

Perspectives of Students With Special Needs on Inclusion in General Physical Education: A Social-Relational Model of Disability

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This study aims to explore the perception of students with special needs on inclusion in physical education and identify the factors that facilitate or inhibit their inclusion. Semistructured interviews were conducted with 20 students with various special needs from five secondary schools in Shanghai. Content analysis was utilized to analyze the interview data. Interview results indicated that the majority of students with special needs are negative on their inclusion, and restricted participation in physical education activities was common. Using a social relational model of disability as a theoretical framework, this study identified personal factors (i.e., impairment and self-efficacy), physical context (architectural barriers and provision of modified facilities), and social context (i.e., teacher support, peer support, and modification) that facilitated or inhibited the inclusion level of these students. The study concluded that intervention is necessary to eliminate architectural barriers, grant financial support, and offer adapted training programs by the government and schools.

Keywords: inclusive physical education, perception, secondary schools

Students with special educational needs are those who do not fit in standard behavioral models. Such students also show certain difficulties in dealing with educational and pedagogical tasks (Milanovic & Markovic, 2014; Wang & Qi, 2015). An increasing number of students with special educational needs are taught in a general educational setting, including general physical education (PE) worldwide (Campos, Ferreira, & Block, 2013; Hutzler & Levi, 2008; Jeong & Block, 2011; Kudláček, Válková, Sherrill, Myers, & French, 2002; Meegan & MacPhail, 2006; Panagiotou, Evagelinou, Doulkeridou, Mouratidou, & Koidou, 2008; Sato, Hodge, Murata, & Maeda, 2007). However, physical inclusion of these students in general PE does not necessarily develop successful social inclusion

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(Morrison & Burgman, 2009). Students continue to experience certain barriers in PE—for example, inequitable opportunities to attend PE activities, social isolation, and discrimination by peers without special needs (Coates & Vickerman, 2008). These issues led to restricted participation in PE and limited social learning opportunities for students with special needs (Asbjørnslett & Hemmingsson, 2008; Blinde & McCallister, 1998; Bredahl, 2013; Fitzgerald & Stride, 2012; Hutzler, Fliess, Chacham, & van den Auweele, 2002; Spencer-Cavaliere & Watkinson, 2010). Understanding the perceptions and feelings of students with special needs in relation to their PE inclusion is crucial, along with the factors that determine their inclusion.

Although the perspectives of students with special needs are important, the majority of research on PE inclusion has centered on the beliefs of PE teachers and the attitudes of students without special needs (e.g., Block, 1995; Herold & Dandolo, 2009; Beamer & Yun, 2014; Meegan & MacPhail, 2006). Fitzgerald (2005) and Smith and Thomas (2006) highlighted the lack of research on the experiences of students with special needs. In an answer to this call, studies were conducted to describe the experience and views of students with special needs on PE inclusion in certain countries, such as the United States, the United Kingdom, Norway, Israel, and Canada (Asbjørnslett & Hemmingsson, 2008; Blinde & McCallister, 1998; Bredahl, 2013; Fitzgerald & Stride, 2012; Goodwin & Watkinson, 2000; Herold & Dandolo, 2009; Hutzler et al., 2002; Spencer-Cavaliere & Watkinson, 2010). Blinde and McCallister (1998) interviewed 20 students with physical disabilities on their PE experience. The results indicated that the typical responses of these students emphasize two learning outcomes: limited participation in activities and negative emotional response. Factors such as lack of adapted activities, construction barriers, lack of teacher support, and weak sports ability contribute to limited participation and negative emotion of students with physical disabilities. Goodwin and Watkinson (2000) examined PE inclusion from the perspectives of students with special needs. A persistent dichotomy in how the participants experienced PE was identified through focus group interviews, filed notes, and participant drawings. On good days, students can feel belongingness, skillfully participate in PE, and share the benefits. By contrast, bad days are full of negative feelings, such as social isolation, questioned competence, and restricted participation. Restricted participation in PE is attributed to the lack of support from teachers, lack of engagement from classmates, constraints imposed by the instructional environment (i.e., lack of adequate modifications), or a combination of all three components. A case study by Herold and Dandolo (2009) explored the personal experiences and perspectives of a pupil with visual impairments regarding PE inclusion. Interview and observation results addressed four important areas for the PE learning and participation of students with disabilities, namely, teacher training and development, need for learning support assistants, resources, and limitations of PE curriculum. Bredahl (2013) also examined the participation of 20 Norwegian adults with physical and visual disabilities in physical activities. The findings revealed that over 75% of negative experiences reported originated from PE. These participants experienced exclusion, failure, and being unheard in general PE classes. Despite these studies, further research should consider the views of students with special needs from other countries and different cultures (e.g., China).

