

THE SOCIAL MATTER OF INCLUDING PUPILS WITH SPECIAL EDUCATIONAL NEEDS IN PHYSICAL EDUCATION CLASSES

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ABSTRACT. Introduction: The specific educational needs of pre-university teachers in physical education and sports classes in working with students with special educational needs has certain peculiarities. **Objectives:** Identifying the profile of the physical education and sports teacher; their attitudes, skills and abilities necessary to promote the social inclusion of students with special educational needs in the physical education and sports classes provided in the school curriculum. Identifying examples of good practice to combat the social exclusion of students with special educational needs in physical education and sports classes. **Materials and methods:** Using the Systematic Review method, a number of 434 articles were initially identified. Following the establishment of the inclusion and exclusion criteria, a number of 18 studies were retained for analysis. **Results:** Peer guidance has proven to be an effective way to facilitate inclusive physical education. However, supplementing the findings with qualitative data from students with disabilities and their teachers on the peer guidance strategy in different cultural and school settings could provide a deeper and more comprehensive understanding of the strategy. Furthermore, it is also suggested that more studies could focus on the roles and responsibilities of support teachers in physical education and sports classes. **Conclusions:** Future studies examining the effects of inclusion on students with or without disabilities should also address student attitudes, social interactions, and the acquisition of cognitive development and motor skills in inclusive physical education settings.

Keywords: *the social matter (continuous training), inclusion, inclusive education, needs inclusion, physical education and sports (teachers).*

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REZUMAT. Problematika socială a incluziunii elevilor cu cerințe educaționale speciale în cadrul lecțiilor de educație fizică și sport – O analiză sistematică a literaturii de specialitate. Introducere: Nevoile educaționale specifice ale cadrelor didactice din învățământul preuniversitar în cadrul orelor de educație fizică și sport în lucrul cu elevii cu cerințe educaționale speciale are anumite particularități. **Obiective:** Identificarea profilului cadrului didactic de educație fizică și sport; a atitudinilor, a competențelor și abilităților acestora necesare promovării includerii sociale a elevilor cu cerințe educaționale speciale în cadrul orelor de educație fizică și sport prevăzute în programa școlară. Identificarea de exemple de bune practici în vederea combaterii excluziunii sociale a elevilor cu cerințe educaționale speciale în cadrul orelor de educație fizică și sport. **Materiale și metode:** utilizând metoda Systematic Review, au fost identificate inițial un număr de 434 articole. În urma stabilirii criteriilor de includere și excludere au fost reținute pentru analiză un număr de 18 studii. **Rezultate:** Îndrumarea de la egal la egal s-a dovedit a fi o metodă eficientă de facilitare a educației fizice incluzive. Cu toate acestea, completarea constatărilor cu date calitative de la elevii cu dizabilități și profesorii lor cu privire la strategia de îndrumare de la egal la egal în diferite setări culturale și școlare ar putea oferi o înțelegere mai profundă și mai cuprinzătoare a strategiei. Mai mult, se sugerează, de asemenea, că mai multe studii s-ar putea concentra pe rolurile și responsabilitățile profesorilor de sprijin în cadrul orelor de educație fizică și sport. **Concluzii:** Studiile viitoare care examinează efectele incluziunii asupra elevilor cu sau fără dizabilități trebuie de asemenea să abordeze atitudinile elevilor, interacțiunile sociale și dobândirea dezvoltării cognitive și a abilităților motorii în medii incluzive de educație fizică.

Cuvinte cheie: *problematika socială (formarea continuă), incluziune, educație incluzivă, nevoi speciale, educație fizică și sport (cadre didactice)*

Introduction

Physical activity is the fundamental component of the general well-being and of the majority of children, the experience in this sense being realized during the physical education classes in school (Cheung, 2019; O'Connor & McNabb, 2020; Ross et al., 2016). The universal popularity of sports makes it an ideal transformer, a tool for encouraging participation through equal access to activities, both inside and outside the school system (UN, 2006). However, research shows that students with special educational needs and disabilities (SEND) in ordinary schools continue to experience fewer participatory sports options than others (Bloemen et al., 2015). The matters related to health, adapted physical activity, social rehabilitation and integration of students with SEN, are becoming increasingly relevant while employing a growing contingent of people interested in this matter (WHO, 2017; Bertills et al., 2019).

