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Inclusive Pedagogy: Lived Experiences and Barriers of Students with Physical Disabilities in Practical Health and Physical Education in Ethiopian Secondary Schools

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Abstract

The main objective of this study is to investigate the lived experience and barriers of students with disabilities focusing on health and physical education practical class from the perspective of inclusive pedagogy approach in selected 2 secondary schools in Ethiopia. A qualitative research approach and case research design is used. A purposeful sampling technique is planned to consider twenty-two students with disabilities and four secondary HPE teachers. Semi structured interviews, FGD, observation and document analysis are used to collect the data. The main findings include: SWD'S prior experience in secondary schools shows that they are excluded from health and physical education practical class. This was mainly due to the absence of inclusive curriculum in HPE subject which accommodates learners with visual, hearing and mobility impairments. Their experience in special primary schools, they were similarly accommodated and empowered like all other students without disabilities. For instance, students with visual impairment were treated equally in all academic and vocational subjects in special primary school. However, in secondary schools, students with visual hearing and physical impairment are not attending the practical class in HPE subject. The other finding is that though secondary HPE teachers have more positive attitude towards inclusion of students with disabilities, their positive attitude is not changed in to an action. Moreover, HPE teachers showed lack of commitment and readiness to adapt the practical class to meet the unique needs and interests of SWDS. To conclude, as of their physically integrated in mainstreaming secondary schools, students with disabilities had no meaningful engagement in HPE subject. Accordingly, they showed low motivation to HPE practical class in secondary schools. Therefore, it is recommended that there must be a space to revisit existing curriculum to be pedagogically responsive to children with different types of disability in particular to HPE subject in secondary schools. Legislation, educational policy, and teacher training programs also need to be progressively revisited to realize inclusive pedagogy.

1 Introduction

Inclusive pedagogy has emerged as a central pillar in transforming contemporary education by promoting equity and meaningful participation for all learners, including those with special educational needs (SEN). Grounded in principles of social justice, it aims to remove structural and attitudinal barriers that hinder full engagement in learning processes (Florian & Spratt, 2013; Loreman, 2021). Particularly in secondary education, Health and

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Physical Education (HPE) serves as a key avenue for fostering students' holistic development. However, students with physical disabilities often remain marginalized in these settings due to inadequate infrastructure, rigid curricula, and insufficiently trained teachers (Maher & Fitzgerald, 2020; Goodwin & Watkinson, 2021; Qi & Ha, 2022).

Research reveals that students with disabilities frequently experience exclusion from active participation in HPE, leading to diminished physical and social development and lower self-esteem (Black & Stevenson, 2023; Armour & Harris, 2021). Yet, when inclusive strategies such as adaptive instruction, collaborative planning, and teacher mindset shifts are employed, students with SEN show improved engagement and peer relationships (Sharma *et al*., 2021; Ben Rakaa *et al*., 2025). Supportive environments cultivated through peer tutoring, co-teaching, and targeted interventions further encourage acceptance, especially in rural settings and among female students (Delgado-Gil *et al*., 2023; Makopoulou *et al*., 2023).

In Ethiopia, several educational policy initiatives—such as the Education Sector Development Programme VI (2020–2025) and GEQIP-E—reflect the nation's commitment to inclusive education. These frameworks promote adapted curricula, inclusive training for teachers, and accessible school environments (MoE, 2020; World Bank, 2023). The Special Needs and Inclusive Education Strategy also recommends individual education plans (IEPs), adapted equipment, and community involvement as essential steps toward equity. These align with Ethiopia's obligations under the UN CRPD (2006), affirming every learner's right to inclusive and accessible physical education.

Nonetheless, evidence suggests that many HPE teachers lack the training and confidence to fully include students with SEN in regular classes (Baloun *et al*., 2016; Kudláček *et al*., 2018). Disabilities are often visible in PE contexts, making it crucial for teachers to adapt lessons in ways that recognize both limitations and potential. Without such adaptations, learners risk exclusion from the benefits that HPE offers, including physical wellness, social connection, and emotional growth.

2 Rationale

Every student brings distinct intellectual, physical, and emotional traits into the classroom. While most learners can thrive with general instruction, those with significant impairments—especially orthopedic, visual, or hearing—require differentiated support. Current research and policies affirm the importance of inclusive HPE in enhancing self-esteem and physical competence for these learners (World Bank, 2023; UNESCO, 2020). Inclusive models are also seen as more ethical, effective, and sustainable than segregated systems, supporting broader educational goals such as flexibility, equity, and diversity.

