



# Comparative analysis of coaches' perception of their capability, opportunity, and motivation to train athletes with special educational needs

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## Abstract

**Background and Study Aim.** In ensuring equal opportunities for all athletes, including those with special educational needs (SEN), coaches play a key role, as their inclusive competence determines the creation of an inclusive sports environment and affects the quality of the training process. Previous studies using the COM-B model have shown that Ukrainian coaches rate their readiness to train athletes with SEN low. Since this depends on various factors, it is important to understand how different socio-demographic characteristics may influence their responses and behavior. Study Aim: to conduct a comparative analysis of Ukrainian coaches' perceptions of their capability, opportunities, and motivation to train athletes with special educational needs, which shape their behavior, based on socio-demographic differences and their own coaching experience.

**Material and methods.** The survey, conducted between September 2023 and March 2024, involved 379 Ukrainian coaches from 58 sports disciplines, with an average age of 37 ( $\pm 14$ ) years. Data collection was carried out via Google Forms, and statistical calculations were performed using Microsoft Office Excel 2010 and IBM SPSS Statistics Version 27. Methods included questionnaires and a range of general scientific and mathematical-statistical methods (descriptive statistics, Mann-Whitney U test, and Kruskal-Wallis H test).

**Results.** Statistically significant differences were found in coaches' perceptions of their capability, opportunity, and motivation to train athletes with SEN based on the following factors: sex ( $2,09 \leq |Z| \leq 3,41$ ;  $0,01 < p \leq 0,04$ ; small effect size); experience with SEN athletes ( $5,90 \leq |Z| \leq 8,06$ ;  $p < 0,01$ ; moderate effect size); self-identification as an inclusive coach ( $5,67 \leq |Z| \leq 8,84$ ;  $p < 0,01$ ; moderate to large effect size). No statistically significant differences were found based on age, coaching experience, education level, or specialties.

**Conclusions.** The absence of differences in responses between coaches with and without coaching-specific education indicates that, at present, professional training does not adequately prepare coaches to work with athletes with SEN. These results should be considered when developing training programs and professional development initiatives related to inclusion in sports.

**Key words:** inclusion, sports, COM-B, socio-demographic factors, experience, coach.

## Анотація

**Порівняльний аналіз сприйняття тренерами своєї здатності, можливостей та мотивації до тренування спортсменів з особливими освітніми потребами**

**Передумови та мета дослідження.** У забезпеченні рівних можливостей для всіх спортсменів, включаючи тих, хто має особливі освітні потреби (ООП), тренери відіграють ключову роль, оскільки їх інклюзивна компетентність визначає створення інклюзивного спортивного середовища та впливає на якість тренувального процесу. Попередні дослідження з використанням моделі COM-B показали, що українські тренери низько оцінюють свою готовність тренувати спортсменів з ООП. Оскільки це певною мірою залежить від різноