How would able-bodied children perceive a student with an intellectual disability in inclusive physical education?

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Introduction. The views of able-bodied children on the inclusion of a student with intellectual disabilities in physical education classes are one of the factors influencing the success of the physical education process. The social interactions of able-bodied pupils and pupils with disabilities are crucial in creating a positive classroom climate. Objectives. The aim of the study was to assess the attitudes of able-bodied children towards the inclusion of pupils with intellectual disabilities in physical education lessons and compare the differences between boys and girls. Methodes. The study involved 274 able-bodied pupils, 153 boys (mean age 12.34±1.19 years) and 121 girls (mean age 12.45±1.23 years). A modified Czech version of the CAIPE-R for the inclusion of a student with an intellectual disability was used (α=.797). Differences between boys and girls were assessed by the Mann-Whitney U-test. Differences between attitudinal dimensions were calculated using the Wilcoxon Signed Rank test. Results. Both genders of able-bodied children (boys, 2.91±.45 score; girls, 3.11±.40 score) assessed the inclusion of a student with an intellectual disability in physical education classes rather positively. Girls were more positive to include a student with an intellectual disability than boys, which was reflected in their overall (U=6984, p=.00, r=.22) and sport-specific attitudes (U=6335, p=.00, r=.28). Boys assessed general attitudes more positively than sport-specific attitudes (Z=-4.97, p=.00, r=.24). Conclusion. More information about the attitudes of intact classmates, teachers, and school management toward inclusion needs to be gathered through research monitoring.

Keywords: students with intellectual disability, able-bodied children, attitudes, inclusive education, inclusive physical education

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Introduction

The percentage of pupils with special educational needs (SEN) in primary schools in Slovakia is the fourth highest in Europe and has increased by more than a third in the last ten years. At the primary school level, it has almost one-fifth of pupils, and in some districts, one in three have some type of SEN. For example, in the 2018/2019 school year, the largest group among pupils with SEN were those with diagnosed intellectual disabilities, with a total of 27213 pupils in pre-primary, primary, and secondary education (CVTI SR, 2021). The increasing proportion of children with SEN may be related to the refinement of diagnosis and the demands placed on children. In Slovakia, half of the children with SEN attend mainstream classes with other children in inclusive education. Inclusive education is the joint education of pupils with special educational needs and their able-bodied peers, which Farrell (2000) equates with full, active participation in school life. He adds that pupils with SEN should be seen as equal members of the school community in inclusive education, with the best education available when looking at their individual, educational, and social development. Booth & Ainscow (2002) state that supporting pupils with SEN to function together with pupils without SEN is one of the main conditions for successful inclusion in education. In the context of inclusive education, research by Furrer et al. (2020) highlights the individual pupil variables which are important for the inclusion of pupils with SEN in able-bodied society. Variables such as school performance (Lindner & Schwab, 2020), behavioral characteristics (Freire et al., 2020), and pupils’ cognitive ability (Rosyadi, Baharun & Asiya, 2021; Ugalde et al., 2021) have a significant impact on the social inclusion of pupils with SEN. This view is also shared by Zdoupas & Laubenstein (2022), who consider the aforementioned variables to be crucial in the social inclusion of pupils in inclusive classrooms. Gender (Wahl et al., 2022), psychomotor dexterity (Ruiz-Pérez et al., 2018), and educators’ or teachers’ attitudes (Japundža-Milisavljević, Đurić-Zdravković & Milanović-Dobrota, 2022; Karić & Kordić, 2022; Manić & Marković, 2022) are essential in interactions and social acceptance. In addition, other authors claim that classroom climate (Gasser et al., 2017), classroom heterogeneity (Grütter, Meyer & Glenz, 2015), and class size (Dell’Anna et al., 2022) are important variables in the social inclusion of students with disabilities. Other studies interpret that SEN pupils included in inclusive classrooms are at risk of being excluded by their able-bodied peers (Garrote et al., 2017). Bakoč (2022) found that the most important predictors of the negative pupils’ attitudes towards inclusive education were the frequency of contact, disagreements, competitiveness, and grade. In Slovakia, these are children from socially excluded Roma localities, of whom almost one in five has a diagnosed intellectual disability.