Yet, the implementation of inclusive pedagogy in HPE faces persistent obstacles, including limited teacher training, lack of adapted equipment, and negative attitudes (Morley *et al*., 2020). Teachers may inadvertently focus on students' disabilities rather than capabilities, perpetuating exclusion. These pedagogical and systemic issues undermine inclusive education goals and emphasize the need for evidence-based strategies that address real-world classroom challenges. Given the gap in local research on the inclusion of students with disabilities in Ethiopian secondary school HPE classes, this study seeks to address a critical need. It aims to understand students' lived experiences, identify perceived barriers, and highlight strategies to enhance inclusion. This will inform both policy and practice, contributing to a more equitable and participatory learning environment for all.

Research Questions:

1. How do students with physical disabilities describe their experiences in inclusive physical education classes?
2. What challenges do students and teachers identify as barriers to inclusion?
3. What strategies can enhance the participation of students with disabilities in HPE?

2.1 Literature Review

Physical education (PE) is widely acknowledged as a valuable platform for fostering positive attitudes among all students, including those with

disabilities, within inclusive learning environments (Hutzler & Levi, 2008; Kudláek, Ješina, & Wittmannová, 2011; Campos, Ferreira, & Block, 2013). PE classes allow students of varying abilities to engage in self-expression through movement, providing an ideal context to observe, appreciate, and evaluate each other's capabilities. These settings help students build empathy, understand individual limits, and actively contribute to the learning experience (Griggs & Medcalf, 2015; Klavina *et al*., 2014).

Despite these benefits, effective inclusion in PE requires significant adjustments based on the type and severity of a student's disability. Meaningful engagement in PE often depends on the teacher's ability and willingness to communicate clearly and adapt instruction to support inclusive participation (Jordan, Glenn, & McGhie-Richmond, 2010). Without such adjustments, students requiring support may face limitations in participating fully (Smith, 2004; Coates & Vickerman, 2010; Healy, Msetfi, & Gallagher, 2013). Students with physical impairments have described fulfilling PE experiences as ones where they felt accepted, competent, and where achievements were shared (Goodwin & Watkinson, 2000). Supportive social environments that promote encouragement, cooperation, and empathy were highlighted as key enablers (Seymour, Reid, & Bloom, 2009).

However, various studies indicate that implementing inclusive practices in PE can be complex and challenging. For example, Asbjørnslett, Helseth, and Engelsrud (2013) found that students with disabilities often face difficulties in accessing appropriate PE experiences in general education settings. Barriers include insufficient teacher preparation, lack of instructional materials, and unsuitable facilities. Teachers also report challenges in acquiring information about students' disabilities and in collaborating with specialists, especially when supporting students with more complex needs (Fiorini & Manzini, 2014).

Florian (2008) emphasizes that in inclusive education, responsibility for adapting instruction lies with the teacher. Teachers are expected to accommodate diversity by adjusting content and delivery, so the burden of adaptation does not rest solely on the learner. Moreover, research suggests that students with disabilities enjoy PE but often question whether the activities are appropriate for them (Coates & Vickerman, 2010). Inclusive or parallel activities, when mutually agreed upon, can increase participation (Bredahl, 2013; Haegele & Sutherland, 2015). Long-term, individualized planning is essential to ensure sustained participation and learning for students requiring additional support.

Inclusion in PE differs from other subjects because it relies heavily on physical resources, seasonal activities, and specific safety considerations (Morley *et al*., 2005). Many teachers lack adequate training to adapt these elements effectively. Coates and Vickerman (2008) argue that this lack of preparation contributes significantly to the exclusion of students with disabilities from mainstream PE classes. Therefore, teacher education programs that incorporate disability studies and inclusive pedagogy can significantly influence how well teachers respond to diverse learning needs (Florian, 2012).

3 Material and Method

This study employed a qualitative case study design to explore the lived experiences and pedagogical challenges of students with disabilities in inclusive Physical Education (PE) practical classes. A qualitative approach was selected to gain in-depth understanding of participants' perceptions, emotions, and social contexts, which cannot be fully captured using quantitative methods (Patton, 2002; Seidman, 1998; Denzin & Lincoln, 2000). As the focus was on natural settings and contextual factors, the case study method was deemed suitable (Yazan, 2021; Yin, 2023).

The study was conducted in two purposely selected secondary schools—Sodo and Dilla secondary schools—in South Ethiopia, known for their enrollment of students with disabilities and their proximity to special schools and disability service associations.

3.1 Sampling and Participants

Purposeful and criterion sampling techniques were used to select 26 participants, including 6 students with visual, hearing, or orthopedic impairments and 4 Health and Physical Education (HPE) teachers

for individual interviews. Additionally, 16 students participated in two focus group discussions (FGDs). Selection criteria for student participants included prior experience in PE, ability to express opinions, and involvement in Paralympic activities. HPE teachers were selected based on their experience with inclusive PE practices and relevant training.