Chinese Inclusive Education

The worldwide trend toward inclusive education has brought forth many reforms to reduce inequality in education and enhance appropriate education for all (Booth & Ainscow, 1998). China is no exception. In the 1980s, sweeping reforms in China resulted in tremendous social, political, and economic changes (Deng & Manset, 2000). Students with special needs have become a focus of the Chinese government (Deng & Manset, 2000). Such students were educated in special schools before the 1980s. However, the number of children with disabilities was growing, and building a network of special schools would be extremely expensive. Thus, including this group of children into general schools was regarded as a cost-effective approach (McCabe, 2003). For these reasons, the Chinese legislation has begun to promote an inclusive approach in education since the 1980s (Deng & Manset, 2000; Deng, Poon-McBrayer, & Farnsworth, 2001; McCabe, 2003).

The compulsory education law was the first official call to teach students with special needs in general schools within areas that lacked or that could not afford special schools or programs (National People's Congress, 1986). In the mid-1980s, China initiated a nationwide movement toward inclusive education called "learning in regular classrooms" (Deng & Poon-McBrayer, 2004). The learning in regular classrooms model aims to offer government-supported arrangements for children with special educational needs to be educated in general schools with peers without special needs (Deng & Manset, 2000). The 1994 Regulations on Education for Persons with Special Needs (State Council, 1994) mandated that schools should accept students with mild intellectual disability and visual and hearing impairments who live in their school districts. This mandate led to a rapid increase in school enrollment of children with special educational needs. In 1992, a total of 129,400 students with disabilities were enrolled in general schools (Gu, 1993). By 2015, enrollment reached 239,600 students, which covered various conditions, such as visual, hearing, speech, physical, intellectual, and multiple disabilities (Ministry of Education of China, 2015).

Under this context, students with special needs are required to attend PE classes with their peers without special needs in China. However, the implementation of PE inclusion has encountered many barriers, such as lack of adapted physical educators, negative attitude from PE teachers, and social isolation of students with disabilities (Li & Sam, 2011). Only a limited number of internationally published studies examined the beliefs of PE teachers on teaching students with special needs in China (Wang & Qi, 2015), teaching behaviors of PE teachers toward students with disabilities (Wang, Wang, & Wen, 2015), and the interaction between students with and without disabilities in PE classes (Qi & Wang, *in press*). In China, no studies examined PE inclusion from the perspectives of students with disabilities.

Social-Relational Model of Disability

Historically, Western cultures considered disability from various perspectives, such as medical, economical, sociopolitical, and administrative (Fitzgerald, 2006; LoBianco & Sheppard-Jones, 2008). The medical model of disability viewed disability problems from biological and medical difficulties. The model assumed

that nature has an accepted course of action, and disability is a result of pathological states (Goffman, 1963). People with disabilities are viewed as deviations from the norm, and the disability determines who they are and what they may become (Davis, 1997). For example, a student with visual impairment cannot be physically active because of the lack of sight.

Distinguished from the medical model, the social constructivism model defines disability as a social creation, which is a relationship between people with disabilities and a disabling society (Oliver, 2004). The social model reframes disability as a phenomenon that occurs because of society and environmental barriers driven by nonimpaired values, rather than as a direct consequence of individual impairment (Oliver, 1996). The social model also addresses disability problems as a result of the social constraints through attitudinal barriers and lack of accommodation (Grenier, 2007, 2011; Oliver, 1990). For example, a student with visual impairment cannot be physically active because of the lack of opportunities to be active and discrimination from his or her peers, which prevents the student from participating.

However, the two models were criticized because they emphasized extreme positions and framed each position as mutually exclusive of the other (Martin, 2013). In response to these criticisms, a social relational model of disabilities suggests that impairment and social and environmental barriers can operate simultaneously (Thomas, 2004a, 2004b). On the one hand, this model identifies impairment that results in the restrictions of activities. This model also views impairment as a result of social impositions by people without disabilities either through “barriers to doing” or “barriers to being” (Thomas, 1999). The former refers to physical barriers (e.g., inaccessible building or transport), which restrict or prevent people from undertaking certain activities. The latter refers to social barriers such as hurtful, hostile, or inappropriate attitudes and behaviors, from others, which has a negative effect on the sense of self of individuals and affects what they feel or can become (Thomas, 1999).

The social relational model of disability was applied in a study by Martin (2013) to discuss the individual, social, and environmental barriers to physical activity for individuals with physical disabilities. Moreover, researchers suggested that the social relational model of disability is a more appropriate framework for special education than other models, such as the medical model of disability, social constructivism model, and International Classification of Functioning Disability and Health, because it is better aligned to the morality of inclusion, in which personal restriction interplays with the social settings (Reindal, 2008, 2009). Therefore, this model was applied to identify the factors that facilitated or inhibited the inclusion level of students with special needs in general PE classes.

Research Purposes

Considering the research gaps and linkages with the social relational model, this study has two objectives: (a) to explore the perceptions of students with disabilities on general PE inclusion in the Chinese context and (b) to identify the personal (i.e., impairment), physical (i.e., physical barriers), and social context (i.e., social barriers) factors that facilitate or inhibit PE inclusion. The findings of this study will provide insights into the dynamics of an inclusive PE classroom and assist the

researchers in identifying barriers that are most meaningful to students with special needs to improve their PE inclusion.