Intellectual disability (ID) is a life-long condition. According to AAIDD (2023), ID is a disability characterized by significant limitations in both
intellectual functioning and adaptive behavior as expressed in conceptual, social, and practical skills. This disability originates in the developmental period, which is defined operationally as before the individual attains the age of 22 (Schalock, Luckasson & Tassé, 2021). People with ID are less intrinsically motivated to engage in regular physical activity than people without ID (Hansen, Nordén, & Ohlsson, 2023). This reduced intrinsic motivation stems from a number of barriers that are perceived by individuals with intellectual disabilities themselves, their families, caregivers/assistants, and can be systematized into personal, social, financial, and environmental factors (Jacinto et al., 2021). Among the personal factors, the authors most often include a preference for an inactive lifestyle, health problems, and characteristics of intellectual disability itself (Cartwright et al., 2017). Among social factors, the authors include lack of adapted spaces, lack of places to do physical activities, lack of adapted physical activities, lack of adapted physical activity specialists, lack of adapted physical activity programs, lack of inclusive programs, lack of information about appropriate and inclusive physical activities, social exclusion, stigma, and misunderstanding of intellectual disability (McGarty, Westrop & Melville, 2021). Financially limiting factors include lack of support and limited economic resources. Family factors that limit participation in physical activities for people with ID include parental concerns, lack of parental time to engage in physical activities with children with ID, acceptance of children’s inactive lifestyles, and communication problems between family members and caregivers (Alesi, 2017). Environmental barriers include adverse weather conditions and difficulty in transporting individuals with ID to the sports venue (Salomon et al., 2019). All this results in negative consequences for their health, well-being, the life around them, and academic performance (Behzadnia, Rezaei & Salehi, 2022; Luiselli, 2017). In some children with ID, movements may be slow and uncoordinated, while others express impulsive movements (Lavay, 2016), which may prevent the acquisition of simple activities of daily living, especially in the area of self-care. There are also children with ID who express a greater motor potential than children without disabilities, so they successfully play sports. The degree, level, and extent of motor expression depends on the site of the brain lesion. If a child’s motor development is neglected, this is particularly evident in fine motor skills, where the child is unable to perform precise and delicate small-scale movements. This also slows down the development of correct motor stereotypes (Erofeeva et al., 2019). Inclusive education, including inclusive physical education, for children with ID plays the most important role in the acquisition of academic skills, the development of adaptive skills, daily living skills, socialization (Buckley et al., 2006), and in maximizing the independence of persons with ID in community living (Kozma et al. 2009; Matson, Matson & Rivet, 2007). However, several studies point to the negatives of inclusive education for pupils with ID. According to Bredahl (2013), children with the
least visible disabilities, including children with ID, suffered from negative experiences in inclusive education, as well as in inclusive physical education. Such negative experiences lead children with disabilities to avoid contact with peers and to disrupt interactions with able-bodied peers. Some able-bodied children feel uncomfortable in the presence of a classmate with a disability, thus adopting a negative attitude towards such a classmate. Able-bodied children show negative attitudes by avoiding eye contact, and their body language sends negative signals toward a classmate with a disability (Armstrong et al., 2016; Wilson & Scior, 2014).

As mentioned above, inclusive education affects physical education (PE) equally, which is inherently different from other subjects. It represents a break from the normal and often demanding school curriculum and provides an opportunity for informal social interaction (Røset et al., 2020). It also greatly strengthens the social bonds of pupils in the classroom through physical games and other physical activities. It has a very high potential to promote social inclusion and faces new challenges in the context of inclusive education (Lieberman & Block, 2016). Hardy and Woodcock (2015) claim that inclusive physical education (IPE) strengthens social development and helps children develop respect for others. An inclusive, structured, and supportive environment is critical for physical activity engagement in children with ID (Pan et al., 2015). On the one hand, openness and agreeableness are positive in inclusive education; on the other hand, they are weakly correlated with attitudes toward pupils with ID (Page & Islam, 2015). There is scientific evidence that deficits in social skills and low conceptual abilities can prevent pupils with ID from developing positive relationships with peers (Schoop-Kasteler & Müller, 2020). As mentioned earlier in the text, pupils’ attitudes towards pupils with SEN can significantly affect the success of IPE. In IPE, the social interactions of able-bodied pupils towards pupils with SEN increase empathy towards these pupils and reduce overall fears of disabled people. IPE offers able-bodied pupils the opportunity to broaden their knowledge about disability and thus reduces prejudice against them (Pettigrew & Tropp, 2006). Negative attitudes of able-bodied children cause avoidance of contact with peers with disabilities and significantly disrupt social bonds in classroom groups (Szumski, Smogorzewska & Grygiel, 2020). Research on attitudes toward the inclusion of children with ID in mainstream PE is scarce.

