



INCLUSIVE EDUCATION BY CLASS TEACHERS, SUBJECT TEACHERS AND PHYSICAL EDUCATION TEACHERS IN CROATIAN PRIMARY SCHOOLS: COMPETENCES AND CHARACTERISTICS

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Abstract/Izvleček

The objectives of this study were to analyse differences among three groups of teachers: elementary class (EC) teachers, subject specific (SS) teachers, and physical education (PE) teachers in certain aspects of inclusive teaching for students with behavioural difficulties (BD). A study was conducted in 126 primary schools, involving 1,479 students with BD. EC teachers possess the most favourable competences for working with students with BD, while SS teachers exhibit the most negative competences. PE teachers demonstrate some interesting professional characteristics, suggesting the need for further research.

Inkluzivno izobraževanje z vidika razrednih učiteljev, predmetnih učiteljev in učiteljev športne vzgoje v hrvaških osnovnih šolah: kompetence in značilnosti

Ključne besede:

simptomi ADHD, vedenjske težave, osnovne šole na Hrvaškem, učitelj športne vzgoje

Cilji študije so bili analizirati razlike med tremi skupinami učiteljev (učitelji razrednega pouka, učitelji predmetnega pouka in učitelji športne vzgoje) v določenih vidikih vključujočega poučevanja za učence z vedenjskimi težavami (VT). Študijo smo izvedli na 126 osnovnih šolah, sodelovalo je 1479 učencev z VT. Učitelji razrednega pouka premorejo najustreznejše kompetence za delo z učenci z VT, medtem ko učitelji predmetnega pouka izkazujejo najbolj negativne kompetence. Učitelji športne vzgoje prikazujejo nekatere zanimive strokovne značilnosti, ki nakazujejo potrebo po nadaljnjih raziskavah.

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Introduction

The inclusion of diverse students has become a key principle of high-quality, holistic, and democratic education. However, for inclusive teaching to be effective, teachers—central figures in the educational process—must be properly trained. Teaching diverse learners involves both didactic-methodological competences, such as understanding students' individual characteristics and special needs, and personal traits, notably inclusive attitudes and beliefs. Inclusive education depends not only on formal access to schooling but also on the quality of support and the extent to which teachers translate inclusive principles into everyday practice. In this regard, previous research has shown that additional support may improve student achievement, while the development of genuinely inclusive practices remains a major challenge (Jeznik, 2022). Moreover, teachers in heterogeneous classrooms often experience implementation difficulties when applying collaborative and student-centred approaches (Adl-Amini et al., 2024).

Competences encompass the knowledge, skills, and behaviours that enhance both individual and institutional performance (National Institutes of Health, 2017). Within the teaching context, these include skills in applying positive discipline and managing group dynamics, along with the ability to recognize traits linked to conditions like attention deficit hyperactivity disorder (ADHD).

In Croatia, Physical Education (PE) teachers (kinesiologists) teach Physical Education three times a week to students in grades 5–8, while elementary class (EC) teachers instruct students from grades 1–4 across subjects such as Croatian, Mathematics, and Nature, as well as cultural subjects like Music, Visual Arts, and PE. Specific subject (SS) teachers also teach grades 5–8 in specialized areas. Current reforms propose that kinesiologists may soon teach PE from grade 1 (Neljak, 2019), increasing the relevance of this study.

To date, the inclusive beliefs of kinesiologists in Croatian primary schools have not been researched. This paper thus provides an original contribution by exploring their perspectives on teaching students with diverse needs.

Behavioural difficulties and ADHD

Behavioural problems span a wide range of manifestations differing in intensity, complexity, duration, and risk levels (Koller-Trbović, 2004). They can be categorized into risky behaviors, behavioural difficulties, and behavioural disorders (Koller-Trbović et al., 2011). In this study, “behavioural difficulties” (BD) refers to the mid-

level category in terms of risk and severity, impacting both students and their environment.

