can read from their essays that they have realized the importance of PA and the development of fundamental motor skills to holistic development and learning of children.

(Sophie)

In an alternative way, Cathy described her concern about her PSTs' previous school experience in PE or PA. From this perspective, the literature suggests that memory regarding PE or PA during childhood can affect PSTs' perceptions of connecting with young children (Ferraz et al., 2021).

*I start the very first class, I give them a survey. I ask them to describe their early experience with PE in the educational movement, and kind of rate the enjoyment they had through that. Most of them had a positive early on movement experience, but some didn't. (...) Because I think if they had a negative experience, I could infer that they wouldn't be comfortable teaching in a movement environment. And maybe they think that PE is not that important, because they think they can be successful without having a good movement experience. So, my goal, based on those responses, is to flip that script by the end of the 5-weeks ... that they feel comfortable teaching and playing with their students in a movement environment. That's my goal. So, I kind of keep a list of those PSTs who didn't have a positive experience, and I check in with them without them knowing how things are going throughout the 5-weeks together.*

(Cathy)

These reports suggest that changes in PSTs' perceptions can occur throughout a PE course in ECTE. These reports support Graber's (1995) findings in which instructional practices of one TE had a positive impact on the beliefs of PSTs. This change in PSTs' perception toward PE will likely lead to the purposeful inclusion of structured PA in these future EC teachers (Bruijns et al., 2021). Bruijns and colleagues suggested that if teachers feel interested and personally responsible, they may plan more opportunities for children to participate in PAs. Martyniuk and Tucker (2014) recommend more supportive training on PA and its health outcomes, especially among the PSTs with low self-reported PA levels.

### **Unique perceptions and curriculum decisions**

During the interviews, each participant revealed beliefs that impact their curriculum decisions. Maria, for example, explains that in Brazil, PE is part of the field of language (Brasil, 2017), and it embraces the concept of corporeality. Maria describes corporeality in her course context:

*When we think about corporeality, we think that the production of this corporal practice is cultural, social, and immersed in many discourses. It doesn't have to be the absolute*

Vidoni, Soini & Ferraz.

*Journal of Early Childhood Education Research* 12(1) 2023, 32–53. <http://jecer.org>

*truth. I have mine that can be confronted with others, and this recognition is one of the obligations that a teacher has to build in the school.*

(Maria)

Maria explains that PE is part of the language field stating that “*shifting the object of study from movement to body practice makes the whole change from the logic of movement to the logic of language.*” The term language, cited in the Brazilian national curriculum, is based on a communication system that enables individuals to perceive things in the world. In other words, language is what allows the construction of shared meanings and, therefore, to build a social world, a culture (Hall, 1997). Maria continues:

*Before improving a specific motor skill, my PSTs are concerned about what senses these children have about corporeality, and what places they live to talk about it. (...) So, corporeality is the understanding of PE as a language, and as a place of social construction; PE as something that tells a story, that reads some stories.*

(Maria)

The literature suggests that the way of communication in corporeality requires a connection with other sources of information because not even a member of a specific culture cannot always recognize all societal conditions to produce and transform dance, games, or PAs in their own community. For example, if a PST is learning a specific movement and does not understand the social codes involved in it, there is a risk that this PST will misunderstand the diversity embedded in power relations of her or his community. In fact, these power relations explain interpretations that lead to racism, misogyny, or any other prejudice that masks power relations between the various social groups (Nunes, 2016).

On a different aspect, Sophie emphasizes her uniqueness as a motor developmentalist, a researcher, and a research consumer: “*Because I am a motor developmentalist, I, of course, focus on those things more than psychological or socio-emotional issues.*” She mentions that “*the only way to teach physical education at the university is based on the latest research evidence. I think it’s the only way to teach.*”

Sophie complements this uniqueness by saying:

*Based on the research evidence, fundamental motor skills are building blocks for a physically active lifestyle. And, if early childhood... and fundamental motor skills develop during the early years, approximately between years two to six years of age. So, early childhood education plays a critical role in promoting fundamental motor skills development of human beings. And they are critical in such a way that if children don’t develop major patterns of skills, they have more difficulties to develop major patterns skills later in their lives.*

(Sophie)