3.2 Data Sources and Collection Methods

Multiple data sources were used for triangulation:

1. Semi-structured interviews with 10 participants (6 students, 4 teachers) explored lived experiences, participation, and pedagogical practices. Interviews were conducted face-to-face, audio-recorded, and supported with Braille notes.

2. Focus group discussions involved 8 students per school, selected for diversity in disability type, gender, and educational background. FGDs aimed to capture shared experiences in inclusive PE.

3. Observations were made during practical PE sessions using a checklist to document teacher-student interactions, instructional adaptations, and accessibility conditions.

4. Document analysis included national education policy documents, special needs strategies, curriculum guidelines, and relevant school-based records to enrich contextual understanding and validate interview data.

3.3 Data Analysis

A thematic analysis approach was employed. Data analysis began concurrently with data collection to identify patterns and refine subsequent interviews (Strauss & Corbin, 1994). Emerging themes were interpreted using iterative coding, leading to the identification of three major themes:

1. Participation experiences of students with disabilities in PE

2. Barriers to inclusive participation

3. Strategies employed by teachers for inclusion

3.4 Trustworthiness and Ethical Considerations

To enhance credibility, the study employed triangulation across data sources and member checks where participants reviewed interpretations. Peer review was also conducted by educational researchers for validation. Ethical practices included obtaining informed consent, ensuring confidentiality, and respecting participants' rights to withdraw at any time. Rapport was established through transparency about research goals and procedures.

4 Results

Under this section of the study, we presented and interpreted the data revealed by informants in terms of our key research questions and to link these with the key considerations highlighted in the literature review. Based on the information elicited by informants (SWDS, HPE teachers) and literature review, three major themes and nine sub-themes emerged. Themes were analyzed and interpreted as follows: the three themes emerged includes:

Practical class participation experiences of SWD'S in HPE subject in regular school

Barriers which affect SWDS participation in HPE subject in a regular school

Strategies applied by health and Physical Education teachers to create effective inclusive Physical Education practical classes in the schools

Practical class participation experiences of SWDS in HPE subject in regular school

For the sake of having convenience for the data analysis, we categorized the schools as school A for Wolaita Sodo secondary school and school B Dilla secondary school. In short, the study sites were coded as school A and school B. Students with physical disabilities and HPE teacher's names were similarly changed. They were coded as SWD1 (student with disability One), SWD2 (Student with a disability), SWD3 (Student with disability), SWD4 (Student with disability Four), etc. Students with disabilities who took part in the focus group discussion are coded with pseudonyms. Participants are coded by considering acronyms FGD for focus

group discussion and their respective no. order 1 and two sessions. For instance, FGD1, FGD2, FGD3 and so on. Physical education teachers were also coded HPET1 HPET2, HPET3, and HPET4.

With regard to grade level, sixteen out of twenty-two participants are drawn from grade 12 while six of them are considered from grade 11. Researchers considered the 2021/2022 academic year grade level of subjects. Regarding the bio data of the respondents, among the 22 students with disabilities, categorically, 16 with visual, 3 with mobility, 1 with both visual and mobility and 2 with hearing impairment were involved as research participants. Similarly, four health and physical education teachers who were teaching in grade ten to eleven are invited to face-to-face semi-structured interviews. Two were female HPE teachers while the rest two were male teachers. Concerning appropriateness of their age to their respective grade level: Among twenty-two students with a disability, nineteen are between 18 and 20. Three of them are between the ages of 22 to 24. Among four HPE teachers, three are in the age 38 to 41 while one HPE teacher is 25 years old. Accordingly, the three HPE teachers served in teaching for 15 years in different schools. One HPE teacher had two years teaching experience in school B.

4.1 Theme 1: Participation Experiences of SWDs in Practical HPE

Participation is widely viewed as a key indicator of inclusion in educational contexts (Maxwell, Alves, & Granlund, 2012). It is considered essential for accessing the four main sources of self-efficacy identified by Bandura (1997): mastery experiences (achievements from performance), vicarious experiences (learning through observation), verbal encouragement, and the influence of emotional and physiological states.

The International Classification of Functioning, Disability, and Health for Children and Youth (ICF-CY) developed by the World Health Organization (2007) defines participation as being actively involved in life situations. In the context of PE, this means that students are not only present but also meaningfully engaged. Imms *et al*. (2016) stress the importance of distinguishing between mere presence and actual involvement, emphasizing that students might be physically in class without feeling included or emotionally connected to the activity. King (2013) also underlines that for participation to be impactful, students must find the experience meaningful.