ADHD, classified by the DSM-V, is a neurodevelopmental disorder marked by persistent inattention and/or hyperactivity-impulsivity. Within schools, students with an official diagnosis and documentation (as per the Primary and Secondary School Education Act, 2008/2022) are classified as having developmental difficulties. Yet, many students exhibit ADHD traits without formal diagnosis, a situation which can delay support. Teachers frequently identify behavioural difficulties and, in more severe cases, a formal diagnosis follows—especially when paired with emotional issues, inattention, or family-related problems (Vlah, 2024). Diagnosis can be delayed by systemic and situational factors. Regardless of diagnosis, individualized instruction is needed when students display behavioural challenges (Vlah, Varda, and Družinec, 2019).

Untreated ADHD symptoms may lead to secondary issues like emotional or antisocial behaviours. These are classified as internalized (e.g., withdrawal, fear, anxiety) or externalized (e.g., aggression, rule violations), all of which negatively affect psychosocial development and inclusion, particularly in unsupportive environments (Vlah et al., 2018).

Teaching students with ADHD poses didactic-methodological challenges. Negative disciplinary approaches—such as punishment—may foster shame and weaken teacher-student relationships (Vlah, Velki, and Zrilić, 2022). In contrast, positive discipline fosters constructive relationships and development (MacLean, Krause, and Rogers, 2023; Staff et al., 2023). In PE, assigning responsibilities instead of exclusion boosts engagement and self-worth. Tavlin, Ariol, and Lawson (2025) emphasize that positive interventions support teacher-student relationships and help students develop self-regulation, self-awareness, and emotional control.

PE teachers' inclusive beliefs about working with students with behavioural difficulties

Inclusive beliefs are essential for the effective implementation of inclusive education. Teachers who believe that every student can succeed are more likely to apply effective inclusive strategies (Alhumaid et al., 2022). These beliefs are especially relevant in physical education, where PE teachers' attitudes directly shape their readiness to adapt teaching and create supportive, inclusive environments (Alhumaid et al., 2022). In Croatia, SS teachers generally show lower levels of inclusive beliefs than EC teachers (Marković, 2022), but no data exist on how PE teachers compare to these groups.

International research has explored PE teachers' general attitudes toward inclusion (Catellani et al., 2018; Alhumaid et al., 2022; Wang et al., 2015; Hodge et al., 2004), though few studies specifically examine their beliefs about students with behavioural difficulties. Evidence suggests that PE teachers often face challenges in inclusive teaching, experiencing mixed success. Catellani et al. (2018) noted that many report stress and anxiety when working with students with difficulties. Wang et al. (2015) found that only a few PE teachers adapt teaching methods or equipment, and some exclude students from group activities. Findings on inclusive beliefs are mixed: 52.3% of PE teachers hold positive views (Catellani et al., 2018), yet many still struggle to implement inclusion effectively (Wang et al., 2015; Hodge et al., 2004). According to Hodge et al. (2004), lack of training, resources, and institutional support hinders success. A consistent gap exists between positive beliefs and practical application. Barriers such as inadequate support and resources continue to challenge inclusive teaching. Further research is needed to understand PE teachers' specific attitudes toward students with BD and to identify opportunities to strengthen inclusive practices in PE.

Research purpose and aim

With the aim of gathering empirical data to better understand the training needs of PE teachers and future PE teachers for working with students with BD, this study has the following objective: to analyse differences among three groups of teachers (EC teachers, SS teachers, and PE teachers) in specific characteristics of inclusive teaching for students with BD.

The term "inclusive teaching characteristics" refers to both teacher-related factors (such as inclusive beliefs about students with attention and concentration difficulties in the classroom and self-assessed positive disciplinary strategies) and student-related factors (such as primary ADHD symptoms like impulsivity-hyperactivity and inattention, as well as secondary ADHD symptoms such as emotional problems and antisocial behaviour).