In the present research, focus is on assessing the attitudes of able-bodied children toward the inclusion of students with intellectual disabilities in physical education lessons. Comparation of the attitudes in terms of gender has been done.
Method

Study participants

The study involved 274 able-bodied children in grades 6 to 9 in three primary schools in Slovakia. Of the total number of participants, 153 boys (mean age 12.34±1.19 years) and 121 girls (mean age 12.45±1.23 years) from primary schools in Bratislava, Ožďany and Nové Zámky took part in the research. Pupils were informed in advance about the aims of the research and its purpose. They were also given instructions on how to fill in the questionnaire, especially its introduction, which included a detailed description of the student with ID, because they had to imagine that they had such a pupil in their PE class before they started filling in the questionnaire. They completed the questionnaires in the presence of the researcher and the class teacher. The pupils’ legal guardians agreed to their children’s participation in the research by signing an informed consent form. The research was carried out within the framework of a national grant project.

Instrument and organization

The research relied on the wording of the questions of the attitudinal questionnaire CAIPE-R (Children’s Attitude toward Inclusive Physical Education-Revised) compiled by Block (1995). The CAIPE-R questionnaire is applicable to more than one disability. The CAIPE-R is a valid and reliable instrument for assessing able-bodied children’s attitudes toward the inclusion of children with disabilities in physical education classes. The Czech version of the CAIPE-R (Kudláček, Ješina, & Wittmannová, 2011) has been translated into Slovak and adapted for students with intellectual disabilities (Olexová, & Luptáková, 2022). In addition to statements aimed at ascertaining attitudes towards inclusion, the questionnaire included a detailed description of the student with ID. A detailed description of a boy with ID named Boris was used for the present study as follows: “Now I’ll introduce you to Boris, a boy who could go to physical education classes with you. Boris has a reduced level of intelligence (IQ between 50-70). He is friendly and likes to play the same games as you, but he is not very good at them. His level of physical fitness is lower compared to you and his other classmates. He is slower than you and gets tired faster. Sometimes, he needs individual attention or the help of an assistant to repeat the instructions for an exercise or the rules of a particular sport several times. He can throw, catch, and kick a ball, but not as well as you. Sometimes, he also needs someone to guide him through a movement, so he understands how to perform it correctly. In sports games, he needs to be instructed continuously to successfully meet the objective of the game, so that he doesn’t make a mistake and score his own goal, for example”. The questionnaire contained 11 statements (STMS) focusing on the inclusion of Boris in physical education lessons. The wording of the statements is shown in Table 1. Six STMS were aimed at the general attitudes toward the inclusion of pupils with ID in
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the physical education class (Table 2), and five STMS at the sport-specific attitudes aimed at adjustments in team sports (soccer) that allow for easier inclusion of pupils with ID (Table 3). Able-bodied students were given the opportunity to respond to each statement (STM) on a four-point scale, where 1 meant “disagree,” 2 “rather disagree”, 3 “rather agree”, and 4 “agree”. We summed 6 STMS to evaluate the total score of general attitudes towards inclusion and 5 STMS to evaluate sport-specific attitudes towards inclusion. These totals referred as total scores. To evaluate the total score of able-bodied students’ attitudes, the sum of all 11 STMS was applied and labeled it as the overall attitude score.