Inclusive education is based on the fundamental right of all learners to receive a quality education which meets their basic learning needs, encourages their personal development to the greatest possible extent and considers the environments' diversity and skills to be more of a learning opportunity rather than a barrier (Ainscow & Miles, 2008). Physical education classes are an integral and indispensable element, part of the general education for children who need a special kind. Disabilities and long-term health conditions may limit the significance of participation in physical education lessons, unless appropriate support is provided.

The structure of physical education lessons is important for the participation of students with special educational needs in school education, both in terms of physical and social adaptations. (Toptaş & Demirci, 2018). Different adaptations and modifications are essential, depending on the type of disability. Significant learning experiences for students with disabilities in physical education and sports (PES) lessons largely depend on the teachers' skills and attitudes toward communicating and structuring their teaching in an inclusive direction (Neville et al., 2020). The restriction of participation can be experienced if the activity is not being adapted to students who need special support (Coates & Vickerman, 2010; Haegele et al., 2017).

Students with physical disabilities describe enjoyable learning experiences as lessons in which they experienced a sense of belonging, their participation being skillful and beneficial. Encouraging, strengthening, helping and guiding facilitates colleagues' positive interaction. Patience and social encouragement are examples of the kind of support they have received. Above all, several studies conclude that sharing physical education lessons with a student with disabilities creates positive attitudes toward the inclusion of these students. (Liu et al., 2010; McKay et al., 2015; Sullivan and Glidden, 2014). However, while physical education lessons encourage students with disabilities' acceptance, it is also noticed that there are barriers and facilitators to inclusion (Darretxe et al., 2016; Haegele et al., 2017).

International research shows that students with SEN still do not access or they are yet to be fully included in the curricula of ordinary schools (Neville et al., 2020). This matter of inclusion is particularly acute when it comes to children with SEN participating in physical education lessons. Furthermore, research evidence shows signs of a double link in this case: children with SEN are disproportionately affected by social and emotional conditions, behavioral and health-related physical inactivity, along with exclusion from physical education and sports lessons (Bloemen et al., 2015). However, physical education teachers often lack the knowledge, confidence, or pedagogical training to adapt their lessons in ways that could include them appropriately (Rekaa et al., 2018).

Physical education programs for children with SEN have to be prepared based on their individual requirements and characteristics, such as diagnosis, severity of diagnosis, and the existing level of performance (Hutzler, 2003; Ozer & Sahin, 2010). It is acknowledged that physical education helps children with SEN to develop self-concept and social competence in order to develop motor skills, physical and motor adaptation, leisure skills, and play and creative time skills as long-term goals (Neville et al., 2020). The physical education of students with SEN must be adequate in improving psychomotor, sensory and cognitive development. If these areas of improvement are achieved, these long-term goals will also be accomplished. Nevertheless, physical group activities promote the sharing, communication, and learning of social behaviors among people with special needs (Konar & Yildiran, 2012; Ozer & Sungu, 2016; Demirci & Toptaş Demirci, 2016). Teachers' knowledge regarding the adapted training and their ability to apply suitable methods and tools is a guarantee for the successful socialization of children with different disabilities and allows these children to cope with the curricular requirements of different disciplines. A special attention should be paid to physical education and adapted sports lessons. All in all, they offer children the opportunity to increase their physical development, to improve their physical capacity and to develop valuable skills, which will be necessary both in their training and in their following years.

Thus, having as a starting point this information and all the specialized studies, going through a systematic review of literature, I intend to detail the specific educational needs of physical education teachers in pre-university education working with students with SEN. It all begins with the question: What are the current training needs of physical education and sports teachers regarding the social inclusion of students with special educational needs in physical education and sports lessons? The objectives of this investigative research approach goes in 2 directions: 1. Identifying the physical education teachers' profiles; their attitudes, skills and abilities necessary to promote the social inclusion of students with SEN in the physical education classes provided in the school curriculum. 2. Identify examples of good practice in order to combat the students with SEN' social exclusion in physical education classes.

