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The Influence of School Pathologies on the Feeling of Pedagogical Incompetence in Teaching Inclusive Physical Education

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Abstract

Background. Inclusion requires a variety of pedagogical skills for the successful learning and well-being of all children. Teachers face daily challenges in meeting the needs of students while ensuring quality learning and facilitating personal development, regardless of their situation.

Objectives. The study aimed to clarify the activities of students who don't participate in physical education and how it affects teachers' sense of pedagogical competence (TSPC) in this area, by examining the effect of other potential factors and investigating the interactions with their perceptions of their students' participation in pedagogical activities.

Materials and methods. The research approach used to perform this study was based on a survey of 918 pathological students (5.85 ‰) and 298 physical education teachers (including 74 females, all over 21 years old) in public schools. The questionnaire consisted of three parts: socio-demographic and student engagement questions, TSPC towards teachers' inclusive practice, and their perceptions related to students' participation in PES educational activities. The items in the last two parts were represented in Likert 5-scale format.

Results. The results showed that boys (62.66 %) with pathologies were more physically involved, and this trend was particularly marked in rural areas (69.40 %). Only a minority of students chose alternative activities during class (14.91 % chose another subject, 8.40 % went to the library). Socio-professional factors influence perceptions and TSPC regarding the participation of students with pathologies in physical activities and other learning tasks, varying according to each type of pathology. TSPC has a highly significant effect on perceptions of students' inclusion in motor, organizational and observational tasks ($p = 0.000$). Finally, when teachers feel pedagogically incompetent, this is reflected in negative attitudes and perceptions toward inclusion.

Conclusions. According to the findings of this study, it has been revealed that boys with disabilities in rural areas are more physically active than girls. Furthermore, the study indicates that teachers' perceptions and sense of pedagogical competence have a strong influence on the inclusion of students with disabilities.

Keywords: school inclusion, learning task, inclusive physical education, teachers' perception, teachers' pedagogical competence, inclusive practices.

Introduction

In 2023 in the annual report on the statistical collection of education in Morocco found that the regular schooling of children with disabilities (SH) is 4.27 ‰ (n = 37911), of which 0.85 ‰ motor, 0.23 ‰ visual, 1.35 ‰ mental, 0.42 ‰ auditory, 0.54 ‰ autism and 1.39 ‰ learning disabilities, including 0.16 ‰ schooled in integrated classes (Direction de la strategie des statistiques et de la Planification, 2023). What's more, 436,000 students with SH attend school with their peers in France. While inclusive education requires theoretical validation as well as methodological and practical expertise to promote the inclusion of students in pedagogical activities as well as in teaching-learning processes (Direction des Curricula, 2019a). As well as ensuring equity in terms of school fairness, quality of learning and overall harmonious promotion of students' potential (physical, emotional, moral and cognitive) (CSEFRS, 2015). The complexity of its successful implementation is often overlooked in curricular guidelines and guides, which is why in 2019 Morocco has conceptualized several guides to inclusive education for school directors (Direction des Curricula, 2019b), teachers (Direction des Curricula, 2019a), associations and families (Direction des Curricula, 2019c), based on the inclusive education reference framework (Direction des Curricula, 2019d). These efforts are part of a framework to strengthen the inclusive professional skills of the various actors and

stakeholders to ensure mainstream education and high performance school inclusion for all students (Myklebust, 2006), regardless of their abilities or disabilities (Direction des Curricula, 2019a). While other organizations have focused on adapted and inclusive physical activity (Kelly, 1995; National Center on Health Physical Activity and Disability, 2017), as well as adaptations and support for students to participate fully in physical and sports education (PSE) sessions (American Association of Adapted Sports Programs (AAASP), 2019).

This subject represents an important pillar of education and the transmission of values, and allows the acquisition of various personal qualities, such as autonomy, cooperation, personal and social responsibility... through the participation in integrative physical activities with their peers (André et al., 2011; Mamak et al., 2020; Viciana et al., 2017). On the other hand, it improves performance and academic achievement (Donnelly et al., 2009; Sallis et al., 1999), and has a positive impact on the health of the practitioner, while those who have a high level of PA feel more athletic and have a good physical condition, quality of life and self-image (Groff et al., 2009; Sallis et al., 1999; Saskia et al., 2018). Consequently, adaptations and diversifications of school inclusion are recommended according to the pathology or disability; these adaptations are essential if all students are to participate fully and safely. Teaching practice in PES with these students requires a professional, systematic and practical rehabilitation of inclusive education and its application procedures to promote inclusive teaching at the levels of design, implementation, orientation, follow-up and evaluation (Direction des Curricula, 2019c). Its success depends on the teacher's contribution to the creation of a motivational climate that leads to the social and educational integration of the student in a differentiated group (Wilhelmsen et al., 2019). The pursuit of equal educational opportunities between these students and their peers does not guarantee their sense of inclusion (King, 2013), but the physical involvement that fosters a sense of educational and social inclusion. In neutral, positive interactions between students and their teachers are the basis for creating an inclusive learning environment for all (Klavina et al., 2008; Seymour et al., 2009; Spencer-Cavaliere & Watkinson, 2010). Creating a climate based on mastery and/or autonomy rather than achievement reflects a motivational pedagogy that is socially and pedagogically inclusive (Wilhelmsen et al., 2019).

