

# **Will students with and without disorders experience discrimination in inclusive physical and sports education lessons? Teachers' perspective**

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## **Abstract:**

The research aimed to find out and compare the physical education (PE) teachers' attitudes, whether students with disorders and students without disorders will experience discrimination in inclusive physical and sports education (PSE) classes. The study involved 152 primary school PE teachers with a mean age of  $40.86 \pm 9.97$  years. A modified version of the standardized research instrument ATIPDPE-R was used to collect the research data. We found that PE teachers do not agree that students with autism spectrum disorders (ASD) (70.6 %) and attention deficit hyperactivity disorders (ADHD) (79.0 %) will experience discrimination in PSE lessons. PE teachers also stated that students with ADHD will experience less discrimination in PSE classes than students with ASD ( $Z=2.603$ ,  $p=0.009^{**}$ ). PE teachers further declared a disapproving attitude to the discrimination of students without disorders if students with ASD (67.5 %) and ADHD (73.0 %) will be included in the PSE lessons. Despite PE teachers' rejection of discrimination against students without disorders in PSE lessons they declared a lower level of discrimination in the inclusion of a student with ADHD compared to a student with ASD ( $Z=2.644$ ,  $p=0.008^{**}$ ).

*Keywords: Inclusion, physical and sports education, physical education teachers, students with autism spectrum disorders, students with attention deficit hyperactivity disorder, attitudes.*

Inclusion is the educational philosophy of educating individuals with health disorders together with peers without health disorders while providing the support needed for all students to be successful (Gale & Hodge, 2017; Lieberman, Houston-Wilson & Grenier, 2024). The purpose of inclusion is to provide services that ensure that all students, regardless of their ability, can achieve their full potential in appropriate educational settings (O'Brien, Kudláček, & Howe, 2009; Florian, Black-Hawkins & Rouse, 2016). Inclusive education, not excluding physical and sports education, takes the responsibility away from the individual student for adapting his/her learning style and calls for educators to provide content in ways that encourage diverse learning and promote the abilities of all students (Carter & Darling-Hammond, 2016). It has been found, that an appropriately implemented inclusive physical and sports education (PSE) positively affects the social skills, attitudes, and awareness toward individuals with

disorders and leadership of students with and without disorders (Grenier, Miller & Black, 2017). Research suggests that teachers' attitudes become crucial in inclusive PSE classes, significantly influencing classroom climate (Hutzler et al., 2019; Braksiek, 2022). Positive attitudes of physical education (PE) teachers may be the most critical factor in ensuring meaningful learning experiences for students with disorders in inclusive PSE and negative attitudes may lead PE teachers to neglect accommodations for students with disorders, which may lead to negative experiences (Haegele & Sutherland, 2015).

The curriculum clearly states that education should be inclusive for all learners without distinction and therefore learners of all abilities should receive the same level of physical and sports education from specialized teachers (Lieberman & Houston-Wilson, 2009), which is also enshrined in the Disability Discrimination Act document (Bell & Heitmueller, 2009). This document makes any form of discrimination based on disability unlawful and aims to promote the recognition and acceptance of disability, equal opportunities, and access to premises and facilities for all persons with a disability. According to Tanure Alves et al. (2024), discrimination in PSE classes happens for two main reasons, the PSE curriculum is mainly based on competitive sports practices raising questions about its meaning to students with disabilities or disorders, and PE teachers do not change the traditional curriculum for the best learning opportunities to children with disabilities or disorders.

### **Objective**

The research aimed to find out and compare the PE teachers' attitudes, whether students with disorders and students without disorders will experience discrimination in inclusive physical and sports education classes.

### **Methods**

The study involved 152 PE teachers with a mean age of  $40.86 \pm 9.97$  years, teaching students at the upper secondary level of education (grades 6-9 of primary school). 74 males and 78 females with an average PSE teaching experience of  $13.08 \pm 9.90$  years participated in the study.