Sophie finds that using fundamental motor skills in different environments such as indoors and outdoors and moving and learning during every season of the year helps children develop motor skills and stay active and healthy. Sophie adds:

*I can take into account the four seasons in Finland, which means that when we have our practices. We go outside for example, and we benefit from seasonal variations. So, I have exercises at the gym, in the forest, in the park, which is kind of like an EC education center yard. And, then we have a wintery environment. So, we play snow games or snow plays, and skiing and ... yes. And then we have water activities, as well.*

(Sophie)

Finally, from an integrated curriculum perspective, Cathy's uniqueness reflects the importance of embedding movement into English Language Arts (ELA), mathematics, or science content. She thinks that because her PSTs will become classroom teachers, it is imperative to increase their awareness of how to integrate movement while teaching other school subjects such as mathematics, science or ELA.

*I think the particular PSTs I have, unless they... themselves create a lesson embedding movement in their lesson... I don't think they are required to teach movement. But we talk about that when PSTs go out to teach in their field work. I say: 'you have to create a lesson, put movement in there. Kids will love you! You might teach the actual classroom teacher some ideas. So, if you teach a math lesson or ELA lesson, add movement into that.' I would love it if they go: 'We are going to the gym for this lesson that I'm teaching!' Then they take the kids down to the gym. Teach how to play with letters while jumping rope or so...*

(Cathy)

In addition to integrated curriculum activities, Cathy complemented the importance of incorporating social-emotional learning skills during PE activities:

*And another role that I think that PE can take in the overall child's education experience is teaching social-emotional learning skills. And I talk to PSTs, you know, sitting in a chair, in the classroom setting is hard to teach the so important social-emotional learning skills. But in a movement environment, it's just a naturally embedded content. That if you go in with it, with the understanding to teach it intentionally, it will make the whole education experience so much better. As well as the teachers. I think that is the role that it should play, doesn't it? I'm not sure, that's why I try to take my class.*

(Cathy)

Based on participants' unique perceptions, we can imply that their context plays a role in their perceptions. In Brazil, the curriculum literature in body culture or corporeality has shown that PE not only improves health and develops active lifestyle, it is also about communication and codification of social values that occur throughout a person's history with the purpose to fight against prejudice related to race, sex, social class (Vidoni & Ferraz, 2019). In Finland, national regulations in PE in EC, require explicit research evidence-based experiences in teacher education programs. In the USA, besides the

Vidoni, Soini & Ferraz.

*Journal of Early Childhood Education Research* 12(1) 2023, 32–53. <http://jecer.org>

inclusion of social-emotional learning skills in the SHAPE America national documents (SHAPE America, 2014), there is a growing trend that supports the integration of social-emotional components such as self-awareness, self-management, social awareness, relationship skills, and responsible decision-making into a quality PE curriculum (Wright et al., 2021). These findings confirm that although TEs have consensus in some outcomes of their courses, they also have specific interests that potentially influence their goals and decisions regarding their curriculum (Bryson, 2004).

## **Course management**

During the interview, participants reported having standards, guidelines, or national curricula covered in their course. They also reported having autonomy in choosing the materials to be used in the course, such as textbooks, research-based articles, research reports, or peer-reviewed articles from practitioners' journals. Two sub-themes related to course management emerged from interviews and analysis of course syllabi: (a) practicum activities, and (b) assessment.

### ***Practicum activities***

All participants described the importance of engaging PSTs in hands-on experiences in their courses. Maria reported that her PSTs completed 30 hours of ECTE internship in PE combined with arts. Her PSTs teach small groups of children. On the other hand, Sophie mentioned that her PSTs are required to teach children one outdoors and one indoors session as part of their PE course. Lastly, Cathy reported that her PSTs are not required to have practical experiences in PE during their ECTE internship. Still, they practice teaching through the development of mini-lessons during her five-week course. In the last class, Cathy's PSTs select one of the mini-lessons and teach it to their peers.