In PES, teachers are often confronted with great diversity among their students, a situation that makes their teaching practice more complex, especially when they work with groups of students suffering from pathologies. This diversity represents a major challenge that they are not always able to cope with satisfactorily, unlike in the associative environment where the practice often consists of grouping pupils according to their performance in relatively homogeneous categories. Indeed, in addition to the diversity of students, teachers have to juggle a variety of knowledge to teach, tasks and contexts, as well as different performance standards. The goal of inclusion is to provide all students, regardless of their needs, with equitable educational opportunities of high pedagogical quality. In this context, physical education teachers play a critical role in creating a learning environment in which each student can fully participate, develop motor and social skills, and thrive. They promote enjoyment of physical activity, manage time and space constraints, establish a balance of authority, create a climate conducive to learning, attend to the individual needs of each student while encouraging interaction among them, and adapt to the unexpected while respecting the established program. This context requires an understanding of these complex dynamics. First, to analyze the alternatives for the participation of students with pathologies in physical education. Second, to measure the impact of pathologies on teachers' sense of pedagogical competence (TSPC). Then, the effect of pathologies on their perceptions of student participation in learning activities in PE. In neutral, to investigate the nature of the relationship between TSPC and their perceptions. Finally, to investigate other factors that modulate this relationship. The objective of this thesis is to determine what students who don't participate in physical education classes do, and how the type of pathology affects TSPC in relation to inclusive physical education, taking into account other factors that may influence this relationship, and explore their interaction with their perceptions of their students' involvement in educational activities, for the relevance of health promotion and the inclusion of students with illnesses and disabilities in physical education classes.

Materials and Methods

Study Participants

Data were collected through online questionnaires administered to physical education teachers in public schools in the Beni Mellal-Khénifra region. To ensure data integrity, participation was voluntary and responses were anonymous. The selection of medical files was based on the inclusion criteria, which included children between 13 and 18 years of age, enrolled in public secondary schools, with pathologies confirmed by a physician. A total of 918 (5.85‰) students pathological case conformed during the diagnosis of 93870 medical records, of them mis 59.80% (n = 549) who are engaged, while 40.20% (n = 369) who do not feel engaged to physical education sessions. These students are enrolled with 298 physical education teachers working in public schools in the territory of the Beni Mellal-Khenifra Regional Directorate of the Ministry of National Education, Preschool and Sports. First of all, it's noteworthy that the 20-29 age group (66.78%) is the most represented among all the participants. The latter is more populated by men (75.45%). The majority has less than 5 years of experience (66.78%). This trend is slightly more pronounced among women (63.51%), with a predominance of teaching in urban areas (80.87%). In neutral, it is relatively balanced between the sexes, with an almost equal distribution found between college secondary (38.26%) and qualifying secondary (61.74%), although slightly more teachers work in qualifying secondary. Finally, the majority of them have a Diplôme de Centres Régionaux des Métiers d'Education et de Formation (CRMEF) (42.62%).

Measuring Instrument

The validation of the questionnaire used has been carried out in four different stages, including an in-depth analysis of international references and school health registries, followed by the design of specific items and the validation

of these items by experts in school medicine and adapted sports. We carried out a meticulous analysis of international references on the classification of health anomalies and school inclusion. In particular, we studied two major axes: the International Classification of Functioning, Disability and Health (World Health Organization, 2012) and the Parasporic Classification of Disability (Comité International Paralympique, 2016). We then carried out an analysis of the school health registers to identify the most common diseases and their status of inclusion or exclusion in physical education. We then began to design questionnaire items focusing on teachers' sense of pedagogical competence (TSPC) and their perception of the inclusion of school pathologies in the 3 types of learning tasks, such as motor skills development (motor tasks), organization and group observation. Based on the most programmed cycles in this geographical region, the pedagogical guidelines (Direction des Curricula et de Vie Scolaire, 2007), and the list of Paralympic sports updated during the Tokyo Games (Comité International Paralympique, 2020). Finally, the axis dealing with the classification of health anomalies was subjected to the evaluation of five experts in school medicine, resulting in a classification comprising 12 main pathology groups. Similarly, the second axis, dedicated to modeling inclusive educational activities, was validated by a group of experts including specialists in para-sport and physical education. The validated instrument was then administered online to PES teachers.

Statistical Analysis

The results obtained were analyzed using SPSS software version 27.0.1.0. First, a descriptive analysis was performed according to gender, including the three types of learning tasks for each pathology group. Next, a χ^2 test was calculated to measure differences between groups according to socio-professional factors. Descriptive analyses of the means and standard deviations of their perceptions were followed by an ANOVA I variance test to assess the effect of socio-professional factors on the variation in their perceptions. Finally, an ANOVA I test was performed to assess the impact of teachers' sense of pedagogical competence (TSPC) on their perceptions of the inclusion of students with pathologies in their pedagogical activities.

Results

This section presents four lines of analysis. First, we present descriptive data on the frequency and percentage of students with diagnosed disorders who participated and did not participate in physical activity at school, and then the difference between them as a function of demographic factors. Then we'll evaluate the difference in terms of socio-professional factors. We then analyze their perception of the physical involvement of pathologies in learning tasks, while measuring the impact of socio-professional factors. Finally, we measure the impact of the TSPC on their perceptions.