Methods

Participants and Settings

This study employed a qualitative methodological framework using semistructured interviews. For the participants in this study, a group of 20 students with various special needs was purposefully selected from five inclusive secondary schools in five districts in Shanghai, a city located in East China. Written informed consent was distributed to all students, and the author explained the objective of the research. The consent form was placed in the students' "take-home" folder, which was brought home to the parents. All 20 students and their parents signed and agreed to participate in the study. The sample consisted of 13 males and seven females. The average age of the students was 13 years ($SD = 1.129$) and ranged from 12 to 16 years. The participants included seven students in Grade 7, seven in Grade 8, and six in Grade 9. Twelve students were born with disabilities, whereas the remaining eight acquired a disability after birth. The target group consisted of six students with physical impairments, four students with autism spectrum disorders (ASD), three students with intellectual disabilities, three students with visual impairments, three students with health impairments, and one student with hearing impairment. Although not representative of secondary school students with disabilities, the sample provided in-depth information about the experiences of such students who were rarely interviewed. Table 1 shows the specific background information on the participants.

Although students with special needs are advised to attend PE classes in Shanghai, attendance is not mandatory. PE classes are provided in a coeducational format and focused on learning and teaching of sports skills. A typical 40-min PE class comprises three segments: warm-up, sports skill instruction and practice, and cooldown. Teachers begin each class with an approximately 5–10-min warm-up segment. The core of each class is 20–25 min of teaching a sports skill (e.g., aerobic block, passing a basketball, or volleyball serving). Teachers demonstrate and explain each sports skill and instruct students to practice. Then, students practice the skill. Classes end with a 5-min cooldown segment. PE classes are administered by certified PE teachers.

Instrument

A demographic data sheet was used to collect demographic information, such as age, gender, grade, disability type, and disability reason, from the participants. The author designed interview guide (see Table 2) based on previous literature (e.g., Blinde & McCallister, 1998; Bredahl, 2013; Fitzgerald & Stride, 2012; Goodwin & Watkinson, 2000; Herold & Dandolo, 2009). These studies reported factors that influence the experience of students with special needs in general PE classes under different cultures and the social relational model of disability to capture the following information from students: (a) general perception on PE inclusion (Question 1), (b) personal factors (Question 2), (c) physical context

Table 1 Study Participant Demographic Information

Pseudonym	Gender	Grade	Age (years)	School	Disability	Number of years living with disability	Perception of inclusion
Wang	F	7	12	School A	Visual impairment	Life	Positive
Lin	M	7	13	School A	Health impairment	Life	Negative
Yu	M	7	13	School E	Physical disability	Life	Negative
Li	M	7	12	School C	Physical disability	3	Negative
Qu	F	7	13	School C	ASD	Life	Negative
Zhang	F	7	13	School D	ASD	Life	Negative
Ming	M	7	12	School B	Hearing impairment	Life	Positive
Luo	M	8	14	School E	Physical disability	5	Negative
Ning	M	8	13	School A	Health impairment	Life	Negative
Qing	F	8	14	School C	Intellectual disability	Life	Positive
Hu	M	8	14	School E	ASD	Life	Positive
Liu	M	8	14	School C	Vision impairment	8	Negative
Lao	M	8	13	School D	Physical disability	5	Negative
Wen	M	8	14	School B	Health impairment	8	Positive
Wu	F	9	15	School B	ASD	Life	Positive
Song	M	9	15	School A	Physical disability	4	Negative
Chen	M	9	14	School D	Visual impairment	7	Negative
Zhu	M	9	15	School E	Intellectual disability	Life	Negative
Ling	F	9	16	School B	Physical disability	2	Negative
Bai	F	9	15	School B	Intellectual disability	Life	Negative

Note. ASD = autism spectrum disorders; M = male; F = female.

Table 2 Interview Guide

No	Interview questions
1	How do you feel about your inclusion level in PE classes? Why?
2	What do you think are the personal factors influencing your inclusion in PE? How do these factors facilitate or inhibit your inclusion in PE?
3	What do you think is the physical context influencing your inclusion in PE? How do these factors facilitate or inhibit your inclusion in PE?
4	What do you think is the social context influencing your inclusion in PE? How do these factors facilitate or inhibit your inclusion in PE?
5	Do you have other comments on your learning with peers without disabilities in general PE classes? If so, what are they?

Note. PE = physical education.

(Question 3), (d) social context (Question 4), and (e) other comments (Question 5). Three experts who specialize in inclusive PE reviewed the interview guide and commented that the interview questions provided an accurate picture of the perception of students with special needs. Moreover, they offered comments and suggestions for improving the interview guide. For example, several follow-up questions were designed to explore whether certain specific factors influence the perception of students with special needs (e.g., Do you think the equipment influenced your inclusion in PE classes? Why?). Thereafter, a pilot study was conducted with three students (i.e., one with physical disability, one with ASD, and one with hearing impairment) to identify possible problems during the interview and any confusing aspects of the interview. The three students stated that they understood the interview questions completely and found no difficulty in answering the questions. However, an assistant that uses sign language was required for the interview with the student with hearing impairment.