A modified version of the standardized research instrument ATIPDPE-R (Attitude Toward Teaching Individuals with Physical Disabilities in Physical Education-Revised) originally developed by Kudláček et al. (2002) was used to collect the research data. The questionnaire, which is designed to investigate PE teachers' attitudes towards the inclusion of students with physical disabilities, was later translated into Czech by the authors Kudláček,

Blanková & Filipčič (2007), a later version of which we adopted (Kudláček, 2007), and this one was translated into Slovak by two independent translators. Since the two languages are very similar, translation was not difficult. We then modified the questionnaire for the inclusion of students with autism spectrum disorders (ASD) and attention deficit hyperactivity disorder (ADHD) and validated it in practice. The revised version of the research instrument identifies three main components: (1) positive outcomes for students, (2) negative outcomes for teachers, and (3) negative outcomes for students (Martin & Kudláček, 2010; Di Nardo et al., 2014). For our research observation in this paper, we elaborated two following statements falling under the component of negative outcomes for students (Cyran et al., 2017): (1) Students with ASD/ADHD will experience discrimination in my PSE classes; (2) Students without disorders will experience discrimination in my PSE lessons when a student with ASD/ADHD will be included. PE teachers rated negative outcomes for students on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). By disagreeable attitude, we summarised responses on scales 1-3, by the agreeable attitude we summarised responses on scales 5-7, and by the indifferent attitude we meant response 4 on the Likert scale. The lower the mean score of the teachers' responses, the more positive the result was for the student.

We uploaded the obtained data into a Microsoft Excel matrix and the matrix was subsequently uploaded into the statistical program SPSS version 27, where the data were subjected to mathematical and statistical processing. For the mathematical evaluation of the data obtained, we used the percentage of responses (%), the calculated mean score of the teachers' responses, and the standard deviation ( $\pm$ SD) for the two statements expressing the experience of discrimination of students with and without disorders in inclusive PSE lessons. Non-parametric Chi-square test determined the significance of differences between teachers' responses about students' experiences of discrimination in inclusive PSE classes (agreeable, indifferent, and disagreeable attitudes). To determine the significance of differences in students' experiences of discrimination in terms of type of disorder (ASD versus ADHD), we used the nonparametric Wilcoxon Signed Rank test for two related samples. We set the significance of differences at the 5% ( $p \leq 0.05$ ) level of statistical significance. We also conducted a reliability calculation of the applied research instrument ATIPDPE-R for the component of negative results for students (4 statements in total) by Cronbach's alpha ( $\alpha = 0.838$ ), which demonstrated good internal consistency of the modified research instrument (George, & Mallery, 2019). We present the research results in pie and bar charts.

### Results

By analysing the attitudes towards the discrimination of students with disorders (ASD/ADHD) in inclusive PSE classes, we found a disagreeable opinion among PE teachers. As many as 70.6% of teachers disagreed with the statement that a student with ASD will experience discrimination in inclusive PSE classes (Figure 1). In the case of a student with ADHD, it was up to 79 % of teachers did not agree that this student would experience discrimination in inclusive PSE classes (Figure 2). Only 12.7% of PE teachers declared their agreement to the discrimination of a student with ASD in inclusive PSE lessons, and only 8% of PE teachers agreed to the discrimination of a student with ADHD. 16.7% of a student with ASD and 13% of a student with ADHD could not determine a clear opinion on the discrimination of students with disabilities. The differences between the teachers' agreeing and disagreeing answers were highly significant in the case of the inclusion of a student with ASD (Chi=83.43, p=0.00\*\*) and the inclusion of a student with ADHD (Chi=101.66, p=0.00\*\*) in favor of disagreeing attitudes towards the discrimination of these students in inclusive PSE lessons (Figures 1, 2).