Analysis of the distribution of students with pathologies participating in PE classes

The highest prevalence of diseases is observed in the male population (37.47 %; 3.66 ‰) than in the female population (22.33 %; 2.18 ‰). However, boys have higher rates, as metabolic abnormalities are more common in boys (6.21 %; 0.61 ‰) than in girls (2.94 %; 0.29 ‰), and cardiovascular abnormalities are also more common in boys (6.21 %; 0.61 ‰) than in girls (1.53 %; 0.15 ‰). Among students aged 12 to 15, the overall prevalence is 52.28 % (3.06 ‰). While those aged 16 to 18 show a slightly lower prevalence of 47.72 % (2.79 ‰). On the other hand, the rate is higher in rural areas (69.40 %; 4.06 ‰) than in urban areas (30.60 %; 1.79 ‰). This variability is significantly different ($p < 0.05$) according to sex, age and zone in most of the pathology groups.

Disengaged student breakdown by sex, age and region

It should be noted that, regardless of gender, age and region, there is no significant difference between alternative activities. Of course, 27.65 % (2.70 ‰) of the confirmed population didn't declare what they do, in contrast to 5.99 % (0.59 ‰) who return to another subject, 3.42 % (0.33 ‰) who return to the school library and 3.14 % (0.31 ‰) who absent themselves instead of benefiting from their physical education. Boys, on the other hand, are more disengaged in physical education with a prevalence of 77.30 %. This trend is associated with the age category 16-18 years (60.28 %) and with the urban area (63.12 %), which means that students aged 16-18 years living in the urban area are more disengaged.

Differences in TSPC regarding their inclusive teaching practices in physical education

Table 3 shows the difference in teachers' sense of competence (TSPC) towards the inclusion of students with pathologies in educational activities in PES as a function of socio-professional factors. Men felt more competent to adapt motor tasks (n = 176; 59.06 %), organizational tasks (n = 146; 49.13 %) and observational tasks (n = 165; 55.37 %) than women (respectively n = 36; 21.25 %, n = 56; 18.90 %, n = 60; 20.27 %). On the other hand, feelings of incompetence predominated in most cases for both sexes and varied according to each pathology group. On the other hand, there is a significant difference ($p < 0.05$) between the experience of the physical education teachers, the experience with the pathological students, the basic training, the zone and the cycle of belonging, while there is no difference between the sex and the age ($p > 0.05$).

Analysis of teachers' perceptions of the participation of students with pathologies in physical activities and learning tasks

Table 4 shows the influence of socio-professional factors on teachers' perceptions of the involvement of students with pathologies in learning tasks in PES. These results show that perceptions of physical participation in learning tasks vary according to the type of disability and the sport activity practiced. On average, teachers were more cautious about motor impairments such as hemiplegic paralysis, lower amputation, osteoarticular anomalies and upper amputation (1.96 ± 0.82, 2.58 ± 1.10, 2.73 ± 1.15, 2.77 ± 1.23, respectively) and cardiovascular disorders (2.74 ± 1.20). However, neither

Table 1. Distribution and difference of diagnosed disorders related to participation in PE by gender

Pathologies	Sex						χ^2	Total	
	Female			Male					
	n (% relatif)	%/918 Confirmed	‰/N Diagnosed	n (% relatif)	%/918 Confirmed	‰/N Diagnosed		n (%) Con Confirmed	‰/N Diagnosed
Upper amputation	15 (53.57 %)	1.63 %	0.16 ‰	13 (46.43 %)	1.42 %	0.14 ‰	0.013	28 (5.10 %)	3.05%
Lower amputation	32 (74.42 %)	3.49 %	0.34 ‰	11 (25.58 %)	1.20 %	0.12 ‰	0.000	43 (7.83 %)	4.68%
Hemiplegic paralysis	17 (60.71 %)	1.85 %	0.18 ‰	11 (39.29 %)	1.20 %	0.12 ‰	0.000	28 (5.10 %)	3.05%
Osteoarticular	25 (43.86 %)	2.72 %	0.27 ‰	32 (56.14 %)	3.49 %	0.34 ‰	0.039	57 (10.38 %)	6.21%
Psychological	20 (35.71 %)	2.18 %	0.21 ‰	36 (64.29 %)	3.92 %	0.38 ‰	NS	56 (10.20 %)	6.10%
Intellectual	15 (53.57 %)	1.63 %	0.16 ‰	13 (46.43 %)	1.42 %	0.14 ‰	0.013	28 (5.10 %)	3.05%
Visual	18 (42.86 %)	1.96 %	0.19 ‰	24 (57.14 %)	2.61 %	0.26 ‰	NS	42 (7.65 %)	4.58%
Auditory	2 (14.29 %)	0.22 %	0.02 ‰	12 (85.71 %)	1.31 %	0.13 ‰	NS	14 (2.55 %)	1.53%
Metabolic	27 (32.14 %)	2.94 %	0.29 ‰	57 (67.86 %)	6.21 %	0.61 ‰	NS	84 (15.30 %)	9.15%
Respiratory	12 (21.43 %)	1.31 %	0.13 ‰	44 (78.57 %)	4.79 %	0.47 ‰	0.021	56 (10.20 %)	6.10%
Cardiovascular	14 (19.72 %)	1.53 %	0.15 ‰	57 (80.28 %)	6.21 %	0.61 ‰	0.001	71 (12.93 %)	7.73%
Immune	8 (19.05 %)	0.87 %	0.09 ‰	34 (80.95 %)	3.70 %	0.36 ‰	0.024	42 (7.65 %)	4.58%
Total	205 (37.34 %)	22.33 %	2.18 ‰	344 (62.66 %)	37.47 %	3.66 ‰	-	549 (100 %)	59.80%

All values are expressed as frequencies (percentages), NS. Not significant, significance $p < 0.05$.