Data Collection

The university ethics committee and relevant school education authorities approved the study. Data were collected over a period of 4 weeks, from March to April 2018. The researcher and a research assistant who was taking postgraduate studies in PE inclusion served the data collectors. The survey on demographic information was completed prior to the interview. Each interview began with a discussion on the research purpose. The interview guide was employed as an instrument for the interview. Each student was queried about their feeling on inclusion in general PE classes and the factors that facilitate and inhibit their inclusion. The interviewer encouraged students to speak freely on their views on each question. Afterward, additional follow-up questions allowed the students to expound on certain potential and specific factors (e.g., disability, equipment for PE, and teacher and peer support). Finally, students were asked whether they have other comments on their inclusion in general PE classes in case certain important information was missed. Each interview lasted between 30 and 40 min.

All interviews were conducted in Chinese and audio-recorded in a quiet room. Students with a hearing impairment were interviewed with the assistance of a teacher using sign language. During the interviews, key phrases, major points, and interpretations were noted and recorded to facilitate analysis. After each interview, the researcher transcribed the interview data immediately to maintain the rigor and validity of the research and guarantee the quality of data. The quoted text was translated into English and back translated into Chinese by two bilingual translators. Any inconsistencies and errors between the two versions were negotiated until the translators reached an agreement.

Data Analysis

Data were coded and evaluated using thematic data analysis, which entailed thorough reading of the transcripts (Patton, 2002). The management and analysis of the interview data included the following steps: (a) two researchers independently identified raw data themes for each participant; (b) using inductive content analysis, the researcher identified 31 common themes or patterns shaped by cross-case raw data analysis. These common themes produced nine first-order themes, which were named using the terms already in the data or from other literature (e.g., disability, self-efficacy, architectural and facilities-related barriers, and peer support). These first-order themes were included under four thematic categories, such as perceptions, personal factors, and physical and social contexts; and (c) summaries of the raw data, first-order themes, and thematic categories for participants were combined to form a hierarchical thematic structure. Consensus for each stage of analysis was achieved between two researchers. The trustworthiness of this study was established using three strategies: peer debriefing (Creswell, 2007), member checking (Merriam, 1998), and analyst triangulation (Patton, 2002). Pseudonyms were used throughout the manuscript for confidentiality.

Result

Perception About PE Inclusion

When asked about their general perception about PE inclusion, 14 out of 20 students with special needs were negative, whereas the other six students were positive (See Table 1). The majority of the students with special needs described their experience with inclusion in PE as “frustrating,” “I am not involved,” “I am excluded,” and “I am in a different world.” Luo, a student with a physical disability, was excluded completely from PE, as shown in his response:

I am not in PE classes. I stay in the classroom to read books or do my assignments while other students go to the sports field to play. The teachers said that I am not suitable for PE classes because of problems with my body. It is unfair.

For the student participants with negative perception, restricted participation in PE activities was common. Instead of practicing skills or playing games, students with special needs were required to “sit,” “watch,” “act as a referee,” “be a cheerleader,”

or “be the audience” during most of the class time. Two students, one with a physical disability and one with health impairment, both commented:

Generally, the teacher would ask me to sit beside and watch while other students play. When a referee is needed in our PE class, the teacher thinks of me and always asks me to referee. Actually, I do not like it. I want to play with my classmates and that is more fun. —Yu, a student with physical disability

I feel that I act like an audience rather than a participant in PE classes. I am not allowed to attend many activities. Miss Feng said the activities are too dangerous and too hard for me. . . . I just stand and watch. —Lin, a student with health impairment

By contrast, a small group of students with positive perception described their inclusion experience as “great,” “a lot of fun,” and “full engagement.” These students with special needs reflected that they joined in all PE activities except for certain “special events,” such as playing games and intensive exercises. For example, two students stated,

I am pretty physically involved. I participate in most PE activities, like running, jumping, and playing basketball individually. However, I am not allowed to attend team games. . . . The teacher feels that playing games is not safe for me. All students are running around and I would get hit because I cannot see them clearly. I understand it, and think the decision is right. —Wang, a student with visual impairment

I would say that I take part in most activities. . . . However, I am forbidden to do intensive exercise, for example, long-distance running. —Wen, a student with health impairment

Personal Factors

As students reflected on the personal facilitators or barriers for their inclusion in PE classes, two individual characteristics emerged—namely, impairment and self-efficacy.

Impairment. Interview results of 11 students (i.e., six students with physical impairments, three students with health impairments, and two students with visual impairments) revealed that their impairment is a personal factor that inhibits their inclusion in PE classes. Luo responded that he was completely excluded from PE classes because of his physical disability, and stated, “I am not in PE classes because I sit on a wheelchair and cannot walk, run, and jump as other students.” The other students with physical disability also stated that their activity participation is limited because of their impairments. Song responded,

The only thing I can do with other students is the warm-up exercise in PE classes. After that, other students run, jump, and play games. Those activities are really difficult for me to do because of my physical problem. I just sit on the wheelchair and watch until the end of class. I feel awkward.