Therefore, to truly promote inclusive education in PE, it is important to actively involve students with disabilities in planning and organizing activities. Scholars like Fitzgerald, Jobling, and Kirk (2003), as well as Fitzgerald (2005, 2012), argue that student voices must be considered, particularly when designing adaptive strategies that support both their physical involvement and emotional investment.

In light of this, the current study explores how students with physical disabilities experience both theoretical and practical aspects of PE in secondary school. The analysis focuses on their level of involvement and how it changes as they transition from special school to mainstream education.

Among the 22 student participants, 16 had visual impairments, 3 had mobility impairments, 2 had hearing impairments, and 1 had both visual and mobility impairments. These students shared a common experience of active and enjoyable participation in HPE during primary education, particularly in special schools. However, their participation declined significantly upon transitioning to mainstream secondary schools.

SWDS4 noted:

"I was playing football, running, and jumping until grade six in Shashemene. There was a sports teacher who helped us with exercises to improve physical fitness."

SWDS2 echoed:

"Football was my favorite. After grade six, I never had the opportunity to play again."

Students frequently expressed that HPE teachers in secondary school neither encouraged nor adapted learning opportunities for them. Another student stated:

"I never attended practical classes from grade seven

onward. Teachers did not encourage us or support us with the theoretical parts either."

Many students with visual impairments described that the environment in primary schools was supportive, featuring adapted equipment like sound balls and safe playgrounds. These adjustments allowed them to participate with confidence. In contrast, the absence of such support in secondary schools resulted in their marginalization.

One focus group participant said:

"In primary school, I was the first runner in a 1000-meter race. After grade seven, I lost motivation due to lack of support from teachers and classmates."

Another added:

"When the HPE teacher enters the class, I leave. I have no reason to stay. We don't get exams or classwork. It's like we don't exist."

Students with hearing impairments noted similar exclusion. The lack of sign language interpretation services left them unable to engage with the lessons. However, some demonstrated resilience and managed to learn practical activities by observing peers or watching television. One hearing-impaired student reported winning medals in regional contests, despite minimal school support.

Students with mobility impairments reported that their needs were entirely overlooked. For example, SWD7 shared:

"I sit outside while others go to the field. I feel ashamed. I can't perform like them. Sometimes I ask why I was born disabled."

Others noted that inaccessible equipment and poverty limited their ability to participate. As one student described:

"We lack proper sports kits and even food. We can't focus on physical education while worrying about hunger."

On the other hand, among the target group of students with physical disabilities those with visual impairment, hearing loss and physical challenge (lower and upper) impairment are the list benefited in secondary schools. Accordingly, they are highly overlooked learners in regular secondary schools. Because mainstreaming schools are not ready to facilitate accessible learning ground for students with visual and mobility impairment. Similarly, sign language interpreters are not employed who might support both HPE teachers and deaf students. Moreover, The contents to be taught, method of delivery, and assessment including the equipment for sport classes are not modified for crutch and wheelchair users.

The informants also inform us there is also gender disparity variation between male and female participants. The findings show that four out of six who are female participants in FGD and two female participants in a semi-structured interview, they reported that they had rarely participated in sport event even in a special school for the Blind. They are involved only in practical classes scheduled for sport classes. Thus, female students with disabilities have low participation even in primary school for the Blind. The main reason explained by female students with disabilities, they do not take part actively in sport activities such as playing football jumping body movement-related activities.

The finding obtained from interviews and FGD were also confirmed in other similar studies conducted in a different setting. Different adaptations and modifications are required, depending on the type of disability. Meaningful learning experiences for students with disabilities in PE are extensively dependent on teachers' skills and attitudes toward communicating and structuring their teaching in an inclusive direction (Jordan, Glenn, and McGhie-Richmond 2010). Participation restriction may be experienced if the activity is not adapted to students in need of special support (Smith 2004; Coates and Vickerman 2010; Healy, Msetfi, and Gallagher 2013). Students with physical disabilities describe good days in PE as lessons in which they experience a sense of belonging, their participation as skillful, and where you share benefits (Goodwin and Watkinson 2000). Encouragement, reinforcement, help, and guidance facilitate positive peer interaction (Seymour, Reid, and Bloom 2009). Patience and social encouragement are examples of caring support (Goodwin and Watkinson 2000).

A significant decline in these indicators for most SWDs. This pattern suggests that secondary schools are ill-prepared to sustain inclusive education practices. The positive experiences of SWDs in special primary schools were made possible through teacher support, curriculum adaptation, and an enabling environment. The absence of these factors in secondary school reflects systemic neglect. Moreover, the lack of encouragement, support, and structured participation opportunities leads many students to internalize feelings of inadequacy, inferiority, and despair. Their gradual withdrawal from HPE—once a source of joy and pride—symbolizes how institutional barriers suppress their self-efficacy and motivation. This finding is consistent with Bandura's (1997) theory of self-efficacy, which highlights that participation and mastery experiences are central to developing confidence and resilience.