Table 2. Percentage of Students Not Participating in PE, by Gender

Pathologies	Sex						χ^2	Total		
	Female			Male						
	n (% relatif)	%/918 Confirmed	‰/N Diagnosed	n (% relatif)	%/918 Confirmed	‰/N Diagnosed		n (%) Disengaged	n (%) Con Confirmed	‰/N Diagnosed
Undeclared	58 (22.66 %)	15.60 %	0.61 ‰	196 (77.27 %)	53.19 %	2.09 ‰	NS	254 (68.83 %)	27.65 %	2.70 ‰
Absent	5 (18.07 %)	1.42 %	0.06 ‰	24 (81.17 %)	6.38 %	0.25 ‰	NS	29 (7.86 %)	3.14 %	0.31 ‰
Go to another subject	13 (23.82 %)	3.55 %	0.14 ‰	42 (76.15 %)	11.35 %	0.45 ‰	NS	55 (14.91 %)	5.99 %	0.59 ‰
Return to library	8 (25.35 %)	2.13 %	0.08 ‰	24 (75.94 %)	6.38 %	0.25 ‰	NS	31 (8.40 %)	3.42 %	0.33 ‰
Total	84 (22.70 %)		0.89 ‰	285 (77.30 %)		3.04 ‰	-	369 (100 %)	40.20 %	3.93 ‰

All values are expressed as frequencies (%), NS. Not significant, significance $p < 0.05$.

Table 3. Differences in TSPC with regard to the inclusion of students with pathologies in physical education classes according to socio-professional factors

Variables	Sex	Age	Experience in PE	Experience with disabilities	Basic training	Work area	Work cycle
TSPC – Inclusion in motor tasks	NS	NS	0.000	0.000	0.000	0.000	0.000
TSPC – Inclusion in organizational tasks	NS	NS	0.000	0.000	0.000	0.000	0.000
TSPC – Inclusion in observation tasks	NS	NS	0.000	0.000	0.000	0.000	0.000

TSPC. Teachers' sense of pedagogical competence, NS. Not Significant, χ^2 p-value < 0.05

Table 4. The effect of socio-professional factors on teachers' perceptions of the participation of students with pathologies in PE activities

Variables	Mean ± SD	Experience in PE	Experience with disabilities	Basic training	Work area	Work cycle
Teachers' perceptions - Inclusion in motor tasks	2.990 ± 0.945	0.000	0.000	0.000	0.000	NS
Teachers' perceptions - Inclusion in organizational tasks	3.376 ± 1.225	0.000	0.002	0.000	0.001	NS
Teachers' perceptions - Inclusion in observation tasks	3.740 ± 1.348	0.002	NS	0.000	0.001	0.029

SD. Standard Deviation, NS. Not Significant, ANOVA I p-value < 0.05

sex nor age had any influence. On the other hand, area, cycle and teaching experience or experience with a student with a pathological condition in physical education had an influence on the teachers' perception of the participation of students with physical activity abnormalities in organizational and observation tasks in physical education ($p < 0.05$).

Impact of teachers' sense of pedagogical competence on their perception of the participation of students with pathologies in PE

This table presents the results of the influence of teachers' sense of competence on their perception of students' involvement in different learning activities in PES. Their data are presented as overall means with standard deviation (± SD). On average, these teachers have more positive perceptions in relation to the inclusion of students in motor tasks (m = 2.990), in those of organization (m = 3.376) and in those of observation (m = 3.740). However, their feelings of competence had a significant effect ($p < 0.05$) on their perceptions of students' involvement in motor, organization, and observation tasks.

Table 5. Effect of TSPC on their perceptions of learning tasks

Variables	N	Mean ± SD	ANOVA I
TSPC – Teachers' perceptions of including students in motor tasks	298	2.990 ± 0.945	0.000
TSPC – Teachers' perceptions of students' inclusion in organizational tasks	298	3.376 ± 1.225	0.000
TSPC – Teachers' perceptions of student inclusion in observation tasks	298	3.740 ± 1.348	0.000

Discussion

This study found that boys with pathologies are more physically active than girls (37.34 %), with this trend slightly balanced between age groups. However, it is more pronounced in rural areas (69.40 %), indicating that non-urban students participate more in physical activities. Research has shown that urban girls perform better physically than rural girls, while rural boys perform better than urban boys (Hadjrioua et al., 2020). Conversely, the commitment of students in urban areas is less significant, as they are situated in close proximity to their educational institutions, which encourages a sedentary lifestyle. Conversely, those who have a relatively slow commute and walk to school will be more likely to engage in daily physical activity. There is a correlation between the amount of time spent outside the home by the child and an increase in physical activity (Larouche et al., 2019). Conversely, a significant barrier to physical activity is the practice of parents transporting their children to school (Larouche et al., 2019). Conversely, the high rate of undeclared disengagement (68.83 %) is particularly noteworthy, as it suggests the need for a more in-depth exploration of the reasons for under-reporting participation. Moreover, the finding that only a minority of students select alternative activities during lessons (14.91 % choose another subject, 8.40 % go to the library) indicates that there is potential to promote more active and engaged participation in physical education. Researchers have demonstrated that some students engage in conversation with one another during the session, or engage in other forms of non-productive behavior with the material, while others exhibit a lack of responsiveness to the teacher's instructions and adopt a passive attitude (Potvin & Lacroix, 2009). Nevertheless, the findings indicate that students with medical conditions are also engaged. One study indicated that individuals with cerebral palsy were the most involved, with the exception of certain gymnastics activities (Blinde & McCallister, 2015). Another study found that there is a notable discrepancy in participation in inclusive school sports physical activities (Ben Rakaa et al., 2024), despite the diversity of disability types in PE. Research has demonstrated that all high achievers in the class engage in PE, which aligns with our findings. Additionally, a strong correlation ($r = 0.76$) was observed between self-efficacy and the capacity to participate in an uninhibited manner, while the ability to be physically involved in the activity was observed during lessons (Bertills et al., 2017). The probability of engaging in a given activity is greater when it is a regular occurrence. Consequently, disabled students' motor engagement time (MET) in activities is demonstrably lower than that of their non-disabled peers (Eriksson et al., 2007).