The inclusion of practicum activities among participants occurs in different ways. Although the provision of PE field experiences (i.e., internship) as one subject in ECEC can be seen as a challenge in ECTE, the TEs seem to give merit to realistic experiences in planning, organizing, and implementing lessons to peers or real children. This methodology supports the literature that indicates that acquisition of pedagogical knowledge can potentially be revealed when PSTs have a chance to relate and apply educational theories, principles, and strategies during practicum experiences (Ferraz et al., 2021; Tardif, 2002). In fact, the literature in teacher education strongly encourages clinical, practicum, field, or any realistic type of teaching during teacher training (Herold, 2019; Nóvoa, 1992; Tardif, 2002). The knowledge acquired during lectures needs to be reframed when PSTs apply to teaching contexts. Moreover, practice teaching to actual children seems to be a paramount to add meaning to pedagogical content knowledge (Herold, 2019).

Vidoni, Soini & Ferraz.

*Journal of Early Childhood Education Research* 12(1) 2023, 32–53. <http://jecer.org>

## **Assessment**

Assessment is an essential component in curriculum development because it provides accountability of effectiveness of teaching and class expectations (Lund & Tannehill, 2011). Data collected from interviews and course syllabi showed that all participants included different types of assessments in their courses, including reading assignments, PSTs' self-assessments, lesson planning, quizzes, class participation, and analysis of research reports. Maria, for example, described three types of assignments as part of her course assessments:

*I have three well-designed assignments. The first is self-assessment. The second is the analysis of experience reports. We have assignments on the experience reports that they deliver in writing... And the last one is from the book "Memories of Cybele" that they had the whole semester to read, and their submission is about responding with the question such as what awakens and worries you when reading this book.*

(Maria)

On another note, the examination of Sophie's PE courses syllabi revealed the following assessment: active participation in contact teaching, making learning tasks, and small teaching exercises and exams.

Unlike the other two other participants, Cathy's PE course was combined with music and art subjects. Her culminating course project requires a cooperative learning group of two or three PSTs to design a lesson integrating the three subjects, including a video presentation. PSTs are also assessed throughout the semester through journal assignments, quizzes, discussion board entries based on assigned readings, curriculum connection lesson plan design, and mini-lessons presented to peers. Cathy explains that technology is an important tool in her course, and it helps with the delivery of her lessons and assessment of students:

*Technology is a big piece of this course. That's where I present my lessons and do most of the assessments. My PSTs can rely strictly on the lesson that I'm using. I use a software called 'Pear Deck,' which is an interactive lesson that students sign on to, they have a link, and they sign in to the lesson. I can move it as an instructor, they can go ahead of me, and I can create slides that they just rely on. For instance, the first week they read an article about why moving is important and they had to reply on the slide five reasons found on the article why movement is important for preK students. So, they can reply right there. I can go back and look at it. We can run through it together. I can switch screens and it shows all the responses, then we can talk about it at that time, which is anonymous. Their names are not on that screen. Then I can go back and actually give them a grade, and make sure they understand what is in the article.*

(Cathy)

Participants were asked about assessments of PSTs' performance of motor skills. Consistently, they responded that motor skills are not part of the course assessments:

Vidoni, Soini & Ferraz.

*Journal of Early Childhood Education Research* 12(1) 2023, 32–53. <http://jecer.org>

*No, I do not. (...) I usually tell them that it is not possible to train a PE teacher in an EC program, without experiencing and practicing the different body practices. (...) This is not a course that teaches physical practices (dance, games, gymnastics, ...) to teachers for children to reproduce, as it would be contradictory to the perspective of body and corporeality that we have.*

(Maria)

*We for example use pictures about fundamental motor skills, how to move legs, how to move arms, how to move body. And then, the PSTs show for themselves, and kind of try the movement by themselves. But I am not... I'm not steering in the direction that she can do... or ... I give them tools to practice. But I don't want to be like a... I don't want to look. I'm assessing if they can jump or not jump... Well, I don't evaluate their skills.*

(Sophie)

*I don't assess them on their skills or their ability to perform. We just talk about what it should look like, and the proper cues for each. I don't assess them. I assess them on their knowledge, but not their psychomotor skills.*

(Cathy)

Although more authentic forms of assessment in PE have emerged in the past three decades, it is still an area of concern in the field (López-Pastor et al., 2013). The statements provided by the TEs were considerate in terms of multiple forms of assessment for PE in ECTE programs. We can suggest that the purposes of the participants' course are aligned with the planned assessments. Motor skill performance assessment, for example, was not mentioned as a one of the purposes of the courses, but why movement (or corporeality) is important in EC education was mentioned several times. The PE teacher education (PETE) literature regarding motor skill performance assessment has been inconclusive whether PETE PSTs should be individually assessed for movement performances or not (Backman et al., 2020). Therefore, in the case of PE in EC programs, assessment of PSTs motor skills, perhaps has not been a concern.