Methodology

Methodology or Methods/ Research Instruments or Sources Used

This study was undertaken as a systematic approach to literature review based on the original guidelines, as proposed by Gough et al. (2012), in accordance with the new provisions supported by Zawacki-Richte et al. (2020), who aims to reveal research trends, developments and open issues of this topic,

which still need to be addressed. The review process is also guided by the Grounded Method for Rigorously Reviewing Literature by Wolfswinkel et al. (2013). Quantitative and qualitative studies were included in the review using the Petticrew and Roberts' (2006) model as a basis.

1. The research process

Starting from the fundamental research question and the 2 directions of analysis / objectives, an advanced search algorithm was established in order to list the articles / books of interest for a clearer search efficiency: (inclusion) AND (special educational needs) AND (physical education), and then for a more precise search we used this other algorithm: (inclusion) AND (special educational needs) AND (students) AND (physical education) AND (physical education and sports teachers) AND (educational needs) AND (best practice) AND (attitudes). The databases searched in this study included SPORTDiscus, JSTOR Arts & Sciences, ProQuest, SAGE, Taylor & Francis Online and Web of Science.

2. Inclusion and exclusion criteria

- Collected peer-reviewed articles on the following topics were included:

Systematic literature reviews (RSL), namely literature surveys containing defined research questions, search process, data extraction and data presentation, even if the researchers referred to their study as a systematic review of the literature.

- Meta-analysis (MA).

- Experimental and quasi-experimental studies

Articles on the following topics were excluded: informal literature surveys (no definite research questions; no definite research process; no definite data extraction process). Duplicate reports of the same study (in the case when there are several reports of an analysis in different journals, the most complete version of the study was included in the review), and non-English research was excluded.

3. Data collection

In the initial review, all articles were revised as to whether their titles, abstracts and keywords met our inclusion criteria. Through the initial screening, 434 articles (for all 2 directions) were identified as relevant for this review, and the authors performed a preliminary coding of the selected articles. During the coding process, 197 items were identified as not fulfilling the inclusion criteria. Thus, the first two stages led to 216 articles. The data extracted from each study was: Source (journal or conference) and full reference. Study type classification (RSL, Meta-Analysis MA); Scope (research trends). The main field. The author (s)

and their institution and the country in which they are located. The study summary, including the main research questions and answers. Research question / problem. Quality assessment. After a re-evaluation of them all as well as after reading the abstract and the entire study, a number of 18 studies and articles were analyzed (See figure 1).

4. Data analysis

The reading was performed in three stages. In the first phase, during the online search, before downloading each article, we carefully scanned the title, the keywords and the abstract. In the second phase, for the selection of the relevant material, the reading was finished for all the downloaded articles. In the final phase, the study was fully read (close and repeated reading) in the case of the sample of articles (N = 18). Also, in the case of books and articles used to establish the background of the study, structuring the literature review and adapting the study method, reading the index (using the index to locate specific elements and reading only the sections).