The results of this study were found to be contradictory to those of previous research, which had concluded that there was a significant difference in teachers' sense of self-efficacy according to gender. However, in this study, TSPC did not differ between gender or age. In addition, several other socio-professional factors were found to affect this feeling, including experience in teaching PE, specific experience with those suffering from a disability or illness, basic training for teaching PE, area and cycle of belonging ($p < 0.05$). However, it should be noted that this distribution changes according to each pathology group. This elucidates why pedagogical incompetence can be ascribed to oneself, for example, due to a dearth of experience, or to an external factor, such as inadequate initial training, or difficulties in managing the situation due to limited resources (material or human) (Martineau & Presseau, 2003). In recent years, the complexity of teaching has increased significantly, primarily due to the expanded responsibilities of teachers and the diversification of the school population. This situation presents teachers with unprecedented challenges that often exceed the scope of their university training (Robert & Tondreau, 1997), as evidenced by the findings of our study. Conversely, research demonstrated that educators exhibited a generally favorable attitude toward the inclusion of children with special needs. However, male educators demonstrated a more positive perception of the pedagogical effectiveness of these children than their female counterparts. Furthermore, the more efficacious the teachers, the more favorable their attitudes toward educational inclusion (Dukmak et al., 2019).

The extent of physical involvement permitted for students with pathologies varies according to the type of activity in question. The study concluded that teachers are more reluctant to include students with motor deficiencies such as paralysis, amputations, osteoarticular diseases, and other cardiovascular diseases. Similarly, the study demonstrated that these educators exhibit a reluctance

to engage their students in motor tasks, a moderate level of reluctance in organization tasks, and a high level of reluctance in observation tasks. This finding provides justification for the hypothesis that those with a higher degree of involvement will have motor tasks, while those with a lower degree of involvement will have organization and observation tasks (Ben Rakaa et al., 2024). The findings of previous studies indicate that these students typically assume the roles of referee, judge, and observer. However, the exclusion of students from participation in sports is not typically due to a lack of interest or an attempt to eliminate certain activities (Blinde & McCallister, 2015). Instead, it is often due to the incompatibility of tasks and circumstances with their abilities (Coates & Vickerman, 2010), which leads them to assume passive roles. In a similar vein, neither gender nor age exerts any influence on the outcome, with the exception of variables such as experience, basic training, and area of residence, which exert the opposite influence (Billing, 2017; Chhabra et al., 2009; Vaz et al., 2015). The results of several studies are in agreement with our findings, indicating that there is no correlation between teachers' attitudes towards inclusion according to their gender. In contrast, other research has indicated that men tend to hold more positive attitudes towards inclusion (Boyle et al., 2013; Sharma et al., 2015; Vaz et al., 2015). In this regard, one study has demonstrated that the experience of pedagogical incompetence among teachers with students is significantly more prevalent in activities conducted outside the classroom than in the classroom setting. This phenomenon is particularly evident among novice teachers who, despite their initial challenges, appear to demonstrate competence during their initial stages of professional development (Martineau & Presseau, 2003). Another study found no correlation between age and perceptions of student inclusion. However, the perception of these challenges varies according to the type and severity of the student's disability. Certain type of disability, which appear to require more adaptation, organization, concentration, and support, are perceived as complex and difficult challenges, and undoubtedly have a negative impact on their attitudes (Obrusnikova, 2008).

In contrast, a significant positive correlation between public school teachers' feelings of competence and self-efficacy and their overall attitudes towards inclusion, as these feelings correlate with acceptance of the idea of inclusion (Weisel & Dror, 2006). This sentiment has a positive effect on students' academic performance (Soodak & Podell, 1993), which contributes significantly to the realization of the school inclusion policy (Weisel & Dror, 2006). Conversely, a low level of pedagogical self-efficacy with regard to inclusion was associated with more negative attitudes (Hofman & Kilimo, 2014; Vaz et al., 2015). Another noteworthy aspect of this research is the influence of teachers' perceptions on their pedagogical skills in including students with pathologies in motor, organizational, and observational tasks. This indicates that educators who possess a strong sense of pedagogical competence are more inclined to engage students with disabilities in inclusive physical education and educational activities. Conversely, educators who perceive themselves as lacking in pedagogical competence are less likely to include students with disabilities in their classrooms. The findings of this study align with those of Dukmak, who demonstrated that when teachers perceive a higher sense of self-efficacy, their attitudes become more positive and favorable towards the inclusion of students with disabilities in regular classrooms (Dukmak et al., 2019).

