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Understanding Visually Impaired Individuals: Primary School Students' Experiences of Movement Education with Empathy Track

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Abstract

This study was conducted to examine the empathy track and movement education experiences of primary school students. The study group consisted of 89 students who continued their education at a primary school affiliated to the Balıkesir Provincial Directorate of National Education and participated in the study voluntarily. The study research design, one of the qualitative research methods, was used in the study. Data were collected using four semi-structured interview questions and a personal information form prepared by the researchers, and interviews were taken from the students about their experiences before and after the application. Content analysis technique was used in the study. In the findings obtained, two main themes and seven sub-themes were determined before the activity, and two main themes and three sub-themes were determined in the findings after the activity. While positive expressions were determined in three sub-themes in the pre-activity data, it was determined that the expressions used in four sub-themes were negative. In the post-activity data, it was determined that three sub-themes connected to one main theme contained two negative expressions, while the expressions used in one main theme were negative. As a result, it was determined that the participants' experiences after the activity were positive, but the experiences were negative in some participants. It was concluded that the applied movement training course was more effective in students' empathy towards disabled individuals than learning by doing and experiencing.

Keywords: Empathy track, experience, pimary school, visually impaired

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INTRODUCTION

There has been a significant increase in the number of students with visual impairment receiving education in inclusive education settings worldwide (Miyauchi, 2020). In Turkey, important steps are being taken to ensure that students with visual impairment in compulsory education continue their education in general education classes with their typically developing peers in the same classrooms and under equal conditions (MEB, 2024). However, despite many efforts, there are still many challenges and problems in this area (Brydges & Mkandawire, 2017; Belay & Yihun, 2020; Coşkun & Şimşek 2021). Therefore, it is stated that more focus should be placed on solving these problems for a harmonious transition to inclusive educational environments (Byrne, 2022). Because physical education/sports lessons are among the lessons where students with visual impairment have the most difficulties and negative experiences in the field of inclusive education (Miyauchi, 2020). It is stated that this negative experience is due to bullying or exclusion by typically developing peers (Ruin et al., 2021). Based on the fact that it is important to raise awareness of students with disabilities and assess their current situation in primary school (Symeonidou & Loizou, 2018; Zhang et al., 2022). In order to contribute to the provision of inclusive education in high quality, it is thought that it is important to examine the empathy status of typically developing students in the context of physical education lessons for visually impaired individuals.

Various studies have shown that these students are often excluded from activities in physical education classes and do not actively participate in the lessons (Brydges & Mkandawire, 2017; Jessup et al., 2017; Lieberman et al., 2019). It is stated that this problem is usually caused by negative and challenging experiences (Haegele & Zhu, 2017), teacher inadequacy in planning and teaching strategies, negative classroom relationships and inappropriate learning environments (Belay & Yihun, 2020; Furrer et al., 2020; Giese et al., 2021; Kart & Kart, 2021; Manitsa & Doikou, 2022). In order to ensure more functional participation of students with visual impairment in inclusive physical education practices, different methodological approaches should be used in the content of the course (Şahin et al., 2024). In this direction, it is thought that understanding each other is of great importance for students to support and encourage each other. Because the attitude of classmates without disabilities is recognized as an important variable of successful social participation (Morley et al., 2021). Therefore, special attention is paid to empathy training for typically developing students to interact positively with their peers with disabilities (Block et al., 2021). However, it has not been sufficiently investigated how empathy training provided with concrete practices in the field of physical education and sports reflects on students' perceptions of individuals with visual impairment (Allen-Collinson et al., 2024). Empathy is an integral part of understanding and sharing the feelings of others and achieving a compassionate society (Knafo-Noam et al., 2009; Zaki, 2019). Empathy is part of a broader category of pro-social actions that promote human flourishing and the collective good. Research suggests a relationship between one's level of empathy with others and the value one places on the well-being of others, as well as openness and willingness to see injustices (Kendi, 2022), and this has been proposed as a key strategy for raising anti-othering children (UN, 2022).

Although empathy rarely appears in sustainability conversations, it has great potential as an element that brings together environmental integrity, social equity and shared prosperity. Developing empathy is particularly relevant to Sustainable Development Goal 4, Quality Education, which emphasizes sustainable lifestyles, human rights, peace, global citizenship and appreciation of cultural diversity (UN, 2022). Empathy deserves to be considered and explored in the context of sustainability education, as empathy not only allows us to feel or experience the perceived emotions of another, but it can also motivate action and therefore be a powerful driver for positive change. Primary schools are considered to be the most suitable spaces where students are provided with experiences to achieve their learning goals, develop their social skills and prevent discrimination and inequalities (Bebetsos et al., 2013). However, it is seen that studies focus on the academic achievement of typically developing primary school students in inclusive classrooms (Kart & Kart, 2021), there is not enough information about the views of these students on inclusive physical education strategies (Furrer et al., 2020), and studies are generally conducted with individuals with visual impairment (Brydges & Mkandawire, 2017; Jessup et al., 2017). In Turkey, it is stated that there are very few studies on individuals with visual impairment in the field of physical education and sports (Akbulut-İnan & İlhan, 2021; Alkan & Selvi, 2022), research on empathy and awareness for people with disabilities in the field of sports sciences is quite insufficient (Akaydın & Yılmaz, 2023), awareness studies for people with disabilities are generally obtained by quantitative methods, and it is necessary to use qualitative methods to obtain more comprehensive information (Qi & Ha, 2012; İlhan Ildız & Tezel, 2018). For this reason, it is thought that determining the empathic tendency only for individuals with visual impairment in this study will contribute positively to the inclusion policies and teaching strategies in the field of inclusive physical education practices for individuals with visual impairment. In line with this information, this study was conducted to examine the empathic perceptions of primary school students towards individuals with visual impairment in the movement education track experiences prepared for individuals with visual impairment.