In sum, this finding confirms as evidence of a broken continuity in inclusive education. While early schooling provides a foundation for active engagement, secondary education environments fail to uphold inclusive values, thereby limiting the holistic development and well-being of SWDs.

4.2 Theme 2: Barriers Affecting SWDs' Participation in Health and Physical Education (HPE)

The data from interviews, focus group discussions (FGDs), and observations revealed multiple barriers that significantly hinder the participation of students with disabilities (SWDs) in HPE classes in mainstream secondary schools. These barriers fall under four major sub-themes:

5.2.1 Lack of Knowledge and Skills Among HPE Teachers

SWD3 from school B, explained that: "HPE teachers are not ready to teach students with visual impairment in grade 11 and 12. When I leave the class in sport period, HPE teachers are willing for my class absence". (SWD3). SWD2, in her turn from school B revealed: "We are not oriented to take sport subject. School principals and HPE teachers do not tell us that learning HPE subject is compulsory like all other subjects. Accordingly, we are lacking proper guidance and counseling (SWD2).

Another informant with hearing impairment from school A described that "It is Lack of sign language skill competence and positive feeling among teachers and school communities which restrict us not to actively participate in sport class" (SWD5).

One of the FGD participants from school B, in Dilla town said "It is because there are no trained HPE teachers who are qualified with proper diversified knowledge and skill." That is mainly to modify the practical exercises and contents as per the nature and type of physical impairment in the school. He also discussed that, "HPE teachers who are assigned in grade nine and ten informed us they took one course on adaptation of physical education to students with disabilities. However, they told us they have little knowledge and skill to modify the games for students with disabilities." He continues to narrate that "They are often complaining the environment is not friendly for you despite the fact that we are willing to train you but we do not have sport equipment which respond to your need and interest." "To your surprise, even we do not have sport equipment for students with no disabilities."

The data revealed significant systemic and instructional barriers that hinder students with disabilities from fully participating in Health and Physical Education (HPE) classes. A student with visual impairment (SWD3) expressed that teachers in Grades 11 and 12 were unprepared and unwilling to accommodate her needs, resulting in her being allowed—and even expected—to miss HPE sessions without consequence. This highlights a lack of accountability and inclusion in upper secondary physical education. Similarly, SWD2 reported the absence of orientation and counseling regarding the compulsory nature of HPE, indicating a communication gap between school administration, teachers, and students with disabilities. Another participant with hearing impairment (SWD5) identified teachers' lack of sign language skills and negative attitudes within the school community as major obstacles to participation in sport classes.

Further insights from a focus group discussion in School B underscored the lack of specialized

training among HPE teachers. Although some instructors reportedly completed a single course on adapting physical education, they admitted limited knowledge and competence in modifying activities to suit students with diverse impairments. These teachers also cited environmental inaccessibility and a critical shortage of adapted and even general sport equipment as factors that prevent meaningful participation. Collectively, these narratives underscore the urgent need for teacher capacity building, accessible infrastructure, and inclusive policy enforcement to ensure equitable access to physical education for students with disabilities.

"We don't even have sport equipment for students without disabilities, l*et al*one for SWDs."

The inadequate teacher preparation was compounded by a lack of resources and environmental constraints. These findings emphasize the need for professional development programs focused on inclusive pedagogy, especially in adapting PE content to meet the diverse needs of SWDs.

5.2.2 Inflexible Curriculum and Systemic Tradition

Participants also pointed to rigid curricular structures that did not accommodate students with disabilities. For example, FGDSW6 noted that mathematics, sciences, and HPE were often presumed unsuitable for students with visual impairments, not because of policy but due to tradition and misconceptions. SWD1 explained:

"We're victims of a curriculum designed for students without disabilities."

Despite no legal barriers preventing SWDs from learning science and PE subjects, teachers and school leaders continue to exclude them. This systemic neglect is worsened by the absence of curricular adaptations, assessments, or instructional methods that account for different learning needs.

5.2.3 Negative Attitudes and Low Expectations from HPE Teachers

A recurring theme in both student and teacher interviews was the prevalence of negative or defeatist attitudes. Some HPE teachers admitted discouraging SWDs from participating, citing safety risks, lack of resources, or assumptions about student ability. One teacher (PE4) said:

"I don't encourage students with physical impairments to do practical exercise because the field isn't safe."

Another HPE teacher (PE2) reported trying to modify lessons but later gave up due to students' lack of motivation and inadequate school support. Teachers also expressed concern about large class sizes, time constraints, and the absence of inclusive education experts. These statements reflect a broader institutional failure to prioritize inclusive values, leaving motivated teachers demoralized and unsupported.