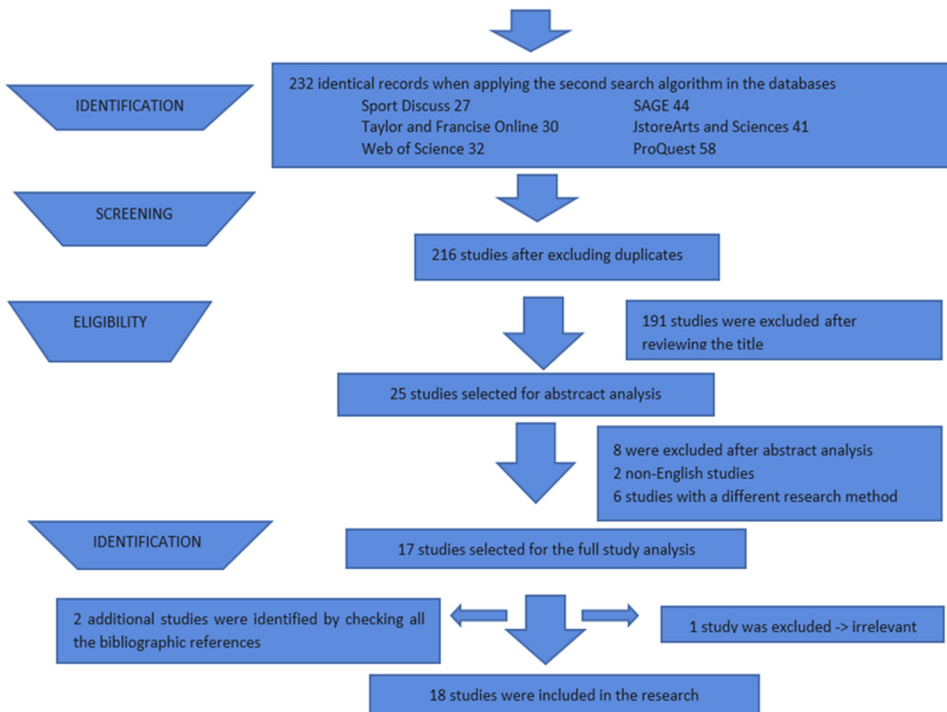


Fig. 1. Flow chart illustrating literature research and selection process

Data presentation

Table 1 provides an overview of all studies included in the research, in reference to the main findings in specialized literature of studies on identifying the needs and attitudes of physical education teachers regarding the inclusion of students with SEN in physical education classes.

Table 1. The main findings of studies on the promotion of inclusive attitudes and behaviors of students with SEN in physical education classes

<i>Article, authors</i>	<i>Sample (profile, n, sex, age)</i>	<i>Research design</i>	<i>Research method</i>	<i>The main findings</i>
<i>Pedersen, Cooley, & Rottier (2014)</i>	450 physical education and sports teachers	Exploratory	Questionnaire	The physical education and sports teachers' training requirements regarding competences of including children with SEN are high, but with a good communication with the support teacher, this can be highly improved.
<i>Majoko, Tawanda (2019)</i>	24 sports teachers, 18 men, 6 women	Qualitative	Semi-structured interview	"Teachers' competence in notifying special education and evaluation procedures have also been reported to be important for the inclusive education. This has been proved to help teachers identify children who need differentiated training and intensive training, respectively, to enable them to teach and learn to accomplish their individual needs in the regular classroom community! "
<i>Kudlacek, Martin & Ješina, Ondřej & Flannagan, Pat (2010)</i>	12 studies	Qualitative	Literature analysis	"Teach students with special educational needs in an inclusive setting along students without disabilities where one of the KEY ROLE would be: to adapt the teaching process to face students' needs in inclusive physical education."
<i>Baglama, Yucesoy, & Beyazit, F. (2019)</i>	105 teachers	Qualitative	Descriptive questionnaire	"Teacher training programs should focus more on teaching people with special needs to promote physical education teachers' knowledge, skills and attitudes."
<i>Demirci, & Tzarova (2021)</i>	67 students	Qualitative	Questionnaire	"The vast majority of teachers surveyed were not open enough to work with children with SEN."

Article, authors	Sample (profile, n, sex, age)	Research design	Research method	The main findings
<i>Qi, Jing & Ha, Amy (2012)</i>	75 studies	Qualitative	Literature analysis	"The results of these studies also indicated that, although students with disabilities can benefit from social interactions in inclusive vocational education, there is also a social isolation of the students with SEN."
<i>SR, Filipe & Mónico, Lisete (2013)</i>	115 teachers	Qualitative	Questionnaire	"Students with SEN have more easily developed their skills with individualized support and there are advantages to including them in regular education. Attitudes towards teaching aids are less favorable, due to the lack of adequate services, as well as the lack of adequate resources / specific materials available to work with students with SEN."
<i>Andrew (2004)</i>	10 teachers	Qualitative	Questionnaire	"For a full inclusion of students with SEN in all the activities offered in the curriculum, there must be a specific adaptation for this category of students."
<i>Vickerman (2007)</i>	30 physical education teachers	Qualitative	Questionnaires and innervations were structured	"Lacking a coherent plan for teacher training in the educational needs of children with SEN, different attempts to include these children in the mainstream would be difficult"
<i>Cooper, Heron, & Heward (1987)</i>	53 subjects	Qualitative	Questionnaire	"The positive effects of peer guidance on improving students' motor performance"
<i>Auxter, Pyfer, & Huettig (2005)</i>		Qualitative	Case study	"The roles and responsibilities of support teachers may include guiding, collecting and maintaining, implementing behavior management plans, preparing instructional materials, and collaborating with teachers. "
<i>Heikinaro-Johansson, Sherrill, French & Huuhka (1995)</i>	Case studies	Exploratory	Case study	"The first goal was to develop an adapted consultant model in physical education classes in order to assist regular elementary school teachers while integrating students with special needs into physical education lessons."