METHOD

Research Model

This research adopts a qualitative intervention-based research approach to examine students' experiences, feelings, thoughts, and reflections regarding visually impaired individuals after a movement-based empathy activity. Qualitative intervention-based studies allow for in-depth examination of participants' experiences, perceptions, and interpretations following a specific educational intervention or practice. The aim of such studies is not to statistically test the causal effect of the intervention, but rather to reveal participants' subjective experiences regarding the intervention process and its aftermath. In this respect, the study is also consistent with the qualitative descriptive research approach. Qualitative descriptive studies aim to describe participants' views and experiences regarding a specific phenomenon, event, or practice using their natural expressions (Patton, 2015; Creswell & Poth, 2018). Furthermore, in intervention research, examining how the intervention is experienced and interpreted by participants through qualitative data contributes to understanding the contextual

and experiential dimensions of the intervention (Fraser & Galinsky, 2010; Sidani & Braden, 2011).

Research Group

The participants of the study consisted of a total of 89 students, 48 girls and 41 boys, in the 4th grade, who were continuing their education in a primary school affiliated to the provincial Directorate of National Education in Savaştepe district of Balıkesir and participated in the study voluntarily. In order not to decipher the names of the students in the study, letter pseudonyms Ö1, Ö2, … Ö89. were given. The study utilized criterion sampling, a type of purposeful sampling method. The participants consisted of 89 fourth-grade students (48 girls and 41 boys) with an average age of 9-10 years, attending a primary school affiliated with the Provincial Directorate of National Education in Savaştepe district of Balıkesir, who voluntarily participated in the study. Inclusion criteria included being in the fourth grade, having an age range of 9-10 years, and not having any disabilities. Parental/guardian consent was obtained from the students before their participation, and voluntary participation was ensured. To maintain confidentiality, each student was given a pseudonym such as Ö1, Ö2, ... Ö89.

Data Collection Tools

In the collection of qualitative data, individual interviews were conducted with students using a semi-structured interview technique. Interview questions were prepared by the researchers, primarily by reviewing the relevant literature and aligning with the research objective. The draft interview form was submitted to expert academics for review to ensure content validity. These expert academics consisted of individuals with experience in physical education and sports sciences, classroom education/child development, and qualitative research methods. The experts were asked to evaluate the interview questions in terms of their suitability to the research objective, clarity, scope, appropriateness to the age and developmental level of 4th grade students, and comprehensibility by the students.

Based on expert feedback, necessary adjustments were made to the questions; expressions that were inappropriate for the age level, abstract, or difficult to understand for the students were simplified. During this process, care was taken to ensure that the questions were appropriate to the cognitive and language development characteristics of 4th grade students aged 9-10. A pilot interview was not conducted as part of this research. However, the suitability and comprehensibility of the interview form for the students' age level were evaluated based on expert opinions, and the final interview form was created as a result of these evaluations.

1. What are your thoughts about visually impaired individuals?

2. What do you think about visually impaired individuals doing physical education and sports?

3. What do you think about the activity you did?

4. What did you think while watching your friends doing the activity?

Data Procedure

Researchers visited the relevant primary school and conducted individual interviews face-to-face. Before the interviews, students were informed about the topic and their consent was obtained. Furthermore, the Scientific Research and Publication Ethics document (Document Date and Number: 09.11.2022-70297, Muş Alparslan University) was obtained. In addition, the document titled "Ethics in Scientific Research and Publications" (Document Date and Number: 11/09/2022-70297, Muş Alparslan University) and the research permit issued by the Provincial Directorate of National Education on 17.03.2023, No. E-32026198-605.01-74630976, have been obtained. Data was collected by visiting the primary school where the application was to be conducted. Participants were identified during the application process, and qualitative data were subsequently collected. The empathy course consisted of basic and sports-specific movement skills. Before the application, students were asked to answer two semi-structured interview questions, and the data collection took 15 to 20 minutes. To expedite the application process, researchers created two identical courses, introduced the course to the students, and demonstrated a model application. Students were taken onto the course one by one and performed the application. During the application, students wore blindfolds, and the researcher acted as a guide, describing the tasks to be performed and ensuring the completion of the course. This process took three to four hours. The empathy course consisted of sections designed to test displacement, balance, and manipulative movement skills. These skills include walking, walking with changes of direction, navigating over and under obstacles, and kicking and throwing a ball. Following the intervention, two semi-structured questions were asked to examine the effect of the intervention on the students. The semi-structured interview questions, collected by four researchers, took between 15 and 20 minutes to answer in total. The interviews with the students were recorded using an audio recorder with their permission.

Data Analysis

The qualitative data obtained as a result of the interviews were transferred from the voice recorder to the computer environment through transcription. Qualitative data were analyzed by content analysis. The data, which were coded and thematized separately by four researchers, were then finalized by determining common codes and themes. The appropriateness of the codes and themes was checked by an academician who is an expert in the field and conducts qualitative studies, independent of the research. Finally, the analysis process was completed with the process of creating and interpreting the findings.

Validity and Reliability

Validity refers to the control of the findings in the research process by the researchers (Yıldırım & Şimşek, 2013). For the validity of the research, a deep-oriented data collection process was applied in the interviews with the students, a literature review was conducted before the questions were prepared, expert opinions were consulted during the question preparation process, and the method section was explained in detail. In order to ensure the internal reliability of the research, codes and themes were determined separately by four researchers and finalized with common codes and themes. In addition, an independent

academician outside the research, who is an expert in the field and qualitative research, checked the appropriateness of the codes and themes obtained after applying content analysis with a holistic approach. Inter-coder agreement was found to be %90. Miles and Huberman (1994) reported that for a good study, inter-coder agreement should be at least %80 according to the internal consistency formula (agreement / (agreement + disagreement)). In order to ensure the external reliability of the study, the position of the researchers in the data collection process and the general method of the study were tried to be explained in detail. In addition, students' opinions were conveyed through a descriptive approach and direct quotations.