Conclusions

Inclusion of students with disabilities into physical education (PE) represents a significant challenge for contemporary educational systems. This study examined the various facets of this challenge, analyzing potential alternatives to the involvement of students with pathologies, the impact of pathologies on teachers' sense of pedagogical competence (TSPC), and their perceptions of students' involvement in learning activities. Nevertheless, she concluded that the diversity of students' pathologies and needs renders the inclusion of students with pathologies in PE particularly complex. The TSPC of teachers is subject to a number of influences, including the specific pathology involved, the teacher's experience, and the context in which teaching occurs. Teachers' perceptions of the involvement of students with medical conditions vary according to their individual characteristics and the context of their respective schools. The relationship between TSPC and teachers' perceptions of the involvement of students with medical conditions is influenced by a number of other factors. This study has illuminated the intricate nuances of inclusion in physical education. It is important to note, however, that a number of limitations must be acknowledged. The sample size and methodology employed render it impossible to generalize the results to all PE teachers. Furthermore, the study did not address the experiences of students with pathologies, which represents an important area for future research.

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Conflict of Interest

Authors declare no conflict of interest.

References

Direction de la strategie des statistiques et de la Planification (2023). *Receuil Statistique de l'Education.* https://www.men.gov.ma/Ar/chafafiya/Pages/statistiques.aspx

Direction des Curricula (2019c). *L'éducation inclusive au profit des enfants en situation de handicap: Guide pour les enseignants.* https://www.men.gov.ma/Ar/Documents/dc/guide-enseignants-fr.pdf

CSEFRS (2015). *Vision Stratégique 2015-2030.* https://www.csefrs.ma/publications/vision-strategique-de-la-reforme/?lang=fr

Direction des Curricula (2019b). *L'éducation inclusive au profit des enfants en situation de handicap: Guide pour les*

directeurs des etablissements scolaires. https://www.men.gov.ma/Ar/Documents/dc/guide-directeurs-fr.pdf

Direction des Curricula (2019d). *L'education inclusive au profit des enfants en situation de handicap: Guide pour les familles et les associations.* https://www.men.gov.ma/Ar/Documents/dc/guide-associations-fr.pdf

Direction des Curricula (2019a). *Cadre referenciel de l'education inclusive des enfants en situation de handicap.* https://www.men.gov.ma/Ar/Documents/dc/curriculum.pdf

Myklebust, J. O. (2006). Class placement and competence attainment among students with special educational needs. *British Journal of Special Education, 33*(2), 76-81. https://doi.org/10.1111/J.1467-8578.2006.00418.X

Kelly, L. E. (1995). *Adapted physical education national standards: National Consortium for Physical Education and Recreation for Individuals with Disabilities.* 216.

National Center on Health Physical Activity and Disability (2017). *Discover Inclusive School Wellness Guide.* https://www.nchpad.org/1505/6469/Discover~Inclusive~School~Wellness~Guide

American Association of Adapted Sports Programs (AAASP) (2019). *Best practices in education-based adaptedteam sports for students with physical disabilities.* https://adaptedsports.org/wp-content/uploads/2021/03/Best-Practices-in-Adapted-Team-Sports-2nd-Edition.pdf

André, A., Daigremont, S., & Janner-Raimondi, M. (2011). Inclusion sociale des élèves en situation de handicap en Éducation physique et sportive: difficultés et perspectives. *La Nouvelle Revue de l'adaptation et de La Scolarisation, 55*(3), 111. https://doi.org/10.3917/nras.055.0111

Mamak, H., Temel, A., & Kangalgil, M. (2020). Examining the Self-Efficacy of Primary School Teachers and the Problems Encountered in Physical Education and Game Course. *Educational Policy Analysis and Strategic Research, 15*(3), 336-358. https://doi.org/10.29329/EPASR.2020.270.16

Viciana, J., Mayorga-Vega, D., & Parra-Saldías, M. (2017). Adolescents' physical activity levels on physical education and non-physical education days according to gender, age, and weight status. *European Physical Education Review, 25*(1), 143-155. https://doi.org/10.1177/1356336X17706683

Donnelly, J. E., Greene, J. L., Gibson, C. A., Smith, B. K., Washburn, R. A., Sullivan, D. K., DuBose, K., Mayo, M. S., Schmelzle, K. H., Ryan, J. J., Jacobsen, D. J., & Williams, S. L. (2009). Physical Activity Across the Curriculum (PAAC): A randomized controlled trial to promote physical activity and diminish overweight and obesity in elementary school children. *Preventive Medicine, 49*(4), 336-341. https://doi.org/10.1016/J.YPMED.2009.07.022

Sallis, J. F., Lewis, M., McKenzie, T. L., Kolody, B., Marshall, S., & Rosengard, P. (1999). Effects of health-related physical education on academic achievement: project SPARK. *Research Quarterly for Exercise and Sport, 70*(2), 127-134. https://doi.org/10.1080/02701367.1999.10608030

Groff, D. G., Lundberg, N. R., & Zabriskie, R. B. (2009). Influence of adapted sport on quality of life: Perceptions of athletes with cerebral palsy. *Disability and Rehabilitation, 31*(4), 318-326. https://doi.org/10.1080/09638280801976233

Saskia, J. te V., Lankhorst, K., Zwinkels, M., Verschuren, O., Takken, T., de Groot, J., Backx, F. J. G., de Groot, J. F., Lankhorst, K. M., Nijboer, T. C. W., Takken, T., Smits, D. W., Verschuren, O. W., Visser-Meily, J. M. A., Volman, M. J., & Wittink, H. W. (2018). Associations of sport participation with self-perception, exercise self-efficacy and quality of life among children and adolescents with a physical disability or chronic disease-a cross-sectional study. *Sports Medicine - Open, 4*(1). https://doi.org/10.1186/S40798-018-0152-1