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Article, authors	Sample (profile, n, sex, age)	Research design	Research method	The main findings
<i>Grenier (2006)</i>	Case study	Qualitative	Case study	"This topic draws attention to the importance of context and the organizational factors which support the students in their ability to demonstrate their skills. The specific curriculum, the modified results and the group dynamics are challenges that teachers need to consider in the planning stages of the training."
<i>Coates, Janine & Vickerman, Philip (2013)</i>		Qualitative	Literature study	"Therefore, by taking such approaches, teachers and researchers should be creative and should consider ways to think outside the box when developing methods of fully employing children."
<i>Klavina, Block (2008)</i>	2 groups of students from different schools and 9 tutorials	Exploratory	Quasi-experimental	"To summarize, examining the relationships between student-teacher and student-student interaction behaviors using the data collection tool (which included contextual variables of both students and teachers) provided a realistic approach to determining and understanding the benefits and / or the problems of peer learning strategies in the case of the strategy for the inclusion of students with SEN."
<i>Klavina, Aija & Rodionova, Karina (2016)</i>	2 groups of students from different schools	Exploratory	Quasi-experimental	"The activity involvement data did not show a significant change in outcomes for target students under teacher-led and peer-mediated conditions. The support provided by trained teachers and other classmates did not negatively affect the level of involvement in regard to the activity for students with SMD in general."
<i>Hodge, S.R. (2010)</i>		Qualitative	Literature study	"In my opinion, effective teachers need to reflect on their practice, carefully plan lessons, adapt, modify and individualize instruction in order to promote student learning."

<i>Article, authors</i>	<i>Sample (profile, n, sex, age)</i>	<i>Research design</i>	<i>Research method</i>	<i>The main findings</i>
				They must also possess different managers' skills which should be as effective and efficient when working with SEN' student behavior. Physical education teachers can use different training formats to organize and provide instruction and to build practice opportunities for students in different curriculum models."
<i>Tsakiridou, Helen & Polyzopoulou, Konstantia (2014)</i>		Qualitative	Questionnaire	"Teachers who participated in this study expressed generally neutral attitudes towards the practice of inclusion, with the exception of students with social difficulties, for whom they seemed to adopt a more avorable attitude."

We started with the deductive phase of the analysis; that is, the development of categories based on reviews and the coding of data according to categories. Subsequently, the inductive approach was used for open coding and category identification. Finally, the data collected from the revised studies was described and interpreted. At the same time, the second co-author of this article, specialized in inclusive education was invited to ask for comments and suggestions for the reasoning behind the categories. On the basis of the relevant literature and expert opinion while using the analytical framework approach, there were two categories of research areas identified: the analysis of attitudes and skills needed by the physical education and sports teachers in combating social exclusion of students with SEN and the encouragement of an inclusive education adapted to the needs of students with SEN in the teaching process. On the other hand, it was finding solutions and good practices that would support this approach to inclusion.

Table 2 presents the research categories, the main objectives of the studies classified in each category and the relevant studies. Firstly, each study was evaluated according to the data selection criteria and placed in the relevant category. Then, all data and research results were annotated for a rigorous subsequent correlation and issuance of a solid conclusions based on the data collected.