The other student, Ning, commented that he cannot participate in some PE activities because of his heart condition:

I had [a] heart condition, and the doctor told me that I cannot participate in certain intensive physical activities. So, I have to be careful when I do physical exercises. Certain activities in PE classes are too intensive and not appropriate for me. My teacher also advised me not to do activities. I missed many opportunities to be physically active.

By contrast, the other nine students (i.e., one student with hearing impairment, four students with ASD, three students with intellectual disability, and one student with visual impairment) described that their impairment is not a barrier for them to participate in physical activities. Ming, a student with hearing impairment, indicated, "I am included in most PE activities. Although I cannot hear clearly, it does not impede my physical exercise and movements. I can do the same exercise as my classmates." A student with an intellectual disability, Qing, stated, "Of course I participated in all PE activities. Why not? I can run. I can jump. I do not think there are problems inhibiting my participation." Similarly, another student with ASD, Wu, also commented, "There are no problems that inhibit me from taking part in PE activities. It is not difficult for me."

Self-Efficacy. Self-efficacy refers to one's belief in one's ability to succeed in a specific situation (Bandura, 1997). Self-efficacy of students with special needs is another personal factor that facilitates or hinders their full PE inclusion. Among 13 students who identified self-efficacy as a determinant, most (nine students) recognized that they had to overcome additional barriers to succeed, which led to their sense of inferiority and lack of confidence in their motor skills competency. The students shared their feelings on their performance in PE because of their weak competency: "I failed to perform certain movements. I am feeling kind of ashamed" (Li, a student with a physical disability) and "I am different from others. I am not capable of doing certain physical activities, which upsets me" (Qu, a student with ASD). The sense of inferiority and lack of confidence deprived students of opportunities to participate in PE activities. The typical responses are as follows:

I am not completely included in PE partly due to my personal issues. I have no confidence in my sports competency, and I am afraid of failure. . . . Thus, I told the teacher that I cannot do the activity and gave up. —Zhu, a student with an intellectual disability

I admit that I am not as capable as the others. Thus, each time the teacher grouped me with other students, I always declined to participate. I am afraid to be ignored and overlooked by my teammates because of my low skill level. —Bai, a student with an intellectual disability

I cannot perform many movements because of my physical disability. I feel I am inferior to other students, which makes me more depressed. I do not feel like going to PE classes and do not want to be involved. —Ling, a student with a physical disability

However, the four other students positively commented on their confidence in their motor skill competence, which is a facilitator for them to engage in PE classes. One student participant stated,

Although I have problems with my hearing, I am confident in my motor skill competency. . . . Sometimes, the PE teacher tells me not to do certain movements, but I respond that I can do it. The teacher always agrees and allows me to try the movement. —Ming, a student with hearing impairment

Physical Context

Physical context was identified by 12 students with special needs as a factor that influences their PE inclusion. In this study, physical context refers to the PE activity environments (e.g., equipment, facilities, and space). The responses from 11 students showed that architectural and facility-related barriers hindered their engagement in PE activities.

Architectural Barriers. Two students with disabilities expressed the architectural barriers in relation to their PE performance. Ling, a student with a physical disability, was excluded from specific events and performances because her wheelchair is unable to reach certain areas. Ling stated,

There are many stairs on the way to the aerobics room and no lift is available. Thus, when we go there to take aerobics classes, the teacher ask me to go back to the classroom or stay in the playground because it is difficult for me to access the area.

The other student with physical disability, Lao, had similar responses, “There is no lift to access the gym. It is really hard for me to climb stairs.”

Facility-Related Barriers. A few students also mentioned that they used the same equipment as other students without special needs in PE classes. Facility-related barriers, such as size, height, or color of PE facilities, contributed to their restricted participation in PE activities. Several students mentioned the height of the equipment. The following statements are two examples of such responses:

No, we use the same equipment as others. However, I felt that certain equipment is not appropriate for me to practice. . . . In hurdle classes, the hurdles are high. I am afraid, and I think I cannot do the activity. Thus, I give up doing the activity and just stand there. I would do the activity if the hurdle was lower than it is. —Li, a student with a physical disability

We are required to jump over the box horse. The box is high, and I am afraid to do that. However, I would do it if the teacher lowered the box for me. —Lin, a student with health impairments

Several students with visual impairments complained that the equipment size and color became a barrier from being completely involved in PE classes. Wang, a student with visual impairment, said, “of course bigger equipment is more helpful for me in PE classes, but there is not this kind of equipment for me.” Another student with visual impairment had a similar response:

I am visually impaired and cannot see clearly. Certain equipment is too small The colors of the equipment for our activities are black, white, and gray, which are not distinct for me . . . I play football but I cannot see the ball clearly, which frustrates me. I mean, larger and more colorful equipment like red or yellow would be better for me. —Chen, a student with visual impairment

Only one student with a vision impairment mentioned that teachers modified equipment for him and this helped him to engage more in PE activities. Wang said,

When we play basketball, other students use the normal basketball but the teacher gave me a softball. She said it will not hurt me. Before, I did not dare to play basketball because the ball hit my body due to my vision problem. Now, I no longer have this problem with a soft ball.

Social Context

When the participants responded to the questions on the social facilitators or barriers to inclusion in PE classes, three social context factors emerged—namely, teacher support, peer support, and modification.