Wilhelmsen, T., Sørensen, M., & Seippel, Ø. N. (2019). Motivational Pathways to Social and Pedagogical Inclusion in Physical Education. *Adapted Physical Activity Quarterly, 36*(1), 19-41. https://doi.org/10.1123/APAQ.2018-0019

King, G. (2013). Perspectives on measuring participation: Going forward. *Child: Care, Health and Development, 39*(4), 466-469. https://doi.org/10.1111/CCH.12083

Klavina, A., & Block, M. E. (2008). The Effect of Peer Tutoring on Interaction Behaviors in Inclusive Physical Education. *Adapted Physical Activity Quarterly, 25*(2), 132-158. https://doi.org/10.1123/apaq.25.2.132

Seymour, H., Reid, G., & Bloom, G. A. (2009). Friendship in Inclusive Physical Education. *Adapted Physical Activity Quarterly, 26*(3), 201-219. https://doi.org/10.1123/apaq.26.3.201

Spencer-Cavaliere, N., & Watkinson, E. J. (2010). Inclusion Understood From the Perspectives of Children With Disability. *Adapted Physical Activity Quarterly, 27*(4), 275-293. https://doi.org/10.1123/apaq.27.4.275

World Health Organization (2012). *International Classification of Functioning, Disability and Health: version for children and adolescents.* https://apps.who.int/iris/bitstream/handle/10665/81988/?sequence=1

Comité International Paralympique (2016). *IPC Classification - Paralympic Categories & How to Qualify.* https://www.paralympic.org/classification

Direction des Curricula et de Vie Scolaire (2007). *Les Oriontations Pedogogiques d'Enseignement d'EPS.* https://pw.men.gov.ma/Ar/Pages/Accueil.aspx

Comité International Paralympique (2020). *Paralympic Sports List 2020 - Summer & Winter Paralympic Sports.* https://www.paralympic.org/sports

Hadjrioua, M., Djoudi, C., & Hadji, A. (2020). *Influence du milieu "Urbain" et "Rural" sur l'activité physique et le profil physique des élèvescas d'étude: lycée Hocine ait Ahmed (tizi n'berber)* / lycée chouhada annani Bejaia. www.univ-bejaia.dz/xmlui/bitstream/handle/123456789/15711/796MAS%20134.pdf?isAllowed=y&sequence=1

Larouche, R., Blanchette, S., Faulkner, G., Riazi, N., Trudeau, F., & Tremblay, M. S. (2019). Correlates of Children's Physical Activity: A Canadian Multisite Study. *Medicine and Science in Sports and Exercise, 51*(12), 2482-2490. https://doi.org/10.1249/MSS.0000000000002089

Potvin, P., & Lacroix, M.-È. (2009). *Les comportements perturbateurs à l'école: mieux les connaître pour mieux intervenir - CTREQ - RIRE.* https://rire.ctreq.qc.ca/les-comportements-perturbateurs-a-lecole-mieux-les-connaitre-pour-mieux-intervenir/

Blinde, E. M., & McCallister, S. G. (2015). Listening to the Voices of Students with Physical Disabilities: Experiences

in the Physical Education Classroom. *Journal of Physical Education, Recreation and Dance, 69*(6), 64-68. https://doi.org/10.1080/07303084.1998.10605578

Ben Rakaa, O., Bassiri, M., & Lotfi, S. (2024). Pour une Inclusion Physique Radicale : L'Urgence d'une Éducation Physique et Sportive Adaptée !. *Diversité, Réussite[s] dans l'Enseignement Supérieur,* Apr 2024, Nantes, France. https://hal.science/hal-04596000

Bertills, K., Granlund, M., & Augustine, L. (2018). Measuring self-efficacy, aptitude to participate and functioning in students with and without impairments. *European Journal of Special Needs Education, 33*(4), 572-583. https://doi.org/10.1080/08856257.2017.1386316

Eriksson, L., Welander, J., & Granlund, M. (2007). Participation in everyday school activities for children with and without disabilities. *Journal of Developmental and Physical Disabilities, 19*(5), 485–502. https://doi.org/10.1007/S10882-007-9065-5/METRICS

Martineau, S., & Presseau, A. (2003). Le sentiment d'incompétence pédagogique des enseignants en début de carrière et le soutien à l'insertion professionnelle. *Brock Education Journal, 12*(2). https://doi.org/10.26522/BROCKED.V12I2.37

Robert, M., & Tondreau, J. (1997). L'école québécoise: débats, enjeux et pratiques sociales: une analyse sociale de l'éducation pour la formation des maîtres. *Centre Éducatif et Culturel,* 545. https://eduq.info/xmlui/handle/11515/13795

Dukmak, S., Aburezeq, I. M., & Khaled, A. (2019). Public school teachers' perceived sense of self-efficacy in teaching students with disabilities in the United Arab Emirates. *International Journal of Economics and Business Research, 17*(1), 34-52. https://doi.org/10.1504/IJEBR.2019.096585

Coates, J., & Vickerman, P. (2010). Empowering children with special educational needs to speak up: Experiences of inclusive physical education. *Disability and Rehabilitation, 32*(18), 1517-1526. https://doi.org/10.3109/09638288.2010.497037