### ***The importance of national documents***

In one way or another, participants are provided with national or state guidelines, standards, curricula, or regulations to follow or to be inspired by. Each participant indicated how they recognize these documents:

*(...) I think maybe one benefit from the Brazilian national curriculum is to guarantee PE's place in the school. This is a point that I can consider as positive and that if it wasn't, maybe it wouldn't show up in some schools. This is a regulatory document that tells me that PE needs to be in school, it has a set of knowledge that needs to be covered by children.*

(Maria)



Maria pointed out that this document is not the absolute truth to PE as a school subject stating that *“When the students arrive thinking that the document is beautiful, wonderful, then I have the challenge of breaking with this logic that is already crystallized for them.”* For Maria, the national curriculum has a huge gap between what is stated in the documents and what has actually been studied in research.

Sophie does not seem to have a disconnect with the Finnish National Core Curriculum for ECEC. She mentioned that *“the benefit of the National Core Curriculum is that it is mandatory for all early childhood education teachers, and it’s kind of easy to decide whether or not to go through them in my course.”*

For Cathy, the SHAPE America National Content Standards and Grade-Level Outcomes have helped her build the scope and sequence of her lessons and her PSTs to understand what is developmentally appropriate for specific age groups. She points out that *“the benefit of these documents is also that they can show to her students that they have resources to go. They help them to build lessons around the movement environment. I think it takes out the guesswork from them on how and why get their kids up and moving.”*

In Finland, the national curricula for ECEC are to guarantee and guide the implementation and development of high-quality and equal ECEC for every attending child (Finnish National Agency for Education, 2022). In support of the concept of national curricula, Michael Apple and Michael Young indicate that their goal should be to assure basic knowledge to all socio-economic classes. Yet, they reiterate that this assumption is compatible with necessary adjustments due to cultural and regional characteristics relevant to each context (Apple, 1992; Galian & Louzano, 2014). In general, the proposition of national curricula has been adopted by several members of the Organization for Economic Co-operation and Development (OECD) with the object to improve education in different countries. The premise, again, supports that the proposed objectives and standardized content and outcomes can help teachers and schools to develop a curriculum that democratizes the access of fundamental knowledge to all students (Shuey et al., 2019).

## Conclusion

Ní Chróinín et al., (2020) claim that stakeholders’ perspectives and voices on the purposes and practices of PE are currently limited and therefore the justification of the views of TEs’ are warranted (McEvoy et al., 2015). This study supports this claim by describing TEs’ perception of the purpose of PE in ECTE across three subjects from different countries. Through a case study, participants reported that the role of PE in ECTE is to help PSTs understand that PE is part of the whole child’s education. It was also reported

Vidoni, Soini & Ferraz.

*Journal of Early Childhood Education Research* 12(1) 2023, 32–53. <http://jecer.org>

TEs provide PSTs with knowledge and resources to teach goal- and child-focused activities that enable children to explore movements that their body can do within the context they live in, and to develop fundamental motor skills.

The findings of this study showed that the TEs' beliefs such as (a) the discourse of the concept of corporeality, (b) the teaching and development of fundamental motor skills, (c) the integration of movement in core academic subjects, and (d) the infusion of social-emotional learning skills were the basis of the decisions they made to design their courses and assess learning. Additionally, all participants expressed that PSTs benefit from a PE course in ECTE because they reframe the idea of the importance of movement and the intent of PAs in ECTE, and they seem to value PE throughout the course. Aside from PSTs' increase in value of PE in ECTE, one of the challenges described in this study demonstrates that a PE course in ECTE programs is not always seen as a legitimate academic discipline.