Teacher support. Thirteen students with special needs identified teacher support as an influencing factor. The majority (eight) of students responded that the lack of teacher support during PE learning inhibited their inclusion. According to the interview results, teachers did not allow students with special needs to participate in certain activities because they underestimated the sports competency of students with special needs and had excessive concerns about safety issues. For example, three students said,

Sometimes, the PE teacher would say, “This is too difficult for you, watching is okay.” So, I just sit there and watch. Sometimes, the teacher would say, “You cannot do that. Lao, can you be a referee?” So, I act as a referee rather than a player in the game. The teacher thinks I cannot do the activity because of my physical problems. Actually, I can. —Lao, a student with a physical disability

My PE teacher keeps me from sports and playing games during most of the PE class. He said these activities are not safe for me. —Bai, a student with an intellectual disability

I was not allowed to participate in some activities, for example, long-distance running. Mr. Yang told me that it is not safe for me to attend this kind of activity. —Wen, a student with a health impairment

Moreover, several students revealed that teachers provided insufficient encouragement or help when they encountered barriers during learning of sports skills:

Certain tasks are too difficult for me. Mr. Hu does not encourage me but rather asks me to give up. For example, in basketball games, I do not understand the game’s tactics. So, when we are teamed to practice these tactics, I do not know where I should stand and when I should run. The teacher become impatient and asks me to stop, and then replaces me with another student. —Qu, a student with ASD

When we practice skills, [the PE teacher] walks around to check our performance. I know my movements are wrong, but he just says, "That's okay" and does not help me correct what I am doing. —Zhu, a student with an intellectual disability

Five students with special needs responded that they obtained support from PE teachers, which motivated them to engage in PE. Several subthemes of teacher support emerged, such as teachers' favorable attitude, encouragement, and arrangements of partners. The students indicated,

The teacher is nice. She is concerned with my feelings and safety. During PE classes, she always comes up to me and asks me how I feel about the sports exercise. She told me that if I feel uncomfortable, I must let her know . . . I like the teachers and thus I like PE class. —Wen, a student with health impairment

Sometimes, I feel the task is difficult for me and I have no confidence in performing. My teacher always encourages me to give the task a try and helps me to complete it successfully. I like PE classes. —Wang, a student with visual impairment

When we practice skills, Mr. Yun always arranged a partner to practice with me. If I have difficulties in performing certain movements, my partner would provide assistance. —Hu, a student with ASD

Peer Support. Sixteen student participants identified peer support as a factor that influences their inclusion. Among them, the majority of students (i.e., 10 students) provided positive comments, whereas the other six students gave negative comments regarding support from peers without special needs. The students reported that their classmates supported them in PE classes through acceptance, encouragement, and learning assistance. The typical responses are as follows:

There is no difference, no ignorance, no distance in PE classes. We are friends. We play together and I enjoy it. I like PE classes. —Ming, a student with hearing impairment

When I completed a difficult [exercise] successfully, my classmates clapped and cheered for me, which makes me feel we are a group. It is good. —Hu, a student with ASD

It has been pretty good. My classmates are really nice to me. When I do certain exercises, classmates beside me reminded me what is in front of and behind me. . . . There is no exclusion. I like playing with my classmates. —Liu, a student with visual impairment

However, the other six students experienced social isolation from their peers, which inhibited their PE inclusion. Qu, a student with ASD, responded, "They do not listen to me anyway. I say something and they ignore me." Yu, a student with a physical disability, stated, "They do not play with me in PE classes unless the teacher requires them to." Chen, a student with visual impairment said, "They excluded me in team games. For example, Jiang, my classmate, always says they

want to win the game, and it will be hard if I am teamed with them.” Song, a student with a physical disability, indicated,

To be honest, I have a good relationship with my classmates. However, I felt that no one wanted to interact and play with me in PE classes. They may think [it is not] fun to play with me because I cannot walk and run.

Similarly, Bai, a student with an intellectual disability, also felt isolated and ignored:

My classmates dislike me, and they think of me as an abnormal boy; they rarely talk to me. Sometimes, the teacher asks us to find a partner to practice some sports skills, and no one wants to be paired up with me. . . . This makes me feel unneeded and like I do not belong to the group. Thus, sometimes I practice individually and sometimes I stand and watched them playing together.

These students with impairments revealed that their peers’ prejudgment of their skill level is the main reason for their ignorance and the reason their peers overlook them during class activities. Ling, a student with a physical disability, recounted, “They think I am not competent enough to be a member of their team. Therefore, when doing team activities, they do not want me on the team.”

Modification. Eleven students with special needs identified modification as a determinant of their PE inclusion. These students reported that no modified instruction, activities, and game rules were provided to them, which inhibited their participation in PE activities. Certain students focused on game rules and revealed that the lack of modification deprived them of the chance to be involved in games. For example, Li, a student with a physical disability, said, “I do not attend games and competitions in PE classes. The rules are the same for me and the other students. I knew that I [would lose]. I do not want to be a loser.” Bai, a student with an intellectual disability, stated,

No, the teacher did not change the game rules for me. I would say these games are not appropriate for me. My teammates do not pass a ball to me because they feel I will lose the ball. I always run and have no chance to touch a ball. There is no fun. Thus, I do not play games with them anymore.