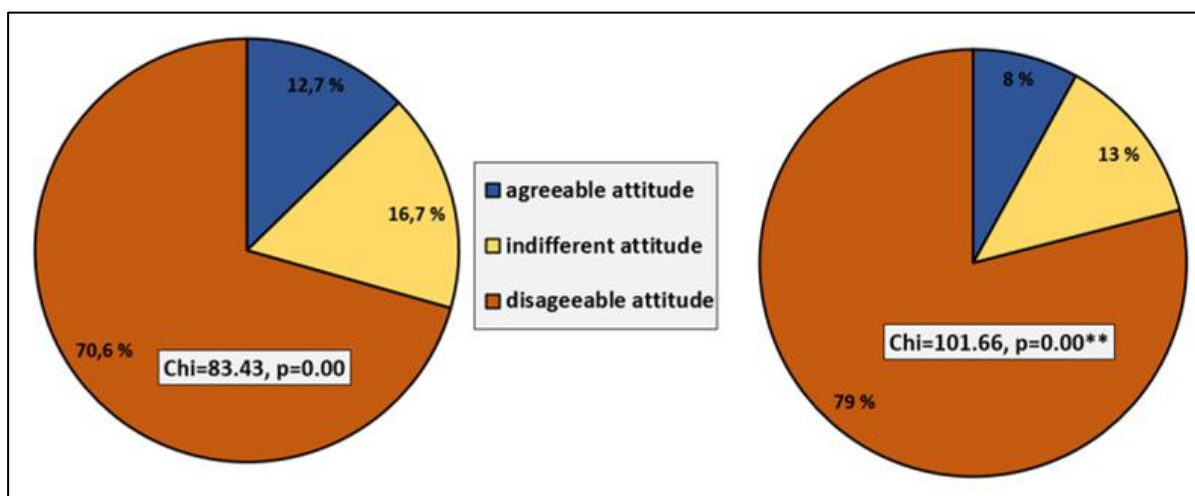


Figure 1 Student with ASD

will be discriminated in my PSE lessons

Figure 2 Student with ADHD

Also, from the next figure, we can observe that the mean value of the PE teachers' responses was less than 3 points, which means that from the teachers' point of view, neither the student with ASD nor the student with ADHD will be discriminated in the inclusive PSE lessons (Figure 3). However, by comparing the differences in PE teachers' attitudes, we found that these were significant, in favour of less discrimination of the student with ADHD versus the student with ASD (Z=2.603, p=0.009\*\*) in inclusive PSE lessons (Figure 3).