The findings of this study inform that although international (WHO, 2019) and national documents provide evidence of the benefit of PA during early years, it is implied that PE as an academic discipline in ECTE, still needs to get the same importance as other courses. Fortunately, this issue was not reported by Sophie (Finland), but it was implicit in Maria's (Brazil) statements about a PE course not teaching serious academic disciplines, and in Cathy's (USA) situation, for sharing her course with art and music education. It is concerning that an educational subject that plays an important role in children's holistic development is delivered in one third of a semester. Ideally, PE and other educational subjects should not compete with each other, but to complete each other within the curriculum. Lack of PE training in ECTE is a factor that can negatively influence young children' development of movement skills (Sharma et al., 2014; Trost et al., 2010). Another implication that involves allocation of time in ECTE curriculum is related to practicum activities. It is recommended that PSTs incorporate PE content in actual ECEC settings. Supported by the literature (e.g., Ferraz et al., 2021), realistic field experiences help PSTs to improve not only their teaching skills, but the connections of principles and concepts learned from education with the real world.

This article contributes to the EC and PETE literature in several ways: (a) it supports previous literature (Laakso, 2003) that states that PE's purpose is to children how to move and educate through movement, (b) it addresses how TEs utilized national documents in their PE courses, (d) it shares TE's views about assessment of motor skill performance in ECTEs, (e) it shows that when PE is included in the ECTE curriculum it enhances its value as part of the whole child education, and finally (f) it underlines the importance of hearing TE's perceptions how to implement appropriate PE in ECEC.

This study presents some limitations that need further consideration. First, only three subjects participated in this study. The data obtained from their interviews and course

Vidoni, Soini & Ferraz.

*Journal of Early Childhood Education Research* 12(1) 2023, 32–53. <http://jecer.org>

syllabus are somewhat weak because they are not generalizable. One TE from each country does not represent perceptions, course organization, or curriculum of other ECTE programs. Second, the sources of data collection lacked PST's direct input. Due to the time constraints between ethics approval and data collection, this was limited to TE's interview and course syllabi. Finally, although the semi-structured interview questions were elaborated ahead of time and allowed the researchers to ask follow-up questions, they did not fully address cultural differences among participants such as country sizes, education systems, and socio-economic background of their university contexts. Future research could involve not only a larger number of TEs and different nations, but it could include PSTs' perceptions of PE in ECTE, and ECEC teachers' view in how they incorporate movement into children's education experiences. Further research could also include group interviews with different TEs. This would bring new and fruitful perspectives to the literature. In addition, it would be worthwhile to investigate the collaboration between ECTE and ECEC settings to find out how ECTE could better meet the needs that constantly arise in ECEC.

## References

- Andriamampianina, P., & Moussa, A. S. (2005). The training of physical-education teachers in France and China: a comparative analysis of curricula and attitudes. *International Review of Education*, 53, 23–34. <https://doi.org/10.1007/s11159-005-0588-7>
- Apple, M. W. (1992). The politics of official knowledge: Does a national curriculum make sense? In M.W. Apple (Ed.), *Cultural politics and education* (pp. 22-41). Teachers College, Columbia: New York, NY.
- Backman, E., Nyberg, G., & Larsson, H. (2020). Moving beyond rigid orthodoxies in the teaching and assessment of movement in Swedish physical education tea: A student perspective. *European Physical Education Review*, 26(1), 11–127. <https://doi.org/10.1177/1356336X19837287>
- Brasil (2017). Ministério da Educação. *Base nacional comum curricular*. [http://basenacionalcomum.mec.gov.br/images/BNCC\\_EI\\_EF\\_110518\\_-versaofinal\\_site.pdf](http://basenacionalcomum.mec.gov.br/images/BNCC_EI_EF_110518_-versaofinal_site.pdf)
- Brasil (2021). *Guia de atividade física para a população brasileira*. Ministério da Saúde, Secretaria de Atenção Primária à Saúde, Departamento de Promoção da Saúde. [https://bvsmms.saude.gov.br/bvs/publicacoes/guia\\_atividade\\_fisica\\_populacao\\_brasileira.pdf](https://bvsmms.saude.gov.br/bvs/publicacoes/guia_atividade_fisica_populacao_brasileira.pdf)
- Brown, W. H., Pfeiffer, K. A., McIver, K. L., Dowda, M., Addy, C. L., & Pate, R. R. (2009). Social and environmental factors associated with preschoolers' non sedentary physical activity. *Child Development*, 80(1), 45–58.
- Bruijns, B. A., Johnson, A. M., Irwin, J. D., Burke, S. M., Driediger, M., Vanderloo, L. M., & Tucker, P. (2021). Training may enhance early childhood educators' self-efficacy to lead physical activity in childcare. *BMC Public Health*, 21, 386. <https://doi.org/10.1186/s12889-021-10400-z>
- Vidoni, Soini & Ferraz. *Journal of Early Childhood Education Research* 12(1) 2023, 32–53. <http://jecer.org>