FINDINGS

Pre-Intervention Qualitative Findings

Table 1. Codes and themes resulting from participants' views on visually impaired individuals

Main Theme	Sub Theme	Code	Participant
From My Eyes	Difficulties	They face difficulties; they can't do their homework, they can't read, they can hear noises, they can't watch television, they bump into walls, they struggle with sports, they don't understand lessons, they have difficulties in traffic, they can't play games, they can't run, they are afraid of touch, they are ignored, they can't climb stairs, they can't read books, they can't protect themselves, they can get injured, they can break things.	Ö2,Ö3,Ö4,Ö7,Ö8,Ö10,Ö11,Ö12,Ö13,Ö14,Ö15,Ö16,Ö17,Ö18,Ö19,Ö20,Ö21,Ö23,Ö24,Ö25,Ö26,Ö28,Ö33,Ö35,Ö36,ö38,Ö39,Ö41,Ö44,Ö46,Ö47,Ö48,Ö52,Ö53,Ö55,Ö56,Ö57,Ö59,Ö62,Ö63,Ö64,Ö66,Ö67,Ö69,Ö71,Ö72,Ö74,Ö77,Ö78,Ö81,Ö86,Ö87,Ö88,Ö89
	Conveniences	They can hear, their work is done by others, their struggle is incredible, they understand with their feelings, they show a lot of interest	Ö15,Ö27,Ö36,Ö50,Ö67,Ö78
	Social Relations	Excluded, treated badly, people may feel pity, empathize, we shouldn't exclude, they feel bad, we should help them, they feel bored, they can't choose friends, they may have good relationships, they may be teased, they may have few friends, they may be bad with their friends, they may be excluded, they may have no friends, they may not leave the house much, we couldn't empathize	Ö1,Ö5,Ö6,Ö9,Ö10,Ö12,Ö16,Ö25,Ö26,Ö29,Ö30,Ö32,Ö33,Ö35,Ö37,Ö42,Ö43,Ö49,Ö51,Ö54,Ö57,Ö58,Ö61,Ö63,Ö65,Ö68,Ö72,Ö75,Ö78,Ö79,Ö83,Ö84,Ö85,Ö88,Ö89
	What I Feel	I feel sad, I feel surprised, I feel bad, I feel ashamed, I feel unhappy, I feel scared, I feel good	Ö22,Ö31,Ö34,Ö40,Ö45,Ö52,Ö56,Ö60,Ö61,Ö67,Ö70,Ö71,Ö73,Ö80,Ö82,Ö86,Ö88

In Table 1, four sub-themes emerged under the main theme "From My Eyes" of the question "What are your thoughts about visually impaired individuals?": Difficulties, Conveniences, Social Relations and What I Feel. Some of the students' opinions on sub-themes and codes are as follows:

Ö6 "They live by seeing a white or black screen for a lifetime without seeing anything. They face many difficulties at school. For example, when they want to go to the canteen, someone has to be with them. They may not know what to buy from the canteen and may not even know many foods. This situation can affect them a lot."

Ö9 "We should put ourselves in their shoes at home, at school, at work. %45 of the world is visually impaired. We should not make fun of them, we should not exclude them. They cannot read books or study. This is how the world is for them. We should maintain our friendship with them even if they cannot see."

Ö12 "Being visually impaired is a difficult thing. It can cause accidents because they cannot see in front of them, we should help our visually impaired friends, they should have someone with them when they are doing something or going somewhere. They should also ask someone for help when doing something at home."

Ö19 "They have a difficult life. They face many difficulties during the day, but these are not insurmountable difficulties. For example, at school, the teacher draws something on the board while lecturing, and the child may not understand the lessons well because he/she cannot see it."

Ö22 "If I were visually impaired, I would feel very bad. They feel very bad too, they cannot even see the garbage."

Ö25 "Visually impaired individuals cannot lead their lives as easily as we do. For example, at home, if they woke up in the morning and there was no one with them, they would have difficulty if they wanted to go to the restroom and the possibility of hitting something would be very high. At school, when the teacher was explaining a subject, they could not take notes and write in a notebook. In my opinion, one of the saddest situations was that if the teacher turned on a movie to make the children happy, the visually impaired child could not watch it, but listen to it. At least as sad as this, one of the most difficult things for them is to make friends. Choosing a good friend is simpler for us, but they have difficulty in this."

Ö27 "Since visually impaired people cannot see at home, at school and at work, their work is difficult. They write very hard when they need to write. They cannot read what they need to read. Thus, their lives are negative. The easy way is that they can hear. When they hear, they can at least imagine what it is. In this case, they can learn."

Ö32 "Visually impaired individuals have a very difficult life. They have difficulty crossing the street, cooking and eating, playing games and doing many other things. We can understand these individuals through empathy. If there are such individuals near you, let's not ostracize them. Let's act as if they have no visual difficulties. Love and respect them."

Ö34 "I felt very sad for the disabled children, and if I was disturbed for 1 minute, I felt sad because they do not see for the rest of their lives."

Ö40 "I feel sad about the visually impaired, but we should help them, not just feel sad. Actually, I am a little surprised that they can cope with so many difficulties and survive."

Ö78 "If I were visually impaired; I would not compare myself with others. My family would pay more attention to me. I would not be able to eat. I think my friends would support me. I would be sad if I could not see. If my friend could not see, then I would support him/her and pay more attention to him/her."