Billing, H. (2017). Attitude of Prospective Teachers towards Inclusive Education for Children with Disabilities In Relation To Gender and Academic Stream. *International Journal of Indian Psychology, 4*(3). https://doi.org/10.25215/0403.159

Chhabra, S., Srivastava, R., & Srivastava, I. (2010). Inclusive Education in Botswana: The Perceptions of School Teachers. *Journal of Disability Policy Studies, 20*(4), 219-228. https://doi.org/10.1177/1044207309344690

Vaz, S., Wilson, N., Falkmer, M., Sim, A., Scott, M., Cordier, R., & Falkmer, T. (2015). Factors Associated with Primary School Teachers' Attitudes Towards the Inclusion of Students with Disabilities. *PLOS ONE, 10*(8), e0137002. https://doi.org/10.1371/JOURNAL.PONE.0137002

Boyle, C., Topping, K., & Jindal-Snape, D. (2013). Teachers' attitudes towards inclusion in high schools. *Teachers and Teaching, 19*(5), 527-542. https://doi.org/10.1080/13540602.2013.827361

Sharma, U., Shaukat, S., & Furlonger, B. (2015). Attitudes and self-efficacy of pre-service teachers towards inclusion in Pakistan. *Journal of Research in Special Educational Needs, 15*(2), 97-105. https://doi.org/10.1111/1471-3802.12071

Obrusnikova, I. (2008). Physical Educators' Beliefs about Teaching Children with Disabilities. *Perceptual and Motor Skills, 106*(2), 637-644. https://doi.org/10.2466/pms.106.2.637-644

Weisel, A., & Dror, O. (2006). School climate, sense of efficacy and Israeli teachers' attitudes toward inclusion of students with special needs. *Education, Citizenship and Social Justice, 1*(2), 157-174. https://doi.org/10.1177/1746197906064677

Soodak, L. C., & Podell, D. M. (1993). Teacher Efficacy and Student Problem as Factors in Special Education Referral. *The Journal of Special Education, 27*(1), 66-81. https://doi.org/10.1177/002246699302700105

Hofman, R. H., & Kilimo, J. S. (2014). Teachers' Attitudes and Self-Efficacy Towards Inclusion of Pupils With Disabilities in Tanzanian Schools. *Journal of Education and Training, 1*(2), 177-198. https://doi.org/10.5296/JET.V1I2.5760

Вплив патологічних станів учнів шкіл на відчуття педагогічної некомпетентності у викладанні інклюзивного фізичного виховання

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Авторський вклад: A – дизайн дослідження; B – збір даних; C – статаналіз; D – підготовка рукопису; E – збір коштів

Реферат. Стаття: 9 с., 5 табл., 46 джерел.

Історія питання. В умовах інклюзії необхідно володіти різноманітними педагогічними навичками з метою організації успішного навчання та забезпечення належного стану здоров'я всіх дітей. Вчителі стикаються з щоденними викликами у задоволенні потреб учнів, забезпечуючи при цьому якісне навчання та сприяючи особистісному розвитку, незалежно від їхньої ситуації.

Мета дослідження. Дослідження мало на меті з'ясувати діяльність учнів, які не відвідують заняття з фізичного виховання, а також як такі дії позначаються на почутті педагогічної компетентності (ППК) вчителів у цій сфері, вивчивши вплив інших потенційних чинників і дослідивши взаємодію зі сприйняттям вчителями залучення своїх учнів до процесу педагогічній діяльності.

Матеріали та методи. Для проведення цього дослідження було застосовано підхід, що ґрунтувався на опитуванні 918 учнів з наявністю патологій (5,85 ‰) та 298 вчителів фізичної культури (у тому числі 74 жінок, віком старше 21 року) у загальноосвітніх школах. Опитувальник складався з трьох частин: питання щодо соціально-демографічних даних та залучення учнів, ППК щодо ставлення вчителів до інклюзивної практики, а також сприйняття вчителями аспекту участі учнів в освітніх заходах з фізичного виховання та спорту. Питання в останніх двох частинах були представлені у форматі 5-бальної шкали Лайкерта.

Результати. Результати дослідження показали, що хлопці (62,66 %) з патологіями виявилися більш фізично активними, і така тенденція була особливо характерною для осіб сільської місцевості (69,40 %). Лише незначна частина учнів обирала альтернативні види діяльності під час уроків (14,91 % обрали інший предмет, 8,40 % відвідували бібліотеку). Соціально-професійні чинники впливають на сприйняття та рівень педагогічної компетентності в контексті залучення учнів з патологіями до фізичної активності та реалізації інших навчальних завдань, варіюючи залежно від кожного типу патології. ППК має дуже значущий вплив на сприйняття інклюзії учнів до виконання рухових, організаційних та спостережних завдань ($p = 0,000$). Зрештою, відчуття педагогічної некомпетентності вчителів відображається на негативному ставленні та сприйнятті процесу інклюзивного навчання.

Висновки. За результатами цього дослідження було встановлено, що хлопці з інвалідністю в сільській місцевості є більш фізично активними, ніж дівчата. Крім того, дослідження вказує на великий вплив сприйняття та почуття педагогічної компетентності вчителів на інклюзію учнів з інвалідністю.

Ключові слова: інклюзія в школі, навчальне завдання, інклюзивне фізичне виховання, сприйняття вчителів, педагогічна компетентність вчителів, інклюзивні практики.

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