- Bryson, J. M. (2004). What to do when stakeholders matter. *Public Management Review*, 6, 21–53.
- Cheung, P. (2020). Teachers are role models for physical activity: are preschool children more active when teachers are active? *European Physical Education Review*, 26(1), 101–110. <https://doi.org/10.1177/1356336X19835240>
- Copeland, K. A., Kendeigh, C. A., Saelens, B. E., Kalkwarf, H. J., & Sherman, S. N. (2011). Physical activity in child-care centers: Do teachers hold the key to the playground? *Health Education Research*, 27(1), 81–100. <https://doi.org/10.1093/her/cyr038>
- Dewey, J. (1928). Body and mind. *Bulletin of the New York Academy of Medicine*, 4(1), 3–19.
- Finnish National Agency for Education. (EDUFI) (2022). Varhaiskasvatussuunnitelman perusteet 2022. [National Core Curriculum for early childhood education and care 2022]. Regulations and guidelines 2022.
- Finnish recommendations for physical activity in early childhood. (2016). *Joy, play and doing together*. Ministry of Education and Culture 2016:35. <https://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/78924/OKM35.pdf?sequence=1&isAllowed=y>
- Ferraz, O. L., Vidoni, C., & Vilas Boas, M. (2021) Bridging the gap between theory and practice: the impact of school–university partnership in a PETE program. *Sport, Education and Society*, 26(7), 788–799. <https://doi.org/10.1080/13573322.2020.1851182>
- Galian, C. V. A., & Louzano, P. B. J. (2014). Michael Young and the curriculum field: From the emphasis on the "knowledge of the powerful" to the defense of "powerful knowledge." *Educação e Pesquisa*, 40(4), 1109–1124. <https://doi.org/10.1590/s1517-97022014400400201>
- Graber, K. C. (1995). The influence of teacher education programs on the beliefs of student teachers: general pedagogical knowledge, pedagogical content knowledge, and teacher education course work. *Journal of Teaching Physical Education*, 14, 157–178.
- Gubbels, J. S., Van Kann, D. H. H., & Jansen, M. W. J. (2012). Play equipment, physical activity opportunities, and children's activity levels at childcare. *Journal of Environmental and Public Health*, 326520. <https://doi.org/10.1155/2012/326520>
- Hall, S. (1997). The centrality of culture: notes on the cultural revolutions of our time. In K. Thompson (Ed.), *Media and cultural regulation* (pp. 206–238). SAGE Publications.
- Herold, F. (2019). Shulman, or Shulman and Shulman? How communities and contexts affect the development of pre- service teachers' subject knowledge. *Teacher Development*, 23(4), 488–505. <https://doi.org/10.1080/13664530.2019>
- Horsley, K. (2020). Slowing down: documentary photography in early childhood. *International Journal of Early Years Education*, 29(4), 438–454. <https://doi.org/10.1080/09669760.2020.1850430>
- Howells, K., & Sääkslahti, A. (2019). Physical activity recommendations for early childhood: An international analysis of ten different countries' current national physical activity policies and practices for those under the age of 5. In B. Antala, G. Demirhan, A. Carraro, C. Oktar, H. Oz & A. Kaplánová (Eds.), *Physical Education in Early Childhood Education and Care: Research-Best Practices-Situation* (pp. 321–336). Slovak Scientific Society for Physical Education and Sport FIEP.

Vidoni, Soini & Ferraz.