Methods

Sample and data collection

The study involved 126 schools from 14 counties in Croatia. The teacher sample was formed as a convenience sample. After schools had provided administrative consent, all available teachers within those schools were invited to participate, and participation was entirely voluntary. The schools were from 14 different counties (Koprivničko – Križevačka, Sisačko – Moslavačka, Varaždinska, Primorsko-Goranska, Međimurska, Osječko-Baranjska, Vukovarsko-Srijemska, Brodsko-Posavska, Ličko-Senjska, Splitsko-Dalmatinska, Dubrovačka, Zagrebačka, Zadarska county and City of Zagreb) of the Republic of Croatia, including both urban and rural areas, with the aim of ensuring geographical diversity. With regard to settlement size, 3% of respondents resided in areas with up to 1,000 inhabitants, 22.9% in areas with 1,001 to 5,000 inhabitants, 11.1% in areas with 5,001 to 10,000 inhabitants, 27% in areas with 10,001 to 50,000 inhabitants, and 36% in settlements with more than 50,000 inhabitants.

A total of 1,095 teachers from grades 1 to 8 participated. Survey administrators distributed questionnaires in sealed envelopes through school coordinators – professional associates – who then passed them on to EC, SS and PE teachers. Completing the four-page questionnaire, from which a subset of variables was analysed for this study, took an average of 15 minutes. In the introductory section of the questionnaire, teachers were asked to participate in a study on students with possible BD. They were instructed to recall one or more students in their class whom they believed or felt exhibited behavioural difficulties, whether in class, or during breaks, extracurricular activities, field trips, etc. The term “student” was used equally for both boys and girls. Teachers were asked to complete a separate questionnaire for each identified student. This process led to the identification of 1463 students. Additionally, to expand the dataset, further data was collected specifically from PE teachers, increasing the total sample to 1,479 students (Mage of teachers=43 years (SD = 10; 86.9% women), averaging 1.35 students per teacher. Teacher distribution by type was 51.3% EC teachers, 3% PE teachers (N = 44), and 46.7% SS teachers. Average duration of familiarity with the assessed student was 2.5 years. Among the identified and assessed students, 1,287 (87%) were boys, aged 7 to 19 years ($M \pm SD = 10.57 \pm 2.24$), and these were evenly distributed across grades 1 to 8.

Measurement instruments

Inclusive beliefs regarding students with attention and concentration difficulties were assessed using an adapted version of the original Teachers' Beliefs about the Values of Inclusive Education Scale (TBIES) (Skočić Mihić, Gabrić and Bošković, 2016). This instrument was specifically designed within this project to evaluate teachers' beliefs about the inclusion of students with special educational needs in regular classrooms. The scale consists of 10 items (e.g., "Students with attention and concentration difficulties in regular classes do not differ from other students."), addressing various aspects of the functioning of students with special needs in regular classrooms. Teachers rated their level of agreement on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Cronbach's alpha for this scale was .914, indicating high reliability.

Self-assessed positive disciplinary strategies were measured using The Scale of Misbehaviour Management Strategy (Martin, Linfoot and Stephenson, 1999), which was translated and validated as part of the project. The scale consists of 24 items and was divided into two subscales for this study: positive discipline ($k = 14$, Cronbach's $\alpha = 0.79$) – measuring the frequency of teachers' use of positive disciplinary strategies when students misbehave (e.g., "I speak with the student"), and negative discipline ($k = 10$, Cronbach's $\alpha = 0.67$) – measuring the frequency of teachers' use of negative disciplinary strategies when students misbehave (e.g., "Sending students to the corner/back of the room"). For this study, only the positive disciplinary strategies subscale was used. Teachers rated how often they applied the described disciplinary procedures using a 6-point Likert scale, ranging from 0 = never and 1 = rarely, to 5 = always.

The NICHQ Vanderbilt Assessment Scale – TEACHER Informant (Wolraich) was used to measure ADHD symptoms. The original scale consists of 35 items grouped into four subscales. Elementary class teachers rated their students' behaviour throughout the school year on a 4-point scale, ranging from 0 = never to 3 = very often. Four validated subscales, each with satisfactory reliability, were confirmed: Impulsivity-Hyperactivity ($N = 10$, $\alpha = .93$; "Talks excessively"), Emotional Problems ($N = 7$, $\alpha = .80$, "Feels inferior or less valuable"), Inattention ($N = 9$, $\alpha = .87$, "Has difficulty organizing tasks and activities"), and Antisocial Behaviour ($N = 9$, $\alpha = .91$, "Is physically cruel to others").