Other students stated that certain movements and activities are extremely complicated and the teacher should modify them. For example, Zhang, a student with ASD, said,

I cannot join in certain activities because they are too complicated for me. I cannot attend games because I do not understand the game’s tactics. Sports skills like dive forward roll are also difficult for me to learn. The teacher should simplify them or provide me other activities that are easier than [these] activities.

Lao, a student with a physical disability, also responded:

Some movements are too hard for me because of problems with my legs. My teacher asked me to stand aside when other students run. This made me sad.

However, I can do [it] if the teacher [changes] it. I would feel better if he asked me to walk when other students run.

Furthermore, several students suggested that teachers' instruction should be modified to further include them in PE classes. For example, Qu, a student with ASD, commented,

In aerobics classes, the teacher instructs too fast. After teaching some movements, Ms. Kang only allows one or two minutes for us to practice and then moves on to the next movement. The practice time is too short for me. I cannot follow her teaching steps.

Chen, a student with visual impairment, also responded, "I cannot see clearly the teachers' demonstration. So, most of time I don't know how to do. It will be better if the teacher can arrange a partner for me to provide help."

Discussion

A Chinese local study by Yao (2004) surveyed 50 primary and secondary schools and determined that the majority of Chinese students with special needs in general schools are excluded from general PE for safety consideration or lack of support. In contrast to the study by Yao (2004), only one out of 20 students was excluded completely from general PE in this study. Despite the qualitative research method and small sample size, this study indicated that the level of inclusion of Chinese students with special needs in PE has improved in recent years. However, the majority of students with special needs felt negatively about their inclusion in PE, and restricted participation in PE activities was a typical occurrence for them. This finding indicated that further effort should be made to improve their inclusion in general PE.

Impairment was identified as a personal factor that influences the inclusion of students with disabilities in PE. The important role that impairment played in the students' PE inclusion supported the social relational model of disability. That is, biological and medical difficulties cannot be ignored, and impairment is a major barrier that restricts activity participation (Thomas, 2004a). Self-efficacy of students with special needs has also become a personal factor in their involvement in PE activities, which may be related to the "social barriers" indicated by the model, because the personal factor is based on how others view and treat them. In this study, the lack of confidence of most students with special needs is partly based on lack of success in PE, peer support, accommodation, and support from the PE teacher. By contrast, students may possess positive self-efficacy in an inclusive and supportive context. The results also showed that inclusion level of students with special needs varies according to impairment types. Students with ASD, intellectual disability, and hearing impairments reported that their impairments did not impede participation in PE activities. However, students with physical, visual, and health impairments reported that their impairments restricted participation in PE activities. The major reason may be that students with certain types of disabilities (e.g., physical disabilities and health impairments) had extra difficulties and safety concerns regarding participation in physical activities than those with other types

of disabilities. A previous study by Wang and Qi (2015) determined that Chinese PE teachers hold negative beliefs on teaching students with physical disabilities than those with other types of disabilities (e.g., intellectual disability and hearing impairments). These students are perceived to have increased difficulty with regard to participation in physical activities. This finding may inhibit the inclusion of such students with physical disabilities in PE. Several studies confirmed that perceived self-efficacy is a determinant of individual action and behavior (e.g., Bandura & Schunk, 1981; Fletcher & Banasik, 2001). Student exercise efficacy also determines the adoption and maintenance of physical activity behaviors (Fletcher & Banasik, 2001). Such findings imply that certain interventions, such as strengthening teacher support and using peer mentoring in PE classes, are required to improve the self-efficacy of students with special needs (Northcott, 2011).

The results indicated that architectural and facility-related barriers exist for most students with special needs to engage in PE activities. This finding supports previous studies (Blinde & McCallister, 1998; Goodwin & Watkinson, 2000). This finding is also consistent with the concept of “barriers to doing” derived from the social relational model of disability, which addressed the physical barriers to the participation of certain activities of people with disabilities (Thomas, 1999). Architectural barriers refer to any obstacles in the building and their nearest vicinity, and they prevent or hinder free mobility in people with special needs, especially those with physical disabilities (Heldak, Stacherzak, & Przybyla, 2018). The government and schools should take responsibility in solving the problems by eliminating architectural barriers that prevent or hinder free mobility in students with special needs. Modifying equipment can also render motor tasks easy and enhance the PE activity participation of students with special needs (Blinde & McCallister, 1998). However, the findings of this study show that modified equipment is unavailable for students with special needs. In China, the ignorance and lack of financial support from schools are the main reasons for the lack of availability (Li & Sam, 2011). Lack of professional knowledge in teaching students with special needs may be another reason for the facility-related barriers (Lieberman, Houston-Wilson, & Kozub, 2002; Li & Sam, 2011). The survey by the Wang and Qi (2015) determined that few PE teachers received adapted PE and special education. Therefore, these teachers may be unaware in terms of using adapted equipment for students with special needs to promote participation in PE activities. This finding implies that schools should provide added financial support—specifically, provision of equipment for physical activities.