Table 2. Codes and themes arising from the participants' views on the participation of visually impaired individuals in physical education and sports practices

Main Theme	Sub Theme	Code	Participant
Physical Education and Sports	Negativities Experienced	May need someone with them, can't hold the ball, can't run, may trip and fall, don't enjoy the game, may get hit and injured, may be teased, can't get along with friends and teachers, can't understand, have few friends, may get injured, don't enjoy the game, may have problems, can't play soccer, have difficulty doing sports, feel left out	Ö1,Ö2,Ö3,Ö4,Ö10,Ö12,Ö17,Ö19,Ö20,Ö21,Ö28,Ö30,Ö31,Ö33,Ö34,Ö39,Ö40,Ö43,Ö44,Ö48,Ö50,Ö52,Ö57,Ö58,Ö63,Ö67,Ö68,Ö69,Ö71,Ö72,Ö74,Ö75,Ö77,Ö82,Ö84,Ö86,Ö87,Ö88
	What we can do	We can hire a tutor, we should make them do easy sports, I will get help from my friend, let's do sports with them, they can play different games, we can stimulate the game, they can take a walk, we should guide them, there can be a visually impaired path, help from friends	Ö6,Ö7,Ö11,Ö14,Ö23,Ö26,Ö32,Ö35,Ö36,Ö45,Ö46,Ö49,Ö54,Ö55,Ö56,Ö61,Ö62,Ö64,Ö66,Ö73,Ö76,Ö78,Ö79,Ö80,Ö85,Ö89
	We Can Gain	They will get close to their friends, they will never give up, they will be determined, courageous and very strong, they will socialize, they will socialize, they will socialize, sports can be good for them, physical and mental contribution, they will be strong, they will socialize with their friends, they will be healthy, they will improve their friendships, sports can be useful, my physique will improve, no health problems will arise, they will forget their troubles	Ö1,Ö8,Ö16,Ö25,Ö27,Ö29,Ö36,Ö37,Ö38,Ö41,Ö49,Ö53,Ö59,Ö60,Ö61,Ö65,Ö67,Ö70,Ö79,Ö81,Ö83

In Table 2, three sub-themes emerged under the main theme of "Physical Education and Sports Lesson" of the question "What do you think about visually impaired individuals doing physical education and sports?": Negativities Experienced, What We Can Do and What We Can Gain. Some of the students' opinions on sub-themes and codes are as follows:

Ö4 "In physical education, the teacher shows a movement, but because he is visually impaired, he cannot see and cannot do that movement. He does not know what to do in a game with his friends. For example, when playing catch, he can't see anything, so he may hit something and get injured. "

Ö7 "We should not make a visually impaired person run. We should make him do easy sports. For example, as long as we are with him, we can walk in short distances. We can make him lift non-heavy weights with our help. We should treat him with respect. "

Ö8 "Visually impaired people do not know where they run in physical education class, but despite this, some of them never give up and gain worldwide fame, so if you want, you can succeed."

Ö25 "Visually impaired people have difficulty in doing sports. They may mistake one material for another and hurt themselves. But if they have a reliable friend with them, they

stay away from this danger. Some of their friends may give them completely different materials to make fun of them. But doing sports makes them social. They can get along better with people. It makes a big contribution to your life. Who says the disabled cannot do sports? I am sure that in the future, materials will be made to make the lives of the visually impaired easier and they will join us. "

Ö30 "The teacher can help them in physical education class, so their work can be a little easier. While doing sports, they can do leg and arm movements while sitting. They may have difficulties in physical education class. For example, he hits something and gets hurt."

Ö36 "When doing sports and playing games, if these games do not require vision, they can provide convenience. It can warn him/her when he/she is going to hit something. For example, 'Körebe'. But they can still have difficulties. Playing games contributes to the life of those individuals physically and spiritually. While doing sports, I don't think it would be much easier. While studying, they wouldn't be able to do their homework, they wouldn't even know what the teacher looked like in class."

Ö56 "They cannot play games, but they can do sports by practicing, they can be a midwife in a game of tag and have fun. So visually impaired people have good sides."

Ö73 "I think there are many difficulties that visually impaired individuals may experience in physical education class, but they have good sides. The good thing is that they cannot say 'Hey, it is forbidden to open the eyes' while playing blindfold. The bad side is many. Some of them are; for example, they can accidentally hit the wall.

Qualitative Findings After the Intervention

Table 3. Codes and themes arising from the participants' opinions regarding the movement training activity for visually impaired individuals

Main Theme	Sub Theme	Code	Participant
Beyond the Darkness	My Feelings at that moment	Came easy, it was difficult, felt strange, felt difficult, very happy, very good, excited, sad and unhappy, upset, impressed, felt good, very difficult, panicked, scared, touched, difficult feeling, less difficult, anxiety and stress, not difficult, touched, felt very difficult, terrible, confused, thought I would fall, bad	Ö1,Ö2,Ö3,Ö5,Ö6,Ö7,Ö8,Ö9,Ö10,Ö11,Ö13,Ö14,Ö15,Ö16,Ö18,Ö20,Ö24,Ö26,Ö27,Ö28,Ö29,Ö30,Ö31,Ö32,Ö33,Ö34,Ö35,Ö36,Ö37,Ö38,Ö41,Ö43,Ö44,Ö45,Ö47,Ö48,Ö49,Ö50,Ö51,Ö52,Ö57,Ö59,Ö60,Ö62,Ö63,Ö64,Ö65,Ö66,Ö68,Ö72,Ö74,Ö75,Ö76,Ö77,Ö80,Ö81,Ö83,Ö85,Ö86,Ö87,Ö89
	I was impressed	Not getting the ball stuck in the mound, throwing the ball, the lanes I pass, how blind people do it, empathy, throwing the ball, being blindfolded, obstacles in front of me, not being able to see, experiences, moving on, hitting the ball blindfolded, how they go on the road like this, how they overcome difficulties, how they find their way	Ö1,Ö2,Ö5,Ö7,Ö10,Ö14,Ö17,Ö18,Ö20,Ö24,Ö28,Ö36,Ö42,Ö49,Ö54,Ö54,Ö56,Ö58,Ö70,Ö71,Ö78,Ö82,Ö86,Ö87
	What Contributed to me	It became easier for me to empathize, I had fun, I understood the visually impaired, it was useful, it taught empathy, I learned about their difficulties, I understood them, I	Ö1,Ö2,Ö3,Ö4,Ö5,Ö6,Ö7,Ö9,Ö11,Ö12,Ö13,Ö14,Ö18,Ö19,Ö21,Ö23,Ö25,Ö27,Ö29,Ö30,Ö31,Ö35,Ö36,Ö39,Ö40,Ö42,Ö46,Ö50,Ö53,Ö55,Ö56,Ö59,Ö61,Ö7

	understood their lives, I learned that they have difficulties, I don't know the visually impaired, we should help them, we learned about their lives, I felt like a visually impaired person, we should instill empathy, I don't think it is useful, I think it is very useful, I learned that I can overcome obstacles, I learned what I should do if I don't see, I understood the disabled, I will treat them better	3,Ö74,Ö76,Ö78,Ö79,Ö82,Ö84, Ö85,Ö86