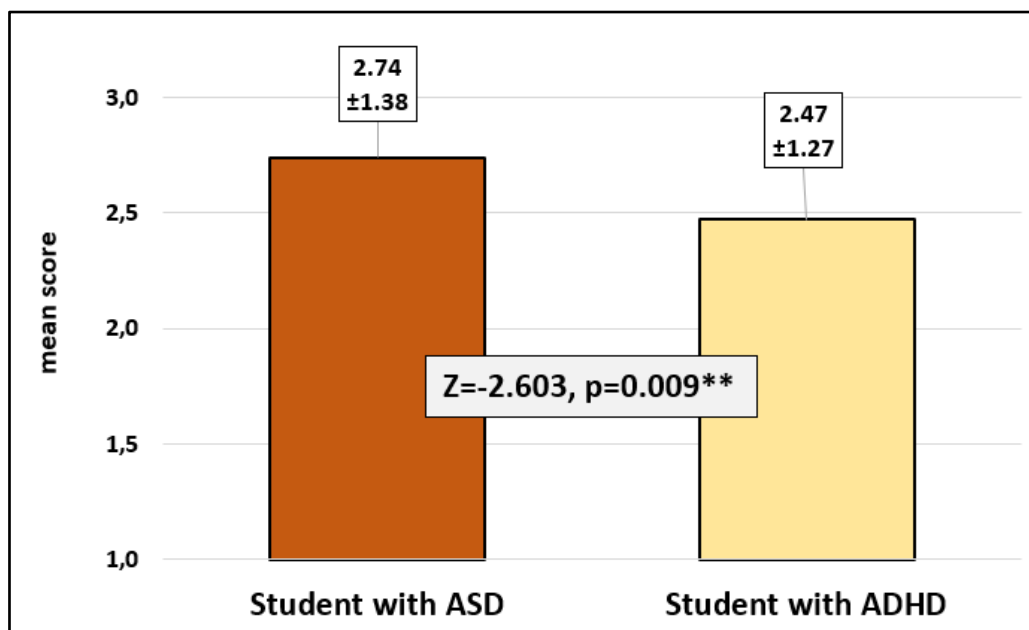
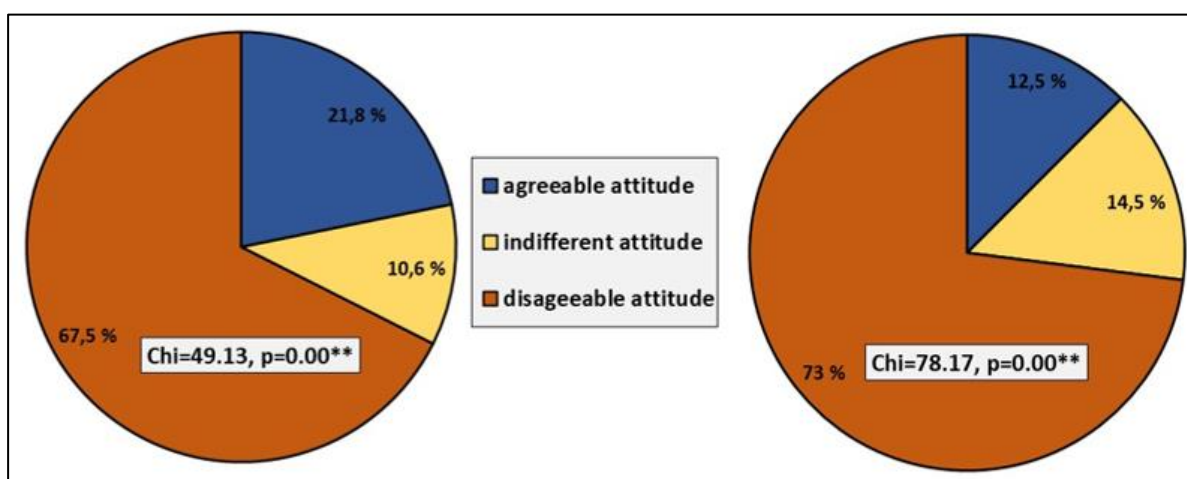


Figure 3 Comparison of teachers' attitudes to discrimination of students with disorders in PSE

Another result was also pleasing, by which we found that the PE teachers declare a disapproving attitude to the discrimination of students without disorders if students with disorders will be included in the inclusive PSE lessons. In the case of the inclusion of a student with ASD, up to 67.5% of PE teachers disagreed with the discrimination of students without disorders (Figure 4), and in the case of the inclusion of a student with ADHD, up to 73% of PE teachers disagreed with the discrimination of students without disorders (Figure 5).



Students without disorders will experience discrimination when a  
 Figure 4 Student with ASD  
 will be included in PSE lessons  
 Figure 5 Student with ADHD

On the other hand, 21.8% of PE teachers agree that if a student with ASD will be included in the PSE lessons, students without disorders will experience discrimination in the lessons. Likewise, 12.5% of PE teachers agree that if a student with ADHD is included in inclusive PSE classes, students without disorders will experience discrimination. 10.6% of PE teachers took an indifferent attitude to the discrimination of students without disorders in the inclusive PSE classes if a student with ASD will be included in the PSE class and 14.5% if a student with ADHD will be included in the PSE class. The differences between agreeing and disagreeing answers were highly significant in favour of PE teachers' disapproving attitudes about the discrimination of students without disorders in inclusive PSE lessons when including a student with ASD ( $\chi^2=49.13$ ,  $p=0.00^{**}$ ) and when including a student with ADHD ( $\chi^2=78.17$ ,  $p=0.00^{**}$ ) (Figures 4, 5).