Statistical analysis

The data from the questionnaires were uploaded into an Excel matrix and entered into IBM SPSS version 23.0. Mathematically, the data by mean (X) and standard deviation (±SD) were processed. The reliability of the modified questionnaire was calculated by Cronbach’s alpha. The Shapiro-Wilk test was used to determine the normality of the data distribution, which showed a significant deviation from normality \[ W(274)=0.976, \ p=0.000 \]. Therefore, u non-parametric tests were used to further process the data statistically. The Mann-Whitney U-test for two independent samples was used to assess differences in attitudes between boys and girls. The Wilcoxon Signed Rank test for two related samples was used to assess the differences between general attitudes and sport-specific attitudes in the groups of boys and girls. The coefficient r was used to determine the degree of dependence (effect size) between the two samples (Pett, 2016). The significance level of differences was set at \( \alpha \leq 0.05 \) (*) and \( \alpha \leq 0.01 \) (**).

Results

The internal consistency measure (Cronbach’s \( \alpha \)) of the modified CAIPE-R questionnaire administered by author of the paper and other researchers in this project, and modified for the inclusion of students with ID, showed a value of 0.797 (Table 1), indicating an acceptable correlation (George & Mallery, 2003).

The results revealed that in terms of general attitudes, both boys and girls consistently expressed the most positive attitudes in statement 6 and the most negative attitudes in statement 2. Both boys and girls would help a student with ID to practice and play games in IPE class, but on the other hand, they are aware that he/she would slow down the progress of sports games for other students. Significant differences between genders were revealed in STMS 4 and 6. Results show that girls show a higher level of agreement compared to boys, that PE would be fun if a student with ID was in PE class with them (U=8079, \( p=0.050, \ r=0.11 \)), and they would like to help a student with ID practice and play the games in IPE (U=7857, \( p=0.02, \ r=0.14 \)). No significant differences were found in the overall scores of general attitudes towards inclusion of students with ID between able-bodied boys and girls (Table 2).
### Table 1

**Internal consistency of the modified questionnaire**

<table>
<thead>
<tr>
<th>STMS</th>
<th>Internal consistency (n=274)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean score ±SD</td>
<td>Item-total correlation</td>
</tr>
<tr>
<td>1. It would be OK to have Boris come to my PE class.</td>
<td>3.26±0.68</td>
<td>0.420</td>
</tr>
<tr>
<td>2. Although Boris cannot play sports very well, he would not slow down the game for everyone.</td>
<td>2.64±0.90</td>
<td>0.153</td>
</tr>
<tr>
<td>3. If we were playing a team sport such as soccer, it would be OK to have Boris on my team.</td>
<td>2.72±0.86</td>
<td>0.438</td>
</tr>
<tr>
<td>4. PE would be fun if Boris was in my class.</td>
<td>3.12±0.79</td>
<td>0.436</td>
</tr>
<tr>
<td>5. If Boris were in my PE class, I would talk to him and be his friend.</td>
<td>3.31±0.79</td>
<td>0.543</td>
</tr>
<tr>
<td>6. If Boris were in my PE class, I would like to help him practice and play the games.</td>
<td>3.39±0.75</td>
<td>0.578</td>
</tr>
<tr>
<td>7. In soccer, passes that are directed at Boris must not be blocked.</td>
<td>2.75±1.01</td>
<td>0.426</td>
</tr>
<tr>
<td>8. If Boris shot on goal, the goalie wouldn’t defend.</td>
<td>2.57±1.08</td>
<td>0.308</td>
</tr>
<tr>
<td>9. Boris could stay in the area in front of the goal longer than the rules allow.</td>
<td>3.21±0.82</td>
<td>0.298</td>
</tr>
<tr>
<td>10. In soccer, it would be good if nobody could steal the ball from Boris while passing.</td>
<td>2.40±1.00</td>
<td>0.404</td>
</tr>
<tr>
<td>11. If Boris got the ball during the game, I would loudly encourage him to score, as he’s a player on my team.</td>
<td>3.58±0.69</td>
<td>0.425</td>
</tr>
<tr>
<td><strong>Total score</strong></td>
<td><strong>2.99±0.44</strong></td>
<td><strong>0.797</strong></td>
</tr>
</tbody>
</table>