Table 2. Research categories and the main purpose of the study

Category	The main purpose of the study
The analysis of attitudes and skills required by physical education and sports teachers in combating the social exclusion of students with open educational needs	To examine teachers' perceptions on the integration of children with SEN in SAI classes
Solutions for the children with SEN in SAI classes' integration	To examine the effects of different practices or strategies which can be used in order to meet the needs of students with disabilities in SAI classes

Results and discussion

The analysis of and skills and demeanor necessary for physical education teachers in combating social exclusion

Numerous studies have identified different variables associated with teachers' views and attitudes. Significant concerns seems to have focused on identifying the factors which contribute to the positive attitude teachers carry towards the inclusion of students with disabilities. For example, the frequently mentioned potential facilitators include vocational training, perceived competence, previous teaching experiences and support available from school (Branco & dos Santos, 2013). In contrast, potential inhibitory factors include lack of training, inadequate training and the type and severity of students' disabilities. Clearly, intervention studies are vital in order to change teachers' attitudes. On the other hand, the most recent study by Demerici (2021) showed that the vast majority of teachers surveyed were not open enough to work with children with SEN in physical education and sports classes. The comparative analysis of physical fitness in children with and without special educational needs shows that, even with some exceptions at the beginning of the experiment, the level of development of boys' and girls' physical capacity with and without special needs does not differ significantly, which is a guarantee of fairness straight from the beginning of the experiment. Each group of children with specific disabilities has its own characteristics related to the nature of the disability in question. The emphasis on work during future physical education and sports activities should focus on those signs of physical fitness where the group has the lowest grades. Efforts to develop the other signs - those with the highest scores - will not have the same building effect on the physical ability of children with special needs. Both at the beginning and at the end of the sports-

pedagogical experiment, the assembled sets are homogeneous and relatively homogeneous in terms of the physical signs studied. The means of physical education and sports applied in the classroom did not cause significant changes in most of the evidence of physical ability examined, both for boys and girls with and without special needs. This requires appropriate changes in the curricula and methods used in school.

In the study by Majoko (2007), we find that all student development and the individual learning differences, learning environments, knowledge of curricular content, assessment, planning and training strategies, learning and professional practice and collaboration are essential to inclusive practice. Regular teachers require a certain level of competence in the skills of the common core of the Children's Council with SEN. According to the same study, it is specified that important skills for teachers in inclusive classrooms include peer guidance, cooperative learning, curricular modification and adaptation, learning to learn and analyze applied behavior, use of classroom assistance, instructional technology and support for children with SEN (Mastropieri & Scruggs, 2010; Oliver & Reschly, 2010; Philpott et al., 2010). Studies also show that regular teachers need to use instructional strategies, such as individualized and adaptive instruction and activity-based learning in order to facilitate the processes of teaching and learning pertaining to children with special needs (Apelgren & Giertz, 2010; Friend & Bursuck, 2012; May, 2005).

When we talk about adapting the curriculum and the teaching scenario, (according to the study Coates, Janine & Vickerman, Philip, 2013), inevitably, we are talking about certain teachers' key competencies, which are found in Kudlacek's study (et. All, 2010) and which are the following:

- Adapting or purchasing appropriate equipment that can facilitate inclusive physical education (eg brightly colored, loud, light or heavy, larger, etc.);
- Analysis of tasks in correlation with desired skills, in order to adapt them to suit the needs of students with special educational needs;
- Adapting the rules of the games to facilitate inclusion;
- Adapting the teaching style to facilitate inclusion;
- Adapting the learning environment to facilitate inclusion.

The results of another study converge in the same direction as Majko's study, Bağlama, Yucesoy, & Beyazit, (2019). These provided evidence on physical education and teachers' attitudes toward students with special needs along with the association of their attitudes among demographic variables. Regarding the results of this study, there is a requirement to support positive attitudes amid physical education teachers and protection against people with special needs. The following recommendations were provided depending on the results of the study:

- Teacher training programs should focus more on how to teach people with special needs in order to promote the knowledge, skills and attitudes attributed to physical education teachers.

- The association with different demographic variables could be examined, as a relative or close person with special needs or teaching experience in special education.

- In the context of the special education course, physical education teachers could be encouraged to make school visits to recognize and gain experience with children with special needs and therefore develop positive attitudes towards them.

- Elective courses may include curriculum which allows for increased awareness of people with special needs. During the teaching practice course, physical education teachers may be required to participate in the observation and implementation of inclusive education practices. Thus, we see how the results of this study correlate both in formal training and in a compulsory internship, in order to see concretely various typologies of children with SEN. Of course, a study measuring this impact would be welcome in order to be able to develop a public policy proposal in this regard.