Academic success was measured by the students' overall school performance, rated on a five-point scale (ranging from 1 = unsatisfactory to 5 = excellent).

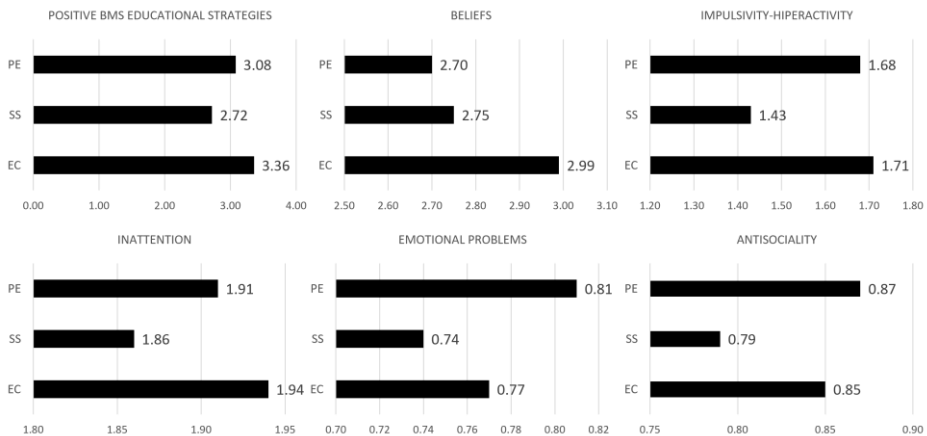
Self-assessed teacher-student relationship was rated with: “Assess your personal relationship with the student,” where each elementary class teacher was asked to assess their personal relationship with the student, and could therefore circle one of the following: unsatisfactory (0), good (1), or very good (2).

Statistical data analysis

Basic descriptive statistics were calculated and presented. ANOVA with the Bonferroni post hoc test was used to determine manifest differences between teacher groups; multivariate discriminant analysis was conducted to analyse latent relationships among teacher characteristics, and Levene’s test was applied to assess the homogeneity of the covariance matrix before conducting further analyses. All analyses were performed using standardized data to minimize the impact of differing group sizes. To identify statistically significant correlations in the subsample of PE teachers, the Spearman correlation coefficient was used, where 0 – 0.25 denoted a weak linear correlation, 0.25 – 0.64 a moderate correlation, and 0.64 – 1 a strong correlation. The IBM SPSS Statistics 21 statistical package was used to process the results and the significance levels with which the analyses were tested. The article is based on research data stored in the PUH (Data Storage and Management) repository that are not publicly available, but are available from the author upon a reasoned request.

Results

The average values from Figure 1 indicate differences in self-assessment among teachers of different profiles. EC teachers have higher average self-assessments compared to SS teachers and PE teachers, particularly in the areas of inclusive beliefs ($M \pm SD = 2.99 \pm 0.65$) toward students with attention and concentration difficulties and in their self-assessment of positive disciplinary strategies ($M \pm SD = 3.36 \pm 0.81$). Additionally, EC teachers provided higher average ratings when assessing students with primary symptoms such as impulsivity-hyperactivity ($M \pm SD = 1.71 \pm 0.80$) and inattention ($M \pm SD = 1.94 \pm 0.58$) compared to PE teachers and SS teachers. On the other hand, PE teachers had the highest average values in assessing secondary symptoms, such as emotional problems ($M \pm SD = 0.81 \pm 0.60$) and antisocial behaviour ($M \pm SD = 0.87 \pm 0.59$). SS teachers had the lowest average values across all observed variables compared to EC teachers and PE teachers. Furthermore, we checked whether the implied differences were significant using the ANOVA test

**Figure 1.***Average Self-Assessment Scores by Teacher Profile*

According to ANOVA analysis (Table 1), the three groups of teachers show statistically significant differences in self-assessed positive disciplinary strategies, inclusive beliefs, and assessed levels of impulsivity-hyperactivity symptoms in students. An additional Bonferroni post hoc test was conducted to examine pairwise differences in arithmetic means between the groups. The results indicate a statistically significant difference only between the EC teacher group and the SS teacher group, with the EC group demonstrating higher mean scores. The PE teacher group did not differ significantly from either of the other two groups.