STMS – Statements; SD – Standard deviation; PE – Physical education

### Table 2

**General attitudes differences**

<table>
<thead>
<tr>
<th>STM No.</th>
<th>Boys (n=153)</th>
<th>Girls (n=121)</th>
<th>Mann-Whitney U-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(\bar{x})±SD</td>
<td>(\bar{x})±SD</td>
<td>U</td>
</tr>
<tr>
<td>STM1</td>
<td>3.19±0.68</td>
<td>3.32±0.68</td>
<td>8292</td>
</tr>
<tr>
<td>STM2</td>
<td>2.65±0.86</td>
<td>2.62±0.94</td>
<td>9083</td>
</tr>
<tr>
<td>STM3</td>
<td>2.72±0.89</td>
<td>2.70±0.83</td>
<td>9011</td>
</tr>
<tr>
<td>STM4</td>
<td>3.04±0.78</td>
<td>3.21±0.78</td>
<td>8079*</td>
</tr>
<tr>
<td>STM5</td>
<td>3.22±0.82</td>
<td>3.40±0.74</td>
<td>8145</td>
</tr>
<tr>
<td>STM6</td>
<td>3.30±0.78</td>
<td>3.51±0.69</td>
<td>7857*</td>
</tr>
<tr>
<td><strong>The general attitude total score</strong></td>
<td><strong>3.02±0.50</strong></td>
<td><strong>3.13±0.49</strong></td>
<td><strong>8038</strong></td>
</tr>
</tbody>
</table>

STM – Statement; No. – Number; \(\bar{x}\) – Mean; SD – Standard deviation; U and p – Mann-Whitney U-test statistics calculation; * p<.05

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In terms of sport-specific attitudes, the results further revealed that both boys and girls consistently expressed the most positive attitudes in statement no. 11 and the most negative attitudes in statement no. 10. Both boys and girls would loudly encourage a student with ID in IPE to score, as he/she is a player on their team, but on the other hand, they were the least identified with the rule of not stealing the ball from a student with ID while passing. Significant differences in sport-specific attitudes towards IPE between boys and girls were revealed in STMS 7 and 8, where again in both STMS, girls significantly more agreed that in a sports game, passes must not be blocked (U=6335, p=0.00, r=0.29) and if a student with ID shot on goal, the goalie wouldn’t defend (U=5881, p=0.00, r=0.32). In the total score for sport-specific attitude (U=6335, p=0.00, r=0.28), we found significant differences between genders (Table 3). Thus, we can conclude that girls are more positively inclined to modify the rules of sports games for a student with ID in IPE.

Table 3

<table>
<thead>
<tr>
<th>Sport-specific attitudes differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>STM No.</td>
</tr>
<tr>
<td>-------------------------------------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>STM7</td>
</tr>
<tr>
<td>STM8</td>
</tr>
<tr>
<td>STM9</td>
</tr>
<tr>
<td>STM10</td>
</tr>
<tr>
<td>STM11</td>
</tr>
<tr>
<td>The sport-specific attitude total score</td>
</tr>
</tbody>
</table>

STM – Statement; No. – Number; x̅ – Mean; SD – Standard deviation; U and p – Mann-Whitney U-test statistics calculation; * p<.05; ** p<.01

Summarising the data, both boys and girls had rather positive general (boys 3.02±0.50 points; girls 3.13±0.49 points) as well as sport-specific (boys 2.76±0.56 points; girls 3.07±0.52 points) attitudes presented by the mean scores. However, girls demonstrated significantly higher positive sport-specific attitude (U=6355, p=0.000, r=0.27) towards IPE (Table 3) as well as an overall attitude (U=6984, p=0.000, r=0.22) compared to boys (Figure 1).
**Figure 1**

*Differences in overall attitude towards IPE between genders*

<table>
<thead>
<tr>
<th>Mean Score</th>
<th>Boys</th>
<th>Girls</th>
<th>U</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.91</td>
<td>3.11</td>
<td>6984</td>
<td>0.000**</td>
<td></td>
</tr>
</tbody>
</table>

STMS – Statements; U and p – Mann-Whitney U-test statistics calculation; ** p<.01

**Figure 2**

*General and sport-specific attitudes differences within boys’ and girls’ groups*