In Table 3, three sub-themes emerged under the main theme of "Beyond the Darkness" of the question "What do you think about the activity you did?", namely My Feelings at that moment, I was impressed and What Contributed to me. Some of the students' opinions on the sub-themes and codes are as follows:

Ö1 "The activity seemed a little easy, but I thought about more difficult things, for example, how they write at school. There was a bump there about the ball, it was very strange that the ball did not get stuck there, even for 1 minute, the sounds were very heavy. At the same time, it became easier for me to empathize, I want to remember this activity even when I grow up.".

Ö4 "I had a lot of fun doing the activity. During the activity, I realized that visually impaired people have a lot of difficulty in doing their jobs. This activity was very useful for me because we empathized with the visually impaired during the activity."

Ö10 "I felt happy and sometimes sad because visually impaired people have a lot of difficulties in their lives. What impressed me the most during the activity was empathizing with the visually impaired and understanding what they feel. It was also to understand what difficulties visually impaired people have. It was not to be selfish towards the visually impaired like some people."

Ö18 "We empathized in the activity. What impressed me the most was that everyone tied something over their eyes. The benefit of this activity is to empathize and understand what visually impaired people see. This activity both entertained and saddened me. If I were the president of this country, I would do everything for visually impaired people."

Ö25 "Thanks to this activity, I was able to empathize with visually impaired people and understand them better. To be honest, I was scared because I couldn't see ahead of me during the activity. Maybe I couldn't even continue if the teachers weren't with me. It's a difficult situation. Maybe if I had never seen that track, I would have hit everywhere, fallen down and tripped. I mean, we have seen the activity we did before, but they have never seen the roads in their lives. I want to exemplify this situation. In fact, when they move from Kars to Izmir, they are like people who do not know the roads, houses and bazaars. I think it is similar to this."

Ö31 "I felt bad in the activity we did because we made a track without seeing and we did it for a minute, but visually impaired people cannot see throughout their lives. We understood how visually impaired people have difficulties."

Ö33 "I felt the difficulties and difficulties of the visually impaired people in that course. And the most difficult course for me was kicking the ball. I mean, if our visually impaired friends

who are ambitious for soccer can succeed in this job, it will be one of the best achievements. I mean, the track was difficult and I also had difficulty, but there is nothing that we cannot overcome when we make effort."

Ö42 "During the activity, I empathized and understood what visually impaired people feel. After the activities, I was impressed by how visually impaired people continue their lives despite all these difficulties. The benefits of this activity for me were that I understood how visually impaired people live."

Ö50 "During the activity, I had a lot of fear, anxiety, panic, stress. The thing that affected me the most during the activity was that if I was blind and disabled, I think my friends would make fun of me a lot. The benefit of this activity for me was to empathize."

Ö79 "During the activity, I felt that people with disabilities live very hard, that is, it is a difficult thing. Disabilities affected me the most during the activity. I understood their difficulties. This activity was very useful for me. I understood the obstacles of the disabled."

Ö88 "I think it was a very meaningful course or a course that would increase the power of empathy. It felt very different, it was bad because I could not see in front of me. It was very meaningful because it was difficult for people with disabilities and this affected me. It helped to strengthen the sense of empathy."

Table 4. Codes and themes related to participants' thoughts while watching other friends doing the activity

Main Theme	Code	Participant
My Experience	It was easy, not suitable for everyone, some had difficulty, the activity was average, very difficult, some did it simply, it reminded me of the visually impaired, they can empathize, they are not treated selfishly, they are respected and loved, they had a lot of fun, they may have difficulty doing sports, I felt I would have difficulty, How would I look if I were disabled, what would I do if I were you, it was very funny, I reviewed what I had difficulty with, it was easy when I did it, blindness is difficult, I came to a good conclusion, let's approach with sincerity and respect, I wish I could be useful, what if I fall, it taught me what the visually impaired experience, I praised Allah, there were ease and difficulties, I was sad, I was surprised, all emotions at the same time, I saw them as disabled, I understood, some people were slow, they had difficulty on the stairs, let's not make fun of them, at first it was difficult, they looked scared and anxious, let's help, I laughed a little, I felt like helping, I was very sad, how difficult they were, they were very desperate, they were very good, most of them were successful, my self-confidence came, I was very scared, I wanted to help, disabled people have difficulties, I understood them, I'm glad I'm not disabled, I can't do it.	Ö1,Ö2,Ö3,Ö4,Ö5,Ö6,Ö7,Ö8,Ö9,Ö10, Ö11,Ö12,Ö13,Ö14, Ö15,Ö16,Ö17,Ö18, Ö19,Ö20,Ö21,Ö22, Ö23,Ö24,Ö25,Ö26, Ö27,Ö28,Ö29,Ö30, Ö31,Ö32,Ö33,Ö34, Ö35,Ö36,Ö37,Ö38, Ö39,Ö40,Ö41,Ö42, Ö43,Ö44,Ö45,Ö46, Ö47,Ö48,Ö49,Ö50, Ö51,Ö52,Ö53,Ö54, Ö55,Ö56,Ö57,Ö58, Ö59,Ö60,Ö61,Ö62, Ö63,Ö64,Ö65,Ö66, Ö67,Ö68,Ö69,Ö70, Ö71,Ö72,Ö73,Ö74, Ö75,Ö76,Ö77,Ö78, Ö79,Ö80,Ö81,Ö82, Ö83,Ö84,Ö85,Ö86, Ö87,Ö88,Ö89

In Table 4, the main theme of "My Experience" emerged for the question "What did you think while watching your friend doing the activity?". Some of the students' opinions on the codes are as follows:

Ö10 "They can empathize with the visually impaired. Visually impaired people are not treated selfishly. They respect the visually impaired. They love them. They do not make fun of them.