Discriminant analysis was used to provide a more precise description of latent differences among EC teachers, PE teachers, and SS teachers in observed characteristics of inclusive teaching of students with BD (Table 2). Levene's test indicated that teachers' positive disciplinary strategies ($F_{2,1263}=0.61$, $p>0.05$), teachers' inclusive beliefs ($F_{2,1294}=2.25$, $p>0.05$), students' impulsivity-hyperactivity ($F_{2,1303}=1.51$, $p>0.05$), students' inattention ($F_{2,1303}=1.51$, $p>0.05$), students' emotional problems ($F_{2,1306}=0.31$, $p>0.05$) and students' antisocial behaviour ($F_{2,1295}=0.36$, $p>0.05$) could be included in the multivariate discriminant analysis. The first discriminant function was extracted with a canonical correlation coefficient of $R = 0.38$, and by squaring this correlation, it was determined that 14.44% of the total variability in group differences could be explained by the analysed variables.

Table 1

Manifest level differences between elementary class teachers, subject-specific teachers, and physical education teachers with Bonferroni post-hoc comparisons between groups

		F	p	GC		MD
POSITIVE BMS EDUCATIONAL STRATEGIES	EC	88.94	0.00*	EC	SS	0.64*
					PE	0.28
	SS			SS	EC	-0.64*
					PE	-0.36
INCLUSIVE BELIEFS	PE	20.59	0.00*	PE	EC	-0.28
					SS	0.36
	EC			EC	SS	0.24*
					PE	0.29
IMPULSIVITY-HYPERACTIVITY	SS	19.14	0.00*	SS	EC	-0.24*
					PE	0.05
	PE			PE	EC	-0.29
					SS	-0.05
INATTENTION	EC	2.79	0.06	EC	SS	0.28*
					PE	0.03
	SS			SS	EC	-0.28*
					PE	-0.25
EMOTIONAL PROBLEMS	PE	0.58	0.56	PE	EC	-0.03
					SS	0.25
	EC			EC	SS	0.08
					PE	0.02
ANTISOCIALITY	SS	1.30	0.27	SS	EC	-0.08
					PE	-0.06
	PE			PE	EC	-0.02
					SS	0.06

EC – elementary class teachers; SS – subject specific teachers; PE – physical education teachers; F – value of ANOVA test; p – statistical significance of ANOVA test; GC – group comparison; MD – mean difference

Table 2*Values of discriminant functions and group centroids of teachers on the discriminant function*

Function	Λ	%	χ^2	df	R	p
1	0.86	99.40	171.14	12	0.38	0.00
2		0.40	0.69	2	0.25	0.98

Λ – Wilk's lambda; % var – percentage of explained variance; χ^2 – chi-square; df – degrees of freedom; R – canonical correlation coefficient; p – statistical significance of the discriminant function

The structure of the discriminant function was further analysed, and the results are presented in Table 3.

Table 3.*Structure of the discriminant function*

Categories	Discriminant coefficient	Correlation with the discriminant function
Positive disciplinary strategies in working with the student	0.84	0.89*
Impulsivity-hyperactivity in students	0.51	0.43*
Inclusive beliefs toward students with attention and concentration difficulties	0.16	0.38*
Inattention in students	0.01	0.18
Emotional problems in students	-0.01	0.02
Antisocial behaviour in students	-0.29	0.08

From the structure of the discriminant function, it is evident that all variables positively correlate with the discriminant function. The variables that contribute most to its formation are positive disciplinary strategies in working with students (0.89), impulsivity-hyperactivity in students (0.43), and inclusive beliefs toward students with attention and concentration difficulties (0.38). Based on these findings, this discriminant function represents the teachers' readiness to adopt a positive inclusive disciplinary approach toward impulsive-hyperactive students.