Of course, not all studies show this positive relationship between teachers and students with SEN. According to a study conducted in Greece (Tsakiridou & Polyzopoulou, 2014), teachers who participated in this study expressed generally neutral attitudes towards the practice of inclusion, with the exception of students with social difficulties, for whom it seemed they adopted a more favorable attitude, as shown in the relevant research. These attitudes seem to stem from the absence of qualified staff in special education, problems with the organization and operation of Greek Centers for Diagnosis and Public Assessment, lack of materials and technical infrastructure, and inadequate support services to reach the requirements of the whole integration process for special education. School principals have expressed a desire to implement inclusive education for students with SEN. However, it was clear that the school system has a real difficulty in fully meeting the needs of these students.

Another idea is outlined in the study by Pedersen, Cooley & Rottier, (2014), namely that itinerant and support teachers should exist in each and every school. Moreover, they should cooperate with teachers as to promote social inclusion. This may indicate an opening to a different research' direction which aims to the exact cooperation degree between the support teacher and the classroom teacher in order to ensure an inclusive educational process. This teacher' competence to cooperate and work in a team with other professionals is also presented as a favorable result for the inclusion of children with SEN in the study conducted by Heikinaro-Johansson, Sherrill, French and Huuhka (1995).

In this case, they used an evaluative case study project to examine the effects of the collaborative team approach on facilitating the inclusion of students with disabilities. Here, the class teacher and the support teacher from the collaboration team. The team organized meetings to identify and analyze the needs related to the successful inclusion of students with SEN. The results showed that teachers, support teachers and students have successfully benefited from the collaborative team approach for facilitating inclusive vocational education.

Solutions and good practices in promoting the inclusion of children with SEN in physical education and sports classes

• *Peer tutoring*

Of all the revised studies, three of them examined the effects of peer guidance in inclusive settings during SAI classes. All of these studies used a multi-data-delayed research project with a single subject (Klavina & Rodionova, (2016)) and provided evidence for the positive effects of peer guidance for improving students' motor performance. As stated in Klavina and Block's study (2007), they highlighted the effect of peer tutoring on interaction behaviors between students with SEN and students without SEN in physical education and sports classes. Behavioral data collected under teacher-directed conditions indicated a high level of interactions between students with SEN and teachers. In regard to the interactions with potential tutors, all targeted students occasionally interacted with selected students as a result of teacher instruction and the positive attitude of individual general education students.

It must be noted that these 3 studies used intentional sampling to select targeted students with different disabilities. Therefore, it is difficult to generalize the results to the entire population of students with SEN. The future studies shall try studies involving random selection, which would allow a greater results' generalization (Block & Obrusnikova, 2007). All studies which examined the effects of peer guidance were conducted in the United States. Research in other countries and other contexts is needed as to add diversity (Qi & Ha (2012). In addition, only one study examined the effects of peer guidance on students with SEN, which is the study by Cooper, Heron, and Heward (1987). It provided evidence for the positive effects of peer guidance in improving students' motor performance. Future research on the effects of peer guidance in the context of primary and secondary education is necessary. Moreover, the individual conditions and characteristics of fellow tutors (eg gender, previous experience of interacting with colleagues with SEN, communication skills and motor skills) should be examined. Finally, the three studies used a quasi-experimental and

qualitative design by applying questionnaires. Completing all the findings with qualitative data from students and their teachers on the peer guidance format could be useful.

• *Adaptation of the teaching process by physical education and sports teachers*

As highlighted in the study started by Hodge (2010) a number of important indicators of effective teaching are applicable to students with SEN in physical education. These include:

1. finding ways in order to keep the students appropriately involved in the subject for a higher percentage of time and doing this without resorting to coercive, negative or punitive behavioral techniques;
2. developing and maintaining a positive classroom climate, in which students have many opportunities to practice levels appropriate to their abilities;
3. individualizing instructions for students' success and task-oriented behaviors, which include adapting and adjusting strategies to suit contextual variables;
4. the use of peer tutors to assist and pay extra attention, which allows students to practice greater opportunities;
5. using appropriate reinforcement strategies to motivate students;
6. providing congruent feedback, specific to skills and behavior;
7. organizing practices in a way that promotes student learning and retention.