*Journal of Early Childhood Education Research* 12(1) 2023, 32–53. <http://jecer.org>

- Jones, D., Innerd, A., Giles, E. L., & Azevedo, L. B. (2020). Association between fundamental motor skills and physical activity in the early years: A systematic review and meta-analyses. *Journal of Sport and Health Science*, 9(6), 542–552. <https://doi.org/10.1016/j.jshs.2020.03001>
- Laakso, L. (2003). Liikuntakasvatuksen ja liikuntapedagogiikan perusteet. [Basics of physical education and physical education pedagogy]. In P. Heikinaro-Johannsson, T. Huovinen & L. Kytökorpi (Eds.), *Näkökulmia liikuntapedagogiikkaan* (pp. 14–23). WSOY.
- Lópes-Pastor, V. M., Kirk, D., Lorete-Catalán, E., MacPhail, A., & Macdonald, D. (2013). Alternative assessment in physical education: A review of international literature. *Sport, Education and Society*, 18(1), 57–76. <https://doi.org/10.1080/13573322.2012.713860>
- Lu, C., & Montague, B. (2016). Move to learn, learn to move: Prioritizing physical activity in early childhood education programming. *Early Childhood Education Journal*, 44, 409–417. <https://doi.org/10.1007/s10643-015-0730-5>
- Lund, J., & Tannehill, D. (2011). Introduction to standards-based curriculum development. In J. Lund & D. Tannehill (Eds.), *Standards-based curriculum development* (pp. 5–21). Jones and Bartlett Publishers.
- Martyniuk, O. J. M., & Tucker, P. (2014). An exploration of early childhood education students' knowledge and preparation to facilitate physical activity for preschoolers: a cross-sectional study. *BMC Public Health*, 14, 727. <http://www.biomedcentral.com/1471-2458/14/727>
- Mavilidi, M. F., Rigoutsos, S., & Venetsanou, F. (2021). Training early childhood educators to promote children's physical activity. *Early Childhood Education Journal*, 50, 785–794. <https://doi.org/10.1007/s10643-021-01191-4>
- McEvoy, E., Heikinaro-Johansson, P., & McPhail, A. (2017). Physical education teacher educators' views regarding the purpose(s) of school physical education. *Sport, Education and Society*, 22(7), 812–824. <https://doi.org/10.1080/13573322.2015.1075971>
- McEvoy, E., McPhail, A., & Heikinaro-Johansson, P. (2015). Physical education teacher educators: A 25-year scoping review of literature. *Teaching and Teacher Education*, 51, 162–181. <http://dx.doi.org/10.1016/j.tate.2015.07.005>
- Muros Ruiz, B., & Fernández-Balboa, J. M. (2005). Physical education teacher educators' personal perspectives regarding their practice of critical pedagogy. *Journal of Teaching in Physical Education*, 24, 243–264. <https://doi.org/10.1123/jtpe.24.3.243>
- National Association for Education of Young Children (NAEYC) (2010). *Standards for Initial & Advanced Early Childhood Professional Preparation Programs*. National Association for the Education of Young Children, Washington, DC. <https://www.naeyc.org/sites/default/files/globally-shared/downloads/PDFs/our-work/higher-ed/NAEYC-Initial-Professional-Preparation-Standards-Summary.pdf>
- Ní Chróinín, D., Fletcher, T., Jess, M., & Corr, M. (2020). A major review of stakeholder perspectives on the purposes of primary physical education. *European Physical Education Review*, 26(2), 322–336. <https://doi.org/10.1177/1356336X19856381>
- Nóvoa, A. (1992). Formação de professores e profissão docente. In A. Nóvoa (Ed.), *Os professores e a sua formação* (pp. 13–33). Dom Quixote.
- Nunes, M. L. F. (2016). Educação Física na área de códigos e linguagens. In M.G. Neira, M.L.F. Nunes, (Eds.), *Educação Física cultural: escritas sobre a prática* (pp.51–72). CRV.
- Vidoni, Soini & Ferraz.  
*Journal of Early Childhood Education Research* 12(1) 2023, 32–53. <http://jecer.org>