Some people who did the activity had difficulty. Some people had a lot of fun. I really had a lot of fun too."

Ö12 "I felt that I would have difficulty when my friends were doing it, I would think about how I would look if I were disabled. It seemed easy when my friends were doing it, but I had difficulty when I came to myself."

Ö26 "I did not know what I was doing, my friends did. While my friends were moving themselves, they did not know what they were doing. We completed the course easily because we had seen it before, but visually impaired people had not seen it before. My friends managed to complete the course in ten minutes because they knew how to follow the lanes. My friend who did the course at first had more difficulty than us. Although we had seen the course before and the older brothers helped us, we had a lot of difficulty."

Ö33 "I followed a friend of mine and saw how difficult it was, I understood from his movements that it was not necessary to keep the ball in one hand and he respected our visually impaired friends, so the aim was not to be in the wrong situation. I think everyone did well, but the aim is that this course taught us what visually impaired individuals experience."

Ö59 "I laughed a lot while watching my other friends doing the activity, it was very funny. But when it was my turn, I realized how my friends felt."

Ö60 "It was a little funny, but I felt sad when I saw them like that. I wanted to help them, but I couldn't because they were in the activity."

Ö78 "Most of my friends went through difficulties. But while watching this, I thought that a visually impaired person has a lot of difficulties, that is, they face difficulties."

Ö85 "Some of them had a lot of difficulty, some of them did it very easily, some of them did it as if they could see, one of my friends was surprised, of course I had difficulty too."

DISCUSSION AND CONCLUSION

In this study, it was tried to learn the experiences of primary school students in the empathy track, which included movement training for individuals with visual impairment. Before participating in the empathy track, semi-structured questions were used to determine the thoughts of typically developing students about individuals with visual impairment and their views on the participation of these individuals in physical education and sports. After the activity, semi-structured questions were used to determine their opinions about the activities on the empathy track and their thoughts about their friends who participated in the activity. The findings obtained in the study were evaluated according to the themes and sub-themes formed as a result of the analysis of the answers given to the questions in the data collection tool.

When the opinions of the students regarding the sub-theme of "difficulties" under the main theme of "from my eyes", which emerged in line with the answers given by the participants to the question "What are your thoughts about visually impaired individuals?" before the implementation of the research, the participants stated the difficulties experienced by individuals with visual impairment in all areas of life. They mentioned the negative

reflections of these difficulties on their academic development, social interactions and health. When the literature is examined, it is reported in studies supporting the research finding that individuals with visual impairment face many difficulties and restrictions in their education, access and perception of social signals (Belay & Yihun, 2020; Qiu et al., 2020; Burton et al., 2021; Allen-Collinson et al., 2024). When the students' views on the sub-theme of "facilities" under the main theme of "From My Eyes" were analyzed, some participants stated that individuals with visual impairment have some special opportunities and special skills in their lives. They emphasized the strength of the feelings and life struggles of individuals with visual impairment, the excellence of their sense of hearing and the privilege they have in certain areas of life. When the literature is examined, it is seen that individuals with visual impairment have various opportunities and facilities in addition to the difficulties they experience (Belay & Yihun, 2020). As a matter of fact, it has been revealed in various studies that the increasing global efforts for individuals with visual impairment and the increase in social support have a positive contribution and positive impact on these individuals (Barbieri et al., 2016; Matsuguma et al., 2018). It is also stated that people with visual impairment may have higher self-efficacy than people in the general population due to their extensive experience of mastery of how to handle life as a visually impaired person (Brunes et al., 2021). When the students' views on the sub-theme of "social relationships" were examined, some participants stated that individuals with visual impairment have poor social competence and relationships. They emphasized that these individuals are often excluded, lonely and mistreated. When the literature is examined, it is seen that individuals with visual impairment are exposed to social exclusion in many areas, especially in the fields of education and employment, and there are negative attitudes towards these individuals (Miyauchi & Paul, 2020; Burton et al., 2021). It is quite striking that this exclusion is also experienced in educational institutions, which should undertake the most important task to eliminate this negative approach (Furrer et al., 2020). For this reason, it can be said that educational institutions, which are considered as environments that maximize social development, should include more practices that encourage social participation, especially in the primary school period (Aktan et al., 2019; Kart & Kart, 2021). Because the social exclusion of students with special educational needs is among the most important barriers to high-quality inclusive education (Manitsa & Doikou, 2022). When the opinions of the students regarding the sub-theme "My feelings" were analyzed, it was determined that the participants had complex feelings towards individuals with visual impairment. The participants stated that they experienced sadness, surprise, fear, good and bad feelings when they encountered these individuals. This result is thought to be likely due to the fact that the participants did not have students with special needs in their classes. Because various prejudices may arise in people who do not have individuals with special needs in their classes or families (Aktan et al., 2019). As a matter of fact, the literature shows that students with special needs in their class or environment have many social gains, fear, prejudice and anxiety towards individuals with special needs are eliminated, and acceptance and understanding increase (Kart & Kart, 2021). In this direction, it can be said that the number of inclusive schools should be increased by including more students with special needs in general education.