Based on the view reflected by HPE teachers in schools A and B, respectively the barriers discussed are similar to opinions raised by students with disabilities involved in semi-structured interviews and FGD. The barriers are associated with a lack of knowledge to identify and provide required adapted practical training mainly for those with hard moderate and profound visual, hearing, and physical impairment. They also mentioned the scarcity of sport adapted equipment, most restrictive playing ground, inadequate skill training in the field of inclusive education, sign language, and low level of concern to a diverse group of learners in the classroom are the challenges to deliver required special educational practical class to the target group of the school. The PE teachers also reported even though that PE teachers showed interest and tried to modify the equipment and playing setting, students with disabilities are found with low initiative and motivation to do practical exercise. They also added lack of required support from special needs education experts, school principals and other general education teachers increased their anxiety to contribute their professional support for students with disabilities. Their report also showed that PE teachers are getting discouraged and demotivated to support students with disabilities. This is caused due to absence of institutionally established support from school to the federal level. Absence of coordinated communication between HPE teachers, experts, parents school principals, and leadership from woreda to ministry level. The other contribut-

ing factor is the existing curriculum teachers' guide and textbook are not adapted to accommodate the unique learning need and interest of students with disabilities.

One considerable finding is that HPE teachers have a more positive attitude towards the inclusion of students with disabilities in a regular class. Lower optimism was the perceived Support. Teachers perceive the support received from the school, the presence of a multidisciplinary support team, and material resources are the major hindrances. These barriers negatively affected their motivation to support students with disabilities. They also explained that students with disabilities will perform similarly to students with no disabilities. The problem is the required facilities such as the absence of suitable playground for all, lack of modified sport equipment, the inflexibility of the existing curriculum and absence of the structurally responsible body in the education sector to support them. The finding also showed that HPE teachers are with more doubt and frustration to accommodate students with a wheelchair and multiple disabling conditions and students. Their reason is that, for students with such type of impairment, the school environment, classroom, walkway and workshop are more painful and poorly structured. That is to address as per the unique need and interests of the learners. Despite some HPE teachers having received workshops on inclusive HPE, many felt unequipped to handle the complexity of teaching students with multiple disabilities. Their frustrations highlight the need for ongoing, practical training and school-level structural support.

5.2.4 Inaccessibility of the Physical Environment

Both direct observations and informant testimonies confirmed that the school environments in School A and B were largely inaccessible. Classrooms, corridors, toilets, and playgrounds presented serious physical obstacles, especially for students with mobility or visual impairments. One FGD participant noted:

"The playground is full of open ditches and stones. It's dangerous."

Observations conducted in mid-October 2022 documented that students with disabilities did not attend HPE practical sessions. Instead, they remained in classrooms, sat under trees, or visited the library while their peers participated in field activities. In both schools, adapted sports materials and inclusive playground designs were entirely absent.

Additionally, HPE teachers reported that there was no budg*et al*location for adapted equipment, no special needs coordinators, and no inclusion of disability issues in annual school plans. This systemic neglect further reinforced the exclusion of SWDs.

The findings presented in Theme 2 highlight a multi-layered exclusion of SWDs in HPE practical classes. Structural, attitudinal, instructional, and environmental barriers converge to limit their access to physical education—despite it being a compulsory subject in the national curriculum. From a socio-ecological perspective, these barriers are not isolated to individual teachers but are embedded in broader institutional and cultural systems. This exclusion contradicts inclusive education frameworks such as the Salamanca Statement (UNESCO, 1994) and Article 24 of the UN Convention on the Rights of Persons with Disabilities (2006), both of which advocate for the right of every learner to participate meaningfully in all aspects of education—including physical education. Teachers' lack of training aligns with findings from Florian (2008) and Fitzgerald (2012), who emphasize that effective inclusion demands that teachers adapt instruction and environment rather than expect learners to adapt. While the research reveals that some teachers are willing to support SWDs, their efforts are often undermined by insufficient resources, lack of institutional support, and deep-seated misconceptions. Moreover, the routine exclusion of visually impaired students from core subjects like math, physics, and HPE is a symptom of systemic tradition rather than policy. This perpetuates low expectations and internalized stigma among students. As Coates and Vickerman (2008) and Goodwin and Watkinson (2000) argue, the absence of inclusive strategies can diminish students' sense of belonging and self-worth.