<table>
<thead>
<tr>
<th>Mean Score</th>
<th>General Attitude</th>
<th>Sport-Specific Attitude</th>
<th>Z</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td>3.02</td>
<td>2.76</td>
<td>-4.966</td>
<td>0.000**</td>
</tr>
<tr>
<td>Girls</td>
<td>3.13</td>
<td>3.07</td>
<td>-0.685</td>
<td>0.493</td>
</tr>
</tbody>
</table>

Z and p – Wilcoxon Signed Rank test statistics calculation; ** p<.01
Significantly more positive general attitudes compared to sport-specific attitudes were revealed in the boys’ group. (Figure 2). It can conclude that boys declare a higher positive general attitude than sport-specific attitude ($Z=-4.97$, $p=0.00$, $r=0.24$) in inclusive PE classes. On the other hand, girls do not perceive differences between general and sport-specific attitudes when it comes to accepting a student with ID in PE class together with other classmates.

**Discussion**

The present research aimed to assess the attitudes of able-bodied children towards the inclusion of students with intellectual disabilities in physical education lessons and compare the differences between boys and girls. The results show that both genders of able-bodied children would help a student with ID to practice and play games in IPE class. Through physical activities that are part of inclusive PE, pupils with disabilities are facilitated to legitimize their social identity. The inclusive PE environment is an appropriate vehicle for the continuous strengthening of social networks with their able-bodied peers (Taub & Greer, 2000). Research examining the inclusion of a blind student in PE classes revealed that these pupils show the most positive general attitudes in social relations by claiming that they would talk to a pupil with visual impairment and be her/his friend (Olekšák, Nemček & Ruman, 2022). Rather negative attitudes towards the inclusion of a student with ID were shown by able-bodied children by declaring that she/he would slow down the progress of sports games for other pupils. Delayed motor development is one of the typical symptoms in children with ID (Siegel et al., 2020). These groups of pupils usually show deficits in motor skills even in adulthood, which, in the worst case, can result in complete immobility and severe motor limitations (profound and severe ID). Pupils with mild ID, as was our pupil Boris in the questionnaire, show only a slight delay in motor skills, mainly in childhood or not at all (Bhat, 2023). This slight delay occurs in locomotion, balance, agility, and the performance of common practical activities, like activities of daily living, playing games, and work (Slováková et al., 2022; Zikl et al., 2013), which our able-bodied children were also fully aware of. Similarly, a student with a visual impairment would not want to have her/his able-bodied classmates on his team when playing a sports game (Olekšák, Nemček & Ruman, 2022).

According to the present study, both genders of able-bodied children would loudly encourage a student with ID in IPE to score, as he/she is a soccer player on their team. Phytanza et al. (2018) highlight inclusive/unified soccer as an ideal sports game for the development of practical activities, like activities of daily living in children with ID, which was also supported by the able-bodied children in our research. They claim that a life skill formation program for children with ID needs to be given in the form of a team game, like a unified
sports soccer program, and implemented into mainstream PE classes. Through such programs, children with ID get to know themselves and increase their self-confidence, which helps them to achieve their goals. At the same time, they form a trusting relationship with their able-bodied partners, which turns into a friendship over time. Therefore, unified sports in children with ID have a very positive impact on their behavior, the formation of friendships and social contacts and, last but not least, they increase their motor development (Alruwaih, 2015; Bota, Teodorescu and Şerbănoiu, 2014). The authors further recommend that unified cooperatives of able-bodied pupils and pupils with ID should be implemented in inclusive physical education classes in the 21st century (Phytanza et al., 2018).