When the opinions of the students regarding the sub-theme of "negativities experienced" under the main theme of "physical education and sports lesson", which emerged in line with the answers given by the participants to the question "What do you think about visually impaired individuals doing physical education and sports?" before the implementation of the research, the participants stated that individuals with visual impairment cannot do physical education and sports activities, they will have difficulty and they may get injured. They generally stated that they believed that this situation, which would be caused by their inability, would put them in a worse situation. As a matter of fact, the literature shows that increased functional limitations due to visual impairment may cause social isolation, which may increase the severity of depressive symptoms (Demmin & Silverstein, 2020). It also shows that individuals with visual impairment tend to be significantly less physically active than their sighted peers (Haegele & Zhu, 2017). It is suggested that the main reason for this may be related to perceived barriers to participation, including the availability of appropriate opportunities, rather than visual acuity or the educational environment (Haegele & Porretta, 2015). The literature suggests that the barriers that individuals with visual impairment usually face in inclusive physical education include negative peer interaction, lack of inclusion, negative attitudes of physical education teachers, and lack of ideal teaching strategies (Haegele & Zhu, 2017; Lieberman et al., 2019). For this reason, it can be said that all barriers and facilitators related to inclusive physical education should be further researched and put forward with stronger evidence. When the opinions of the students regarding the sub-theme 'What we can do' were analyzed, the participants stated the arrangements and changes that can be made for more active participation of individuals with visual impairment in physical education and sports activities. Participants generally emphasized that various adaptations can be made in physical education and sports activities inside and outside the school, environmental conditions can be made suitable for them and peer support is important. They also stated that appropriate sports options can be offered to these individuals, and therefore guidance should be provided. These findings are important for the inclusion of individuals with special needs in general and individuals with visual impairment in particular in inclusive physical education. It can be said that increasing awareness of individuals with special needs in the society may have affected the students. As a matter of fact, it is stated that the participation of individuals with special needs in sports and the fact that their achievements in this field become more visible create an important awareness in society (Block et al., 2021). In this direction, it can be said that it is necessary to emphasize the abilities of individuals with visual impairment related to sports more in all areas of life, especially in educational institutions. When the student opinions on the sub-theme of "gains" were analyzed, the participants stated that physical education and sports would have a positive effect on the health of individuals with visual impairment. Participants emphasized that participation in sports would strengthen and socialize individuals with visual impairment physically and psychologically. Indeed, there is strong evidence in the literature that participation in physical education and sports positively affects the mental and physical health and social skills of individuals with visual impairment (Haegele, 2019; Giese et al., 2021; Şahin et al., 2024). In this direction, it can be said that the participants' views on the effects of physical education and sports are in line with the literature.

When the opinions of the students regarding the sub-theme of "My feelings at that moment" under the main theme of "Beyond the darkness", which emerged in line with the answers given by the participants to the question "What do you think about the activity you have done?" after the implementation of the research, the participants stated that the application created very different feelings in them. The participants stated that they experienced anxiety, stress, fear, panic and confusion during the application, and that the application excited and moved them. Today, empathy training is given great importance in practices aimed at strengthening inclusive physical education. It is stated that this training given to peers without disabilities has a very strong effect on promoting peer support and developing positive attitudes towards these individuals (Block et al., 2021). In this respect, it can be said that empathy training positively impacted participants' ability to empathize with individuals with visual impairments. This is because the transfer of emotional responses to participants' feelings during the training is consistent with the literature on empathic tendencies toward individuals with visual impairments. (Paterson, 2014; Krösl et al., 2023). When the opinions of the students regarding the "I was impressed" sub-theme were analyzed, the participants stated that they experienced the difficulties experienced by individuals with visual impairment while performing movement skills. The participants stated that it was quite impressive that blind people overcome the difficulties and limitations they experience while performing daily life activities. When the literature is examined, it is seen that physical activity-oriented empathy training, which is implemented to help students without disabilities develop positive attitudes towards individuals with visual impairment, has positive effects on students (Reina et al., 2011; Mesas et al., 2017). In the process of including individuals with visual impairment in inclusive physical education, it is considered an important factor to overcome the problems related to peer interaction, which is considered one of the important obstacles, and to provide positive experiences to prevent bullying and social exclusion (Haegele & Zhu, 2017). In this direction, movement-based empathy training can be considered as an important teaching strategy for inclusive physical education. When the opinions of the students regarding the sub-theme "What did it contribute to me?" were analyzed, the participants stated that they understood how the world looks through the eyes of an individual with visual impairment. Participants stated that they understood what individuals with visual impairment feel, how they behave and what they need. These findings show that the empathy training provided within the scope of the study improved the empathy tendencies of the participants. It is difficult for an individual with healthy eyes to understand how the world looks through the eyes of someone with visual impairment through books, articles, or medical explanations. These methods are generally insufficient to ensure that someone truly understands how the world looks through the eyes of a visually impaired person (Krösl et al., 2023). For this reason, it is stated that practices carried out in real environments will contribute more to the strengthening of empathy and the reduction of prejudices (Furrer et al., 2020; Agarwal & Agarwal, 2023). It is stated that conducting special studies including empathy training, especially for the formation of sensitivity in typically developing primary school students, can have positive results in the formation of awareness for individuals with special needs (Block et al., 2021). In this direction, it can be said that the dissemination of empathy training in general education institutions and its addition to physical education course content will have

positive effects. When the students' opinions on the main theme of "My Experiences", which emerged in line with the answers given by the participants to the question "What did you think while watching your other friends doing the activity?" after the application of the research, were examined, the participants stated that they understood how much support individuals with visual impairments needed. The participants stated that they empathized by putting themselves in their shoes while watching their friends and that they would approach those individuals differently from now on. It has been revealed by various studies that the understanding of students with visual impairments by their sighted friends will have positive effects on their quality of life and participation in active sports (Giese et al., 2021; Lievense et al., 2021). Considering the limited literature on the effect of inclusive physical education practices on the emotional interaction of healthy sighted people with individuals with visual impairments (Lieberman et al., 2019). After the implementation of the research, when the students' opinions regarding the sub-theme "What I felt at that moment," which is under the main theme "Beyond the Darkness," were examined in relation to the question "What do you think about the activity you did?", it was observed that the participants stated that the activity evoked different emotions in them. Students stated that they experienced anxiety, stress, fear, panic, and surprise during the activity; at the same time, they indicated that the activity excited them and affected them emotionally. Today, it is seen that empathy training is given importance in studies aimed at strengthening inclusive physical education practices. In the literature, it is stated that empathy-based practices for peers without disabilities are important in terms of strengthening peer support and supporting the development of positive attitudes towards individuals with special needs (Block et al., 2021). In this context, the findings obtained in this research suggest that the students reported emotional awareness regarding the experiences of visually impaired individuals after the activity. However, since these findings are not supported by a validated empathy scale, control group, or statistical pre-test-post-test analysis, they should not be interpreted as a direct increase in the students' empathy levels. The findings should be interpreted as students expressing that they developed awareness to understand the experiences of individuals with visual impairments, based on their post-activity reflections.