4.3 Theme 3: Strategies to Enhance Participation of Students with Disabilities (SWDs) in HPE Practical Classes

Students with disabilities and Health and Physical Education (HPE) teachers proposed multifaceted strategies to address the exclusion experienced in HPE. These strategies emerged in six thematic areas:

5.3.1 Provision of Adaptive Equipment and Skilled Personnel

Participants emphasized the urgent need for training materials adapted to the unique needs of SWDs. They also stressed the importance of hiring and continuously training HPE teachers specialized in adaptive physical education. HPE Teachers demonstrated interest in inclusive practice but admitted that institutional support and professional development opportunities were lacking.

5.3.2 Curriculum Adaptation and Sport Counseling

HPE teachers and SWDs called for curriculum reform that integrates guidelines for inclusive HPE instruction. They urged the Ministry of Education and subordinate bodies to institutionalize this change. Furthermore, participants suggested incorporating sport-specific counseling services into subject selection and placement processes to help SWDs make informed decisions.

5.3.3 Attitude Change and Awareness Building

Negative stereotypes and assumptions about disabilities were recognized as major barriers. HPE Teachers and students recommended school-wide and community-level awareness campaigns to foster empathy and promote inclusive attitudes toward SWDs.

5.3.4 Improving Accessibility

Participants highlighted the need for accessible school infrastructures, including ramps, safe play areas, and adapted PE fields. They also recommended assigning sign language interpreters to support students with hearing impairments. Accessibility—both physical and communicative—was considered central to inclusive participation.

5.3.5 Promoting Research

HPE teachers proposed national-level research initiatives to explore the inclusion of SWDs in HPE. These efforts would help identify systemic gaps, inform policy, and support sustainable planning for inclusive education.

5.3.6 Monitoring and Evaluation

Participants suggested establishing formal monitoring systems to assess SWDs' participation in HPE. They proposed integrating disability indicators into education reports and forming inclusive student sports clubs to institutionalize and track progress.

5 Discussion

This study sought to understand the lived experiences, challenges, and possible solutions for inclusive pedagogy in HPE practical classes. The researcher's reflection is incorporated below, aligned with the study's three guiding questions.

5.1 How Do SWDs Describe Their Experience in HPE Classes?

Participants' narratives reveal a sharp contrast between their experiences in special primary schools and mainstream secondary settings. In their early education, students with disabilities—particularly those with visual impairments—experienced full inclusion in HPE, facilitated by trained teachers, adapted activities, and supportive environments. However, in mainstream secondary schools, this inclusivity eroded. Most were excluded from practical lessons, left idle, or allowed to leave class altogether, which diminished their motivation and sense of belonging.

This finding is consistent with Black and Stevenson (2023), who emphasized that participation—not mere physical presence—is a core measure of inclusion. When inclusion is reduced to integration without adaptation, students experience symbolic inclusion but functional exclusion. Moreover, the absence of adaptive materials, lack of peer collaboration, and inactive teaching practices further widened the participation gap in physical activities.

Imms *et al.* (2016) also argue that for inclusion to

be meaningful, students must not only be present but must also find personal relevance and emotional engagement in the learning experience. These elements were largely absent in the current study's context, highlighting a disjuncture between policy intentions and classroom realities.

The experiences shared by SWDs point to a critical disconnection between primary and secondary schooling environments. While primary special schools offered inclusive and adaptive HPE, students felt abandoned in mainstream secondary schools, often being left in classrooms or discouraged from participating altogether.

As researchers, we were struck by the stark contrast between the inclusive practices in special primary schools and the exclusionary nature of mainstream secondary settings. This finding illustrates that inclusion is not merely a matter of placement but requires sustained systemic support, adapted resources, and skilled teaching. The dissonance between policy rhetoric and lived experiences highlights a failure to implement inclusive education at the secondary level.

This aligns with Black and Stevenson (2023), who stress that inclusion without participation is superficial. Similarly, Imms *et al*. (2016) emphasized the importance of personal engagement and meaningful involvement, both of which were clearly absent for SWDs in the study context.

5.2 What Barriers Hinder Inclusive Pedagogy in HPE?

The barriers were multi-dimensional:

- **Limited Teacher Competence:** Teachers often lacked training in adaptive pedagogy and expressed fear of causing injury or doing harm (Beyazoğlu & Özbek, 2024).
- **Rigid Curriculum:** Students with visual impairments were often discouraged or barred from taking HPE and other subjects deemed incompatible with their disability (Qi & Ha, 2022).
- **Inaccessible Environments:** School facilities—playgrounds, classrooms, toilets—were not designed with disability in mind (CDC, 2024).
- **Negative Attitudes:** Teachers and peers occasionally held deficit-based views of SWDs, perceiving them as incapable or unfit for HPE (Maher & Fitzgerald, 2020).