Table 4.*Group centroids*

Group	Function 1
EC	0.37
SS	-0.46
PE	0.05

EC – elementary class teachers; SS – subject specific teachers; PE – physical education teachers

An examination of the signs and values of group centroids across the three participant groups suggests that EC teachers exhibit a positive association with the discriminant function, indicating a greater alignment with inclusive disciplinary approaches toward impulsive-hyperactive students. In contrast, SS teachers show a negative association with the function, reflecting a lower tendency to apply inclusive teaching strategies. PE teachers appear neutral overall but lean slightly more toward positive inclusive disciplinary practices. In light of the discriminant analysis findings and supported by the results of the Bonferroni post hoc test in the ANOVA, we conducted additional statistical analyses focusing specifically on PE teachers to further explore their characteristics in working with students with behavioural difficulties (BD).

Table 5 presents the relationship between PE teachers and variables such as chronological age, years of professional experience, duration of familiarity with the student, the student's academic achievement, self-assessed personal relationship with the student, and characteristics of inclusive teaching.

Table 5

Spearman's correlation coefficients of PE teachers (N=44)

	A	B	C	D	E	F	G	H	I	J	K
A	1.00	0.80**	-0.23	-0.26	-0.38*	0.18	-0.12	-0.02	0.03	0.27	-0.13
B	0.80**	1.00	-0.26	-0.34	-0.33	-0.13	-0.46*	-0.14	-0.30	0.06	-0.14
C	-0.23	-0.26	1.00	-0.25	0.05	0.07	-0.27	-0.17	0.05	-0.09	0.05
D	-0.26	-0.34	-0.25	1.00	-0.00	-0.14	0.01	-0.27	-0.10	-0.20	0.11
E	-0.38*	-0.33	0.05	-0.00	1.00	-0.35	-0.13	-0.08	-0.24	-0.25	0.47*
F	0.18	-0.13	0.07	-0.14	-0.35	1.00	0.54**	0.19	0.45*	0.24	-0.30
G	-0.12	-0.46*	-0.27	0.01	-0.13	0.54**	1.00	0.42*	0.56**	0.11	-0.31
H	-0.01	-0.14	-0.17	-0.27	-0.08	0.19	0.42*	1.00	0.57**	0.09	-0.37
I	0.03	-0.30	0.05	-0.10	-0.24	0.45*	0.56**	0.57**	1.00	0.25	-0.51**
J	0.27	0.06	-0.09	-0.20	-0.25	0.24	0.11	0.09	0.25	1.00	0.01
K	-0.13	-0.14	0.05	0.11	0.47*	-0.30	-0.31	-0.37	-0.51**	0.01	1.00

*A - Chronological age of kinesiologists; B - Years of professional experience; C - Duration of familiarity with the student; D - Positive disciplinary strategies; E - Inclusive beliefs; F - Impulsivity-hyperactivity; G - Inattention; H - Emotional problems; I - Antisocial behaviour; J - Student's academic achievement; K - Personal relationship with the student; correlations are significant at: ** $p < 0.01$, * $p < 0.05$*

The chronological age of kinesiologists is low to moderately negatively correlated with inclusive beliefs ($r = -0.38$). The years of professional experience are moderately

negatively correlated with the assessment of inattention in students ($r = -0.46$). Inclusive beliefs are moderately to highly positively correlated with the self-assessed personal relationship with the student ($r = 0.47$). Antisocial behaviour is moderately to highly negatively correlated with the self-assessed personal relationship ($r = -0.51$). Intercorrelations of assessed ADHD symptoms show a statistically significant moderate positive correlation between impulsivity-hyperactivity and inattention ($r = 0.54$) and impulsivity-hyperactivity and antisocial behaviour ($r = 0.45$). Inattention is statistically significantly positively correlated with impulsivity-hyperactivity ($r = 0.42$), emotional problems ($r = 0.54$), and antisocial behaviour ($r = 0.56$). Emotional problems are statistically significantly positively correlated with inattention ($r = 0.42$) and antisocial behaviour ($r = 0.57$).