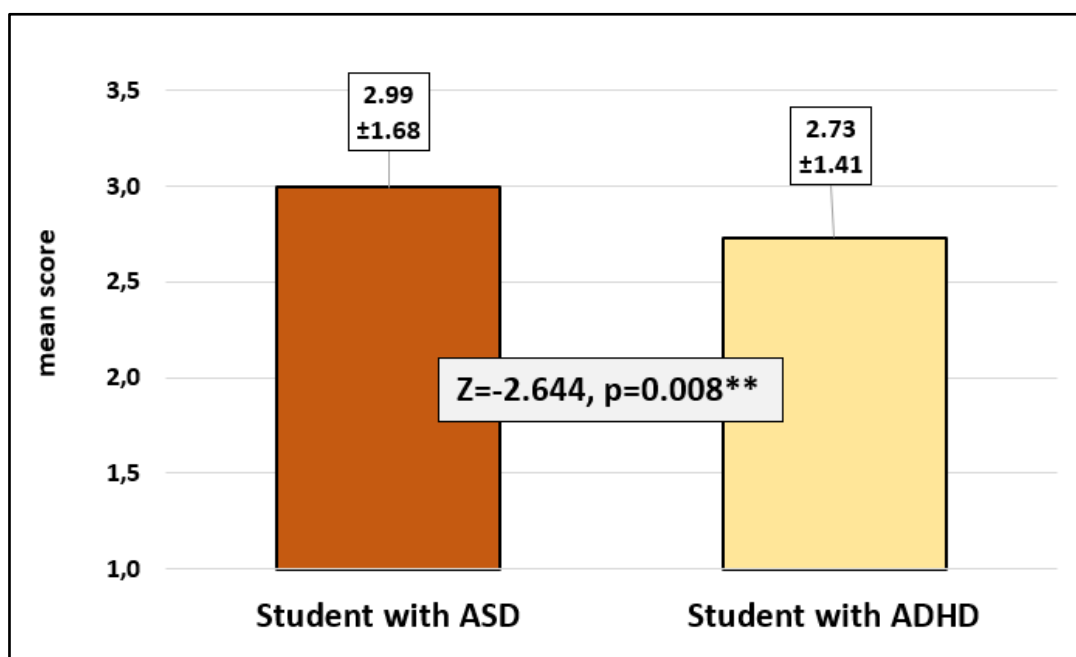


Figure 6 Comparison of teachers' attitudes to discrimination of students without disorders in PSE lessons

Further, we found that the mean score of the PE teachers' responses in this statement did not exceed 3 points, which was a pleasing result. We can see that neither in the inclusion of a student with ASD nor in the inclusion of a student with ADHD, from the perspective of PE teachers, students without disabilities will experience discrimination in inclusive PSE classes. Although teachers' mean scores expressed a negative attitude toward discrimination against students without disorders, they were nevertheless significantly less likely to agree with this statement when a student with ADHD is included in inclusive PSE lessons than when a student with ASD is included in PSE lessons ( $Z=2.644$ ,  $p=0.008^{**}$ ) (Figure 6).

### **Discussion**

Inclusion means everyone belongs in a school that is a "community" of learners. A positive learning environment invites all students to participate in meaningful learning that offers a variety of opportunities for personal successes. Attention to the social environment is important to the success of inclusion. Teachers must closely monitor the social environment to protect all students from ridicule, exclusion, or discrimination (Tripp, Piletic & Babcock, 2004). The present research aimed to find out and compare the PE teachers' attitudes, on whether students with disorders and students without disorders will experience discrimination in inclusive physical and sport education classes. Research has shown that even though students with disabilities enjoy physical education (Kurková, Nemček & Labudová, 2015; Kurková & Nemček, 2016), discrimination by classmates and adults can threaten their ability to fully participate in the classroom (Coates & Vickerman, 2008). The results of present research revealed that PE teachers do not agree that students with ASD nor students with ADHD will experience discrimination in inclusive PSE lessons. PE teachers also stated that students with ADHD will experience less discrimination in PSE classes than students with ASD. There are also findings where students themselves have documented discrimination by PE teachers. These were primarily overweight students who claimed that PE teachers bullied them in class, called them fat and were mean to them (Coates, 2011). In contrast to the aforementioned research, in our research we investigated the experience of discrimination in the inclusion of students with ASD and ADHD, where we did not find discrimination in inclusive PSE towards these students from the perspective of PE teachers.