Observing HPE sessions firsthand revealed a distressing reality: students with disabilities were not only physically excluded but also emotionally sidelined. While many teachers expressed good intentions, their lack of training, confidence, and support hindered effective inclusion. During our school visits, it became painfully clear that SWDs were simply occupying space during PE time rather than participating meaningfully. This finding reinforces the need for urgent intervention across teacher training institutions and curriculum developers.

5.3 What Strategies Can Enhance SWDs' Participation in HPE?

Participants proposed specific, actionable solutions:

- Continuous training for teachers on adaptive physical education (Makopoulou *et al*., 2023).
- Curriculum reform to embed inclusive pedagogy and accommodate a range of disabilities (Florian & Spratt, 2021).
- School-wide attitude transformation and public awareness (Delgado-Gil *et al*., 2023).
- Physical infrastructure reform, appointment of support staff, and formation of inclusive clubs (Ben Rakaa *et al*., 2025).

The strength of this study lies in the solutions offered directly by the participants themselves. These are not abstract or generalized ideas, but grounded, context-specific recommendations from those closest to the problem. As researchers, we believe these voices carry moral and practical urgency. The call for disability to be understood not as a limitation but as part of human diversity (Florian & Black-Hawkins, 2021) must be heard at all levels of education leadership. Inclusion is not an add-on—it is a right.

Despite national efforts reflected by Ethiopian government in policies like ESDP VI and GEQIP-E (MoE, 2020; World Bank, 2023), practical implementation remains fragmented. The study affirms

that inclusive pedagogy demands a shift in mindset, structure, and practice. Without it, policies will remain theoretical ideals far removed from the realities of students' lives.

6 Conclusion

Based on the findings, it is concluded that the study explored the participation of students with sensory and physical disabilities in HPE practical classes in Ethiopian secondary schools. The findings revealed a consistent pattern of marginalization and exclusion—students with disabilities were often sidelined, left unengaged, or removed from HPE activities altogether. In contrast, their experiences in primary special schools were marked by inclusivity, adaptation, and teacher commitment. Unfortunately, this inclusive momentum was lost upon entry into mainstream secondary education. Teachers, while occasionally well-meaning, lacked the skills, resources, and institutional support to deliver inclusive HPE. Meanwhile, students with disabilities reported feelings of isolation, reduced self-confidence, and missed opportunities for physical and social development. Thus, this study reveals a critical disconnect between Ethiopia's inclusive education policies and the realities in its secondary schools. Unless inclusive pedagogy is embraced not just in policy but in practice—through training, infrastructure, curriculum, and attitude reform—students with disabilities will continue to be left behind. As educators, policymakers, and researchers, we must act not out of charity but justice.

Recommendation

To create a genuinely inclusive Health and Physical Education (HPE) environment for students with disabilities, a coordinated effort across all levels of the education system is essential. Teachers of HPE must begin by cultivating a strong understanding of the varied nature of disabilities, including orthopedic, visual, and hearing impairments. This awareness must be paired with a positive attitude and an openness to adapt teaching practices. Teachers are encouraged to revise their lesson plans and teaching materials to include diverse, communication-friendly, and participatory activities that accommodate all learners. Flexibility, creativity, and a commitment to inclusive values are crucial to dismantling the discriminatory practices often embedded in physical education.

Secondary schools also hold a central role in this transformation. They must prioritize teacher training in adapted physical education and inclusive pedagogy. Beyond training, schools are urged to provide accessible and affordable instructional materials, ensure the availability of adapted sports equipment, and improve physical infrastructure—such as playgrounds, walkways, and restrooms—to guarantee accessibility for students with disabilities. Raising awareness among students, parents, and staff is also key to building a school culture that embraces diversity. Schools are further encouraged to establish inclusive sports clubs and to support research initiatives that inform inclusive teaching strategies and curriculum adjustments.

At the zonal and woreda level, education offices in the Wollaita and Gedio zones must commit to the regular monitoring and evaluation of student participation in HPE. They should ensure that inclusion of students with disabilities is reflected in education plans and reporting frameworks. Such localized accountability mechanisms can help identify and address challenges early.

Finally, the Ministry of Education has a vital leadership role. It is recommended that the MoE issue national guidelines on how HPE should be adapted for students with different types of disabilities. Teacher education programs must be revised to build the necessary competencies for inclusive instruction. Furthermore, nationwide awareness campaigns and capacity-building efforts should be initiated to reach regional and local stakeholders. The Ministry, in collaboration with development partners, must also allocate dedicated funding for the procurement of adapted sports equipment and update curricular and counseling frameworks to align with the specific needs of students with disabilities. Stronger coordination across federal, regional, and school-level actors will be necessary to ensure that inclusive HPE is not only envisioned in policy but realized in practice.

Conflicts of Interest

The authors declare no conflicts of interest.

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