- O'Sullivan, M. (2005). Beliefs of teachers and teacher candidates: Implications for teacher education. In F. Carreiro Da Costa & M. Cloes (Eds.), *The art and science of teaching in physical education and sport* (pp. 149–164). Faculdade de Motricidade Humana.
- Park, S. H., & Park, H. (2019). Relationships of family history of disease and child weight status to child routines: Multi-mediating effect of parental feeding practices and perception of child's weight. *Nursing and Health Sciences*, 21, 359–366. <https://doi.org/10.1111/nhs.12607>
- Patton, M. Q. (2001). *Qualitative evaluation and research methods* (3rd ed.). Sage. <https://doi.org/10.1080/1750984X.2021.1929404>
- Rudd, J. R., Pesce, C., Strafford, B. W., & Davids, K. (2020). Physical literacy - A journey of individual enrichment: An ecological dynamics rationale for enhancing performance and physical activity in all. *Frontiers in Psychology*, 11(1904). <https://doi.org/10.3389/fpsyg.2020.01904>
- SHAPE America (2020). *Active start: A statement of physical activity guidelines for children from birth to age 5*. SHAPE America. <https://www.shapeamerica.org/standards/guidelines/activestart.aspx>
- Sharma, S. V., Upadhyaya, M., Schober, D. J., & Byrd-Williams, C. (2014). A conceptual framework for organizational readiness to implement nutrition and physical activity programs in early childhood education settings. *Preventing Chronic Disease*, 11, 1–6. <http://dx.doi.org/10.5888/pcd11.140166>
- Sevimli-Celik, S. (2020). Moving between theory and practice: preparing early childhood teachers for teaching physical education. *Journal of Early Childhood Teacher Education*, 42(3), 281–298. <https://doi.org/10.1080/10901027.2020.1735588>
- Shuey, E., Kim, N., Cortazar, A., Poblete, X., Rivera, L., Lagos, M.J., Faveiro, F., & Engel, A. (2019). Curriculum alignment and progression between early childhood education and care and primary school: A brief review and case studies (OECD Education Working Papers, 193). OECD Publishing, Paris. <https://doi.org/10.1787/d2821a65-en>
- Soini, A. (2015). *Always on the move? Measured physical activity of 3-year-old preschool children* [Doctoral Dissertation, University of Jyväskylä]. Studies in Sport, Physical Education and Health, 216.
- Soini, A., Watt, A., & Sääkslahti, A. (2021). Finnish pre-service teachers' perceptions of perceived competence in early childhood physical education. *International Journal of Environmental Research and Public Health*, 18 (6454), 1–14. <https://doi.org/10.3390/ijerph18126454>
- Tardif, M. (2002). *Saberes docentes e formação profissional*. Vozes.
- Trost, S. G., Ward, D. S., & Senso, M. (2010). Effects of child care policy and environment on physical activity. *Medicine & Science in Sports & Exercise*, 42, 520–525. <https://doi.org/10.1249/mss.0b013e3181cea3ef>
- Tsangaridou, N. (2006). Teachers' beliefs. In D. Kirk, D. MacDonald & M. O'Sullivan (Eds.), *The handbook of physical education* (pp. 486–501). Sage.
- Tsangaridou, N. (2017). Early childhood teachers' views about teaching physical education: challenges and recommendations. *Physical Education and Sport Pedagogy*, 22(3), 283–300. <https://doi.org/10.1080/17408989.2016.1192593>

Vidoni, Soini & Ferraz.

*Journal of Early Childhood Education Research* 12(1) 2023, 32–53. <http://jecer.org>

- UNESCO (2015). *Quality Physical Education: guidelines for policy-makers*. United Nations Educational, Scientific Organization, Paris, France.  
<https://en.unesco.org/inclusivepolicylab/sites/default/files/learning/document/2017/1/231101E.pdf>
- U.S. Department of Health and Human Services (USDHHS) (2018). *Physical activity guidelines for Americans*. U.S. Department of Health and Human Services.  
[https://health.gov/sites/default/files/2019-09/Physical\\_Activity\\_Guidelines\\_2nd\\_edition.pdf](https://health.gov/sites/default/files/2019-09/Physical_Activity_Guidelines_2nd_edition.pdf)
- Vidoni, C., & Ferraz, O. L. (2019). An analysis of national physical education curriculum initiatives in Brazil. *The Physical Educator*, 76(5), 1342–1356.  
<https://doi.org/10.18666/TPE-2019-V76-I5-9201>
- World Health Organization (WHO) (2019). Guidelines on physical activity, sedentary behaviour and sleep for children under 5 years of age. WHO.  
<https://apps.who.int/iris/handle/10665/311664>
- Wright, Gray, S., & Richards, K.A.R (2021). Understanding the interpretation and implementation of social and emotional learning in physical education. *The curriculum journal*, 32(1), 67-86. <https://doi.org/10.1002/curj.85>