The research further revealed that PE teachers declared their disapproval of discrimination against students without disorders if students with disorders are included in PSE classes. Despite the disapproving attitude of PE teachers towards discrimination of students without disorders, they declared a lower rate of discrimination against students without disorders if a student with ADHD is included in PSE lessons compared to a student with ASD. Student bullying and social isolation in the classroom by peers without disorders has been confirmed in other studies (Fitzgerald, 2005; Goodwin & Watkinson, 2000; Healy et al., 2013; Moola et al., 2011), contributing to negatively perceived experiences in PSE for students with disorders. Ruin & Meier (2017) claims that the most common cause of discrimination is the performance-oriented content of PSE, which discriminates students with disorders against students without disorders. Therefore, in inclusive PSE classes, it is appropriate to fill the content not with activities focused on performance, but on experience. In this way,

discrimination of students with disorders against students without disorders, who many times have no problem successfully achieving these performances in PSE classes, is avoided.

### **Conclusion**

The present research revealed that PE teachers do not agree that students with ASD nor students with ADHD will experience discrimination in inclusive PSE lessons. PE teachers also stated that students with ADHD will experience less discrimination in PSE classes than students with ASD. PE teachers further declared a disapproving attitude to the discrimination of students without disorders if students with disorders will be included in the PSE lessons. Despite PE teachers' rejection of discrimination against students without disorders they declared a lower level of discrimination against students without disorders if a student with ADHD will be included in PSE lessons compared to a student with ASD.

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## Abstrakt

### **Budú žiaci s poruchami a intaktní žiaci zažívať na hodinách inkluzívnej telesnej a športovej výchovy diskrimináciu? Pohľad učiteľov**

**Dagmar Nemček**

*Cieľom výskumu bolo zistiť a porovnať postoje učiteľov telesnej a športovej výchovy (TŠV) k tomu, či žiaci s poruchami a žiaci bez porúch zažívajú diskrimináciu v inkluzívnych hodinách TVŠ. Výskumu sa zúčastnilo 152 učiteľov TŠV vyučujúcich v základných školách na nižšom sekundárnom stupni vzdelávania s priemerným vekom 40,86±9,97 rokov. Na zber výskumných údajov sa použila modifikovaná verzia štandardizovaného výskumného nástroja ATIPDPE-R. Zistili sme, že učitelia TŠV nesúhlasia s tým, že žiaci s poruchami autistického spektra (PAS) (70,6 %) a poruchami pozornosti s hyperaktivitou (ADHD) (79,0 %) budú na inkluzívnych hodinách TŠV diskriminovaní. Učitelia tiež uviedli, že žiaci s ADHD budú na hodinách TŠV zažívať nižšiu mieru diskriminácie ako žiaci s PAS ( $Z=2,603, p=0,009^{**}$ ). Učitelia tiež deklarovali nesúhlasný postoj k diskriminácii zdravých žiakov, ak budú na hodinách TŠV začlenení žiaci s PAS (67,5 %) a ADHD (73,0 %). Napriek odmietavému postoj učiteľov k diskriminácii intaktných žiakov na hodinách TŠV deklarovali preda len nižšiu mieru diskriminácie zdravých žiakov pri zaradení žiaka s ADHD v porovnaní so žiakom s PAS ( $Z=2,644, p=0,008^{**}$ ).*

*Kľúčové slová: Inklúzia, telesná a športová výchova, učitelia telesnej a športovej výchovy, žiaci s poruchami autistického spektra, žiaci s poruchou pozornosti a hyperaktivitou, postoje.*

**doc. Mgr. DAGMAR NEMČEK, PhD.** – Zaoberá sa inkluzívnou telesnou a športovou výchovou, telesnou a športovou výchovou na špeciálnych školách a športom zdravotne postihnutých. Je hlavnou riešiteľkou projektov VEGA 1/0694/24 a KEGA 051UK-4/2022.