Discussion

The results of this study indicate the existence of statistically significant differences in the characteristics of inclusive teaching for students with BD among teachers of different profiles. The extracted first discriminant function reflects teachers' timely detection of students' impulsivity and hyperactivity symptoms, along with the simultaneous use of positive disciplinary strategies and personally inclusive beliefs. Specifically, this is a function of readiness to adopt a positive inclusive disciplinary approach toward impulsive-hyperactive students. This function is theoretically highly significant, as it aligns with theoretical trends in contemporary inclusive teaching (Martin et al., 1999; Mihić et al., 2016), where every student is provided with the opportunity for success and positive psychosocial development for overall well-being. EC teachers demonstrated the highest readiness to apply positive disciplinary strategies and inclusive beliefs when working with impulsive-hyperactive students. This finding reflects the specific nature of their role, which involves continuous work with the same students and the need for an individualized approach, thereby increasing their sensitivity to the necessity of inclusive educational methods. On the other hand, PE teachers displayed a low positive, almost neutral correlation with readiness to adopt a positive inclusive disciplinary approach toward impulsive-hyperactive students, suggesting a moderately developed but still present readiness for inclusive approaches. The review study by Rekaa et al. (2018) supports the idea that PE teachers recognize the potential for inclusion in physical education. Additionally, Alhumaid et al. (2022) emphasize that teachers' attitudes toward inclusion influence

their willingness to adapt teaching methods, which contributes to creating a supportive and inclusive environment for all students. PE teachers often incorporate team-based and individualized approaches in their teaching, which may have led them to develop some inclusive strategies. However, these strategies are not necessarily systematically aligned with educational approaches specific to students with BD. PE teachers tend to focus more on secondary symptoms, such as emotional problems and antisocial behaviour, which may influence their assessment of impulsivity-hyperactivity. Nevertheless, there is room for improvement in implementing inclusive strategies within PE settings. The most concerning finding is the negative relationship between the function of readiness to adopt a positive, inclusive disciplinary approach toward impulsive-hyperactive students and SS teachers' perceptions of students with BD in this study. This may be related to the structure of subject-based teaching, which involves shorter and more intermittent interactions with students. Additionally, it may reflect a lack of formal education on inclusion in their teacher training programs and insufficient professional support, as noted by Hodge et al. (2004). Subject teachers may also be less likely to recognize the specific needs of students with difficulties, since their teaching responsibilities are less focused on the development of socio-emotional skills. Other studies support this, showing that EC teachers tend to have significantly higher self-efficacy in inclusive teaching compared to their subject-teaching colleagues (Djigić et al., 2014; Marković, 2022). The differences identified between EC, SS and PE teachers may also be interpreted in light of broader school and classroom conditions. Earlier studies suggest that teachers' work in heterogeneous classrooms is shaped by practical and systemic implementation challenges (Adl-Amini et al., 2024), while inclusive support is not always matched by socially inclusive everyday practice (Jeznik, 2022). In this sense, the broader institutional framework, including school culture and leadership, may provide an additional explanation for the differences in inclusive practices observed across EC, SS, and PE teachers and across school contexts (Eger and Egerová, 2023).

Additionally, the results of the correlation analysis indicate that the chronological age and professional experience of PE teachers are negatively correlated with inclusive beliefs, suggesting that older kinesiologists tend to have weaker beliefs about inclusion compared to their younger colleagues. This finding may stem from more traditional educational approaches and fewer opportunities for professional development in the field of inclusion during their formal education. In contrast, younger PE teachers, who were educated more recently, were likely exposed to modern pedagogical practices that emphasize the importance of inclusive education.