The social context, such as teacher and peer support and modification, was identified to influence students’ inclusion in PE. Previous studies also gathered similar findings, which showed the lack of adapted activities. In addition, teachers support restricted PE participation of students with special needs (i.e., Block, 1995; Herold & Dandolo, 2009; Meegan & MacPhail, 2006). The finding supports the social relational model of disability, which addressed the restricted participation of students with special needs as a result of not only individual impairment, but also of social constraints that disable individuals through attitudinal barriers (i.e., teacher and peer support) and lack of accommodation (i.e., modification; Fitzgerald, 2005; Grenier, 2007). This study determined that the majority of students with special needs perceived limited support from PE teachers. Interview data further revealed that teachers did not provide sufficient

support because they underestimated the students' sports competency and safety consideration. The lack of professional knowledge may lead to teachers' low expectations of students' sports competency. Furthermore, PE teachers in China take full responsibility for the occurrence of accidents during PE classes. As a result, Chinese PE teachers have become excessively concerned with students' safety in PE classes and refrain from arranging "high-risk" physical exercises for students (Wang, 2008). Therefore, PE teachers exhibit excessive concern with regard safety of students with special needs. In addition, teachers failed to modify or adapt activities, game rules, and instructions to meet the needs of students with special needs, which resulted in the exclusion of students with special needs from certain activities. This finding is consistent with previous studies that showed that PE teachers are unprepared or lack knowledge about accommodating children with disabilities in general PE (Anunah & Hodge, 2005; Qi, Wang, & Ha, 2017; Sato et al., 2007). On the one hand, PE teachers were unable to adapt their activities or instructions because most did not receive professional training in adapted PE and lacked professional knowledge. PE teachers may also be unwilling to adapt activities and instructions because doing so may exert a negative effect on the learning interest and participation of other students without special needs. On the other hand, the majority of students with special needs reported sufficient support from their peers. This result was supported by previous studies that show that peers in general hold positive attitudes toward including peers into their PE programs (Block, 1995; Campos et al., 2013; Hutzler & Levi, 2008; Obrusnikova, Block, & Dillon, 2010).

The findings of this study suggested that the lack of professional training is an important reason for lacking teacher support, modified equipment, activities, and instruction in PE classes. This finding was supported by certain studies (e.g., Bredahl, 2013; Qi et al., 2017; Sato & Hodge, 2009; Sato et al., 2007; Wang & Qi, 2015). Professional training should be provided to preservice and inservice PE teachers who handle children with disabilities in their classes. The training program may focus on increasing teachers' awareness of using modified equipment and improving their ability to modify equipment, activities, and instruction strategies. It should also include means to render inclusive PE safe for children with special needs. Moreover, an infusion-based model was suggested for adoption by teacher educators in the training program because many studies confirmed that the model is an effective approach in preparing physical educators for inclusion (e.g., Block, Kwon, & Healy, 2016; Hardin, 2005; Kowalski & Rizzo, 1996). This model suggests that all concepts of disabilities are interconnected throughout the overall curriculum, such that preservice and inservice teachers are likely to develop a competence to teach students with disabilities along with a positive attitude (Block et al., 2016).

In conclusion, the majority of students with special needs in this study had a negative view of inclusion in general PE classes because of their restricted participation in PE activities. Personal factors (i.e., impairment and self-efficacy), physical context (architectural barriers and provision of modified facilities), and social context (i.e., teacher and peer support, and modification) facilitated or inhibited the inclusion level of these students. Such a finding is consistent with the social relational model of disability. In response, the government and schools should further eliminate architectural barriers, provide financial support for

teaching, and provide PE teachers with relevant professional development that focuses on teaching students with special needs.

Strengths and Limitations

This study is characterized by important strengths. This study is the first to explore the perception and experience of Chinese students with special needs on their inclusion in general PE classes and factors that contribute to their inclusion. The study offers several important points to understand the difficulties that students with special needs face regarding PE inclusion in China. However, this study has several limitations. First, the study is limited to the perception and experience of 20 students with special needs in Shanghai. Therefore, caution should be exercised in generalizing the results of this study to other populations. Based on this qualitative study, future quantitative research is necessary to justify the results of this study and generalize the findings to primary or secondary school students in China. Second, only interview data were included in this study to further understand the inclusion of students with special needs in general PE. Other data, such as field notes, are required to supplement interview data and reveal the actual inclusion in PE classes. Moreover, the interviewer should spend time in the setting to establish rapport with participants to facilitate self-disclosure and ease anxiety during the interview, which may help obtain comprehensive and accurate information. Third, students with varied special needs may have different perceptions and experiences on inclusion. Future studies should focus on a specific disability (e.g., physical disability) to explore problems that students encounter in PE classes. This study determines that the professional knowledge and behavior of teachers significantly influenced the inclusion of students with special needs. Future intervention studies are necessary to examine the effect of training programs that PE teachers receive regarding the inclusion level of students with special needs.

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