In IPE, some rules require adjustments when including a pupil with ID. Block (2007) suggests several ways of modifying the rules of sports games within inclusive PE. In his publication, the author offers many improvements for the inclusion of students with different disabilities in mainstream PE lessons. He states that many factors of the game can be modified, such as the number of players, the dimensions of the field, the way able-bodied pupils move around the field, the use of inclusive equipment and tools and other sports equipment, the positions of the players, or the slight disadvantage of able-bodied pupils. He concludes by stating that any modification to the rules depends on the particular pupil with a disability that we include in PE lessons. Some sport-specific adaptations are agreed with by the able-bodied pupils in the present study, but some are not. Able-bodied children in present research were the least identified with the rule of not stealing the ball from a pupil with ID while passing, and in the same way, this rule met with significant dissatisfaction among able-bodied children when including a pupil with a visual impairment (Olekšák, Nemček & Ruman, 2022), or a pupil in a wheelchair (Mészárosová & Nemček, 2022). Several modifications to the rules were met with more positive attitudes towards IPE among girls than boys, who were more likely to agree that in a sports game, passes that are directed at a pupil with ID must not be blocked, and if a pupil with ID shot on goal, the goalie wouldn’t defend. Although able-bodied girls in this research agreed that PE would be fun if a pupil with ID was in PE class with them, and they would like to help a pupil with ID practice and play the games in IPE, state school pupils in the research of Skovajsové, Nemček and Bumbera (2022) were significantly more likely to agree that including a pupil with ID in IPE would mean more work for the teacher compared to including a pupil with a sensory impairment or physical disability.

The present research has revealed another important finding. Girls are more positively inclined than boys to modify the rules of sports games for a pupil with an ID in IPE. Similarly, this was evident in Nemček’s (2022) research, which investigated the attitudes towards the inclusion of pupils with visual impairment in general PE lessons. The results of this research declared more
positive general and sport-specific attitudes by a group of able-bodied girls compared to boys. The boys in the aforementioned research took only neutral or indifferent attitudes toward the inclusion of students with visual impairment in mainstream PE. The obtained results correspond with the results of several other studies (McKay, Park & Block, 2021; Rojo-Ramos et al., 2022), but there is a lack of gender-focused research that shows attitudes toward the inclusion of pupils with ID, focusing specifically on PE classes (Nemček & Wittmannová, 2021). The need for research focusing on children with ID in inclusive education has also been expressed by Laat, Freriksen, and Vervloed (2013), who argue that there is a need for more information about children with ID than about deaf or blind children because the attitudes of their classmates are less positive than attitudes towards students with hearing or visual impairments. Results of the present study further revealed more positive general attitudes than sport-specific attitudes in able-bodied boys, while girls do not perceive differences between general and sport-specific attitudes when it comes to accepting a student with ID in PE class with other classmates. In the study of Wang and Qi (2020), Chinese students showed unfavorable general and sport-specific attitudes toward inclusive PE. This research showed positive associations between female gender and pupils with disabilities. These variables were positively correlated with general attitudes toward inclusive PE. The variable competitiveness was negatively correlated with general attitudes toward inclusive PE. The authors of the research also found that inclusive cooperative environments play a significantly important role in the PE process. In particular, they highlighted the attributes of positive social interaction between able-bodied students and students with disabilities (Wang & Qi, 2020).

However, this study has potential limitations. It does not present the results of able-bodied children who have had personal experience with a student with ID in inclusive PE. The research is based only on the attitudes of able-bodied children, but not those who have personally experienced a student with ID in inclusive PE. If the attitudes of children with experience were assessed, the research would take on a high scientific significance. This is because some studies have revealed that the attitudes of children with direct experience with a pupil with a disability in inclusive PE are different from those of children who have not had such an experience. Olekšák, Nemček, and Ruman (2022) found that able-bodied pupils without previous experience with a person with visual impairment showed a higher positive attitude towards the inclusion of a pupil with visual impairment in PE classes than pupils who had previous experience with a blind person. This positive attitude was shown in the reciprocal cooperation, willingness to assist him/her, socialization, and modification of sports game rules. Another study revealed the opposite findings. Pupils who had previous experience participating in physical and sports activities together with children with disabilities showed more favorable attitudes toward these children.
(Reina et al., 2019). Skovajsová et al. (2022) found that able-bodied pupils who had in-school experience with a pupil with a physical disability, compared to pupils without in-school experience, showed more positive attitudes toward the acquisition of motor skills by a pupil in a wheelchair. The authors declare that pupils with experience of having a pupil with a physical disability in IPE are significantly more likely to believe that he/she will be able to acquire motor skills much faster. Research suggests that it depends on the type of disability of the pupil involved in the IPE classes.