Unlike these findings, the study by Woodcock et al. (2023) found no statistically significant differences in inclusive beliefs among teachers based on years of experience or level of qualification. While it might be expected that additional formal and informal training would enhance inclusive attitudes, Woodcock and Hardy (2017) found that specialized training can sometimes increase teachers' concerns about adapting to diverse student needs. These findings suggest that the effects of experience and education on inclusive beliefs may vary depending on profession, education programs, and individual professional experiences. The negative correlation between years of professional experience and the assessment of inattention in students may indicate greater tolerance and more experience-based behaviour management strategies among more experienced PE teachers. It is possible that over time, they develop better classroom management skills, which reduces their perception of inattention as a significant challenge. On the other hand, the positive correlation between inclusive beliefs and the self-assessed teacher-student relationship confirms an expected pattern: teachers who perceive themselves as having a close relationship with students are more inclined toward inclusive practices, and vice versa. This highlights the importance of fostering high-quality teacher-student relationships in the context of inclusive education. The negative correlation between antisocial behaviour and the self-assessed teacher-student relationship further reinforces the importance of positive social interaction and maybe better preparation of PE teachers in communication skills with students with BD in building a strong teacher-student connection. Teachers who perceive students as antisocial tend to report weaker relationships with them, which could have further implications for inclusive teaching practices. Those could form the basis for further research.

This study analyses the differences among three groups of teachers in specific characteristics of inclusive teaching for students with behavioural difficulties, a topic that has been rarely addressed in previous research. A particular scientific contribution lies in the inclusion of PE teachers, who are often overlooked in the academic literature on inclusive education despite their important role in students' socio-emotional development. The study's findings confirm the existence of structural differences in inclusive beliefs, disciplinary strategies, and perceptions of student behaviour among different teacher profiles, contributing to a better understanding of professional roles in the context of inclusive teaching. These findings create an opportunity for the development of new models of professional support and teacher training. By empowering teachers, a foundation is laid for the

formulation of educational policies that support sustainable and inclusive educational practices.

The findings of this study emphasize the importance of professional development and continuous education for PE teachers to strengthen their inclusive beliefs and strategies for working with students with behavioural difficulties. The methodological limitations of this research include the small subsample of PE teachers and potential biases in self-assessment and teacher assessment of the examined variables. Although the sample covers nearly the entire territory of Croatia, future research should aim to incorporate both self-assessment and student assessment, as well as to compare these assessments with teacher perceptions. It is necessary to identify the key factors that contribute to the development of positive attitudes toward inclusive physical education among teachers.

Conclusion

The results highlight the need for additional professional development for teachers across all profiles, particularly in working with students with behavioural difficulties. Although the differences between groups of teachers are not very large, EC teachers, who work with the same students continuously, evince greater readiness to adopt a positive inclusive disciplinary approach towards impulsive-hyperactive students, while PE teachers demonstrate minimally developed but not fully integrated strategies. SS teachers, on the other hand, exhibit the lowest level of readiness to adopt a positive inclusive disciplinary approach towards impulsive-hyperactive students, which may be a result of organizational constraints, lack of professional support, or gaps in formal education that fail to address student needs. Older PE teachers tend to hold more negative views on inclusion, while those with more years of experience perceive lower levels of inattention in students with difficulties. Additionally, PE teachers who perceive students as more antisocial tend to report poorer teacher-student relationships, whereas those with stronger inclusive beliefs assess their relationships with students more positively.

The practical application of the results of this study is reflected in the potential to develop targeted training programs for teachers of different profiles, aimed at building competences for recognizing and effectively managing student behaviour. The findings can serve as a basis for curricular adjustments in higher education programs

for teachers, particularly in the fields of physical education and subject-based teaching, with the goal of strengthening inclusive practices from the beginning of their professional careers. Through interdisciplinary collaboration among teachers of different profiles, a higher quality educational process could be ensured—one that excludes no student, but instead promotes their active participation, success, and development in line with their individual abilities.

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Data Availability Statement

The article is based on data fully presented and discussed within the article itself; therefore, no additional data archiving is required.

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