The time which students spend in the lesson activity should be directed towards the skills' acquisition with clear measures of responsibility regarding the learning outcomes through active participation. In planning lessons, teachers and service providers need to design learning experiences which ensure that their students actively participate in fun movement activities. It is important for teachers to focus on the fun of the students as they move. However, they must hold students accountable for the correct movement' forms towards the acquisition, development or competence of skills. For all of this to happen in real life and for physical education and sports teachers to develop these skills and abilities, the study by Smith (2004) shows that there is a need for a change in curriculum. This should include a wider range of physical activities, adapted to students with SEN, other than the 'traditional' team sports, which could be the best course of action. In addition to his own, Vickerman (2007) also emphasized "the need for the profession to establish a clear and consistent approach to physical education and sports classes in an inclusive manner through initial teacher training and continuing professional development programs". Indeed, although there is a tendency to overemphasize the significance of training for the practice of physical education teachers, it would be appropriate

to start a change with trainees themselves and to continue some education programs with their already qualified colleagues, in order to facilitate it even more, as specified in the conclusions of the study by Auxter, Pyfer, & Huettig (2005).

- *Cooperative learning*

Cooperative learning is defined as “the instructional use of small groups so that students can work together to maximize their own and mutual learning” (Johnson, Johnson, & Holubec, 1993, p. 6). Group goals can only be achieved if individual students in the group work together (Grineski, 1996; Johnson & Johnson, 1999). Grenier (2006) described teachers’ behaviors and students in inclusive environments in SAI classes from a constructionist social perspective. The participant in Grenier’s (2006) study was a physical education and sports teacher in primary education who adopted cooperative learning strategies to include a student with severe cerebral palsy and visual impairment in her physical education program. She used a small group format to increase the level of interaction through face-to-face involvement, positive interdependence and group processing. The findings showed that cooperative learning supported her beliefs in developing social skills for students with or without disabilities, as well as the effectiveness of her inclusion practices. Nonetheless, students did not always have the ability to include their disabled colleagues in activities despite all the teacher’s attempts to place them in support groups. This finding drew attention to the importance of context and the organizational factors which support students in their ability to demonstrate their skills. Despite the progress in establishing more effective inclusive practices, further research on how to improve the effectiveness of training for students with or without disabilities in the inclusive framework of SAI classes is essential. Future research should continue to address the effects of different inclusive strategies. For example, a single study (Grenier, 2006) explored the effects of cooperative learning strategies. More evidence from several research methodologies is necessary.

Conclusions

This review provided a summary and a discussion of the existing work on the format of physical education and sports classes conducted in an inclusive manner. The data in this analysis indicate that the number of studies on inclusive research has increased in the last 20 years. Regarding their research projects, most studies were generally classified as non-experimental studies (causal comparative method and correlational studies) and about over 80% of

them were conducted using a qualitative approach. There was no experimental research with random sampling among the studies that were reviewed. It is suggested that the quality and generalization of experimental design could be improved through collaborative studies.

Additionally, it is also necessary to increase the quality of the qualitative studies by applying well-planned approaches or strategies. Although many of the research studies have focused on teachers' attitudes and perceptions towards inclusion, future studies are still vital to identify the factors which contribute to the development of positive attitudes towards inclusive education in physical education and sports classes. Furthermore, future studies should explore effective inclusive practices in different social and cultural contexts.

The results of this review showed that peer guidance has proven to be an effective method of facilitating inclusive physical education (e.g., Klavina & Block, 2008; Ward & Ayzazo, 2006). However, supplementing the findings with qualitative data from students with disabilities and their teachers on the peer guidance strategy in different cultural and school settings could provide a deeper and more comprehensive understanding of the strategy. Besides, it is also suggested that more studies could focus on the roles and responsibilities of support teachers in physical education and sports classes.

Finally, future studies examining the effects of inclusion on students with or without disabilities should also address student attitudes, social interactions, and the acquisition of cognitive development and motor skills in inclusive physical education settings. There are a number of limitations to this literature review. For example, the keywords used in this study (namely: inclusion, inclusive education, inclusive physical education, disabilities and integration) may have limited the number and range of studies identified. Future research may need to consider including other words. However, this review improved our knowledge of the type of studies undertaken in the field of inclusive physical education for students with SEN.

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