Another limitation of the present study may be the characteristics of the pupil with ID conveyed in the questionnaire, as it appears that he may not be described in the best way (e.g., where his IQ is mentioned - pupils may not be sufficiently informed about this). It may be a problem that the description of a pupil with ID mainly highlights his/her difficulties and problems, but does not sufficiently emphasize that a pupil with ID has strengths, assets, and talents despite his/her difficulties and that he/she enjoys socializing with non-ID peers, participating in shared activities, etc., like everyone else. This is evidenced by Bath (2023), who highlights that pupils with mild ID show only slight delay in motor skills, mainly in childhood or none at all. Therefore, this needs to be modified in future research focusing on the attitudes towards inclusion of pupils with ID, as such a generalized description of pupils with ID, among whom there are large individual differences, could influence the attitudes of able-bodied peers.

**Conclusion**

The present research has shown that able-bodied primary school children, both boys and girls, perceive the inclusion of a student with an intellectual disability in PE classes rather positively. They show the most positive attitude toward IPE in cooperation, helpfulness, and encouragement to achieve sporting success. They perceive the slowing down of the sports game and the disallowance of the rule of stealing the ball while passing more negatively. Girls are more likely than boys to perceive the inclusion of a student with ID in PE classes as fun and would be more supportive of this student in the realization of different kinds of physical activities. Also, they accept adapting the rules of sports games for a student with an intellectual disability more positively than boys. Generally, girls were more positive about the inclusion of a student with an intellectual disability than boys, which was reflected in their overall attitude and sport-specific attitude toward IPE. For boys, more positive general attitudes prevailed over sport-specific attitudes toward the inclusion of a student with ID in PE classes. For girls, general attitudes and sport-specific attitudes toward IPE were the same. In order for the inclusion of a student with ID in PE to be successful, more information about the attitudes towards inclusion of intact
classmates, teachers, and school management needs to be gathered through research monitoring. The class teacher, who creates a positive classroom climate, and the PE teacher, who should create a positive climate in inclusive PE lessons, play the biggest role in the successful inclusion of students with ID.

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Kako bi deca bez ometenosti doživljavala učenika sa intelektualnim smetnjama u inkluzivnom fizičkom vaspitanju?

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Uvod: Stavovi dece bez ometenosti o uključivanju učenika sa intelektualnim smetnjama u nastavu fizičkog vaspitanja jedan su od faktora koji utiču na uspešnost procesa fizičkog vaspitanja. Društvene interakcije ovih učenika i učenika sa smetnjama u razvoju su ključne za stvaranje pozitivne klime u učionici. Cilj: Cilj istraživanja bio je da se procene stavovi dece bez ometenosti prema uključivanju učenika sa intelektualnim teškoćama u nastavu fizičkog vaspitanja i uporede razlike između dečaka i devojčica. Metod: U istraživanju su učestvovala 274 učenika bez ometenosti, 153 dečaka (srednja starost 12,34±1,19 godina) i 121 devojčice (srednja starost 12,45±1,23 godine). Korišćena je modifikovana češka verzija CAIPE-R za uključivanje učenika sa intelektualnim invaliditetom (α=.797). Razlike između dečaka i devojčica procenjene su Mann-Whitney U-test. Razlike između dimenzija stava izračunate su Wilcoxon Signed Rank testom. Rezultati: Uključivanje učenika sa intelektualnim teškoćama u nastavu fizičkog vaspitanja prilično pozitivno ocenjuje oba pola dece bez ometenosti (dečaci 2,91±,45 poena; devojčice 3,11±,40 poena). Devojčice su bile pozitivnije prema uključivanju učenika sa intelektualnim teškoćama nego dečaci, što se odrazilo na njihov ukupni (U=6984, p=.00, r=.22) i stav prema
sportu (U=6335, p=.00), (r=.28). Dečaci su pozitivnije ocenjivali opšte stavove, nego stavove specifične za sport (Z=-4.97, p=.00, r=.24). **Zaključak:** Neophodno je da buduća istraživanja prikupe više informacija o stavovima dece bez ometenosti, nastavnika, kao i rukovodstva škole prema inkluziji, kroz longitudinalna istraživanja.

**Ključne reči:** učenici sa intelektualnim smetnjama, deca bez ometenosti, stavovi, inkluzivno obrazovanje, inkluzivno fizičko vaspitanje.

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