When examining student opinions regarding the sub-theme "I was affected," it was observed that participants stated they experienced the difficulties faced by individuals with visual impairments in performing movement skills. Students indicated that they noticed the limitations faced by individuals with visual impairments in daily living activities and movement skills, and that they were affected by this situation. The literature suggests that physical activity-based empathy practices conducted with non-visually impaired students can contribute to students' awareness processes in order to support positive attitudes towards individuals with visual impairments (Reina et al., 2011; Mesas et al., 2017). Reducing the difficulties experienced by individuals with visual impairments in interacting with their peers in inclusive physical education settings is considered important in terms of strengthening peer support and preventing bullying and social exclusion (Haegele & Zhu, 2017). Accordingly, movement-based empathy activities can be considered as supportive practices that can contribute to the development of awareness and sensitivity among students in inclusive physical education settings. When student opinions regarding the sub-theme "What did it add

to me?" were examined, it was observed that participants stated they gained awareness of how an individual with visual impairment might perceive the world. Students indicated that they better understood what individuals with visual impairments might feel, how they might behave, and what kind of support they might need. These findings show that after the activity carried out within the scope of the study, students reported an increase in their understanding and empathetic awareness regarding the emotions, behaviors, and needs of individuals with visual impairments. However, since a validated and reliable scale for measuring empathy levels was not used in the study, this should not be interpreted as an objective increase in empathy tendency or that the activity improved empathy. The findings should be evaluated based on students' subjective experiences and post-activity statements. It may be difficult for a sighted individual to fully understand how a person with visual impairment perceives the world solely through books, articles, or medical explanations. It is stated that such methods alone may be limited in understanding the experiences of individuals with visual impairments (Krösl et al., 2023). Therefore, it is stated that applications representing real life can contribute to individuals developing awareness and reducing prejudices (Furrer et al., 2020; Agarwal & Agarwal, 2023). It is particularly noted that incorporating empathy-based activities to support sensitivity towards individuals with special needs in typically developing primary school students can contribute to awareness formation (Block et al., 2021). Accordingly, it is thought that such movement-based empathy activities can be evaluated as activities supporting awareness, sensitivity, and peer understanding in general education institutions and physical education lesson content. After the implementation of the research, participants were asked, "What do you feel while watching your other friends do the activity?"9; (Metatla et al., 2020), it can be said that the research findings are quite important. Because students with visual impairments often avoid physical activities and games because they are exposed to behavioral difficulties and are not understood by their sighted friends (Haegele & Zhu, 2017; Manitsa & Doikou, 2022). In addition, in general education institutions, participation of individuals with visual impairments in integrated physical education activities without appropriate arrangements and sufficient support may cause different difficulties (Haegele, 2019). In this direction, it can be said that the research findings reveal the necessity of adding movement training practices in the empathy track to physical education course content in general education institutions.

As a result, it can be said that the results of this study, which aims to ensure that individuals with visual impairments are understood by sighted individuals through movement training in the empathy track, contribute positively to the development of strategies for inclusive physical education and to the understanding of individuals with visual impairments by primary school students.

When the results obtained in the study are considered; from the themes obtained, it is seen that primary school students generally have complex emotions and feelings despite being aware of the difficulties experienced by individuals with visual impairment. Participants stated that the active participation of individuals with visual impairment in physical education and sports activities may cause problems due to their functional disabilities, but if sufficient support is provided, it will contribute to their general health. The empathy course with

movement education content had a positive effect on the participants' development of empathy towards individuals with visual impairment.

Limitations and Recommendations

This research has some limitations. First, the study was conducted only with 4th-grade students attending a single primary school. Therefore, caution should be exercised in generalizing the findings to different school types, different socio-cultural environments, and different age groups. Second, the participants in the study consisted of students who voluntarily participated, thus employing a convenience/convenience sampling approach. This may limit the applicability of the findings to larger student groups. Another limitation of the study is the absence of a control or comparison group. Therefore, students' post-activity statements should not be interpreted as a direct and definitive effect of the intervention. Furthermore, students' post-activity responses may have been influenced by the novelty effect stemming from the new and different experience of the intervention, or by a tendency to give socially acceptable answers. Since no long-term follow-up measurement was conducted in the study, an assessment of the permanence of the awareness and understanding expressed by students after the activity could not be made.

In addition, the empathy course and movement-based activities used in the research aim to help students become aware of some of the difficulties that individuals with visual impairments may encounter. However, it should be considered that applications based on disability simulations may not fully represent the experiences of individuals with disabilities and may, in some cases, create a limited or incomplete perception of disability. Therefore, the findings should be evaluated within the context of students' post-activity reflections and awareness statements. Finally, there may be limitations in meaning due to translation during the reporting process and the translation of some conceptual expressions into English. This should be taken into account, especially in the interpretation of concepts such as empathy, awareness, inclusion, and special needs. In future research, more comprehensive data can be obtained by increasing the number of movement training sessions and the number of participants. Studies conducted in different schools, different age groups, and different socio-cultural environments can contribute to the transferability of the findings and their evaluation in broader contexts. Furthermore, it is recommended that future studies include control or comparison groups and support pre- and post-application evaluations with validated and reliable measurement tools.

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Statement of Ethics Committee

This research was conducted in accordance with the protocol decision numbered 70297, dated 09/11/2022, of the Muş Alparslan University Ethics Committee.

Statement of Conflict

Researchers do not have any personal or financial conflicts of interest with other people and institutions related to the research.

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No contribution and/or support was received during the writing process of this study.

Generative AI Use Statement

An artificial intelligence tool was not used for data analysis, interpretation of results, or creation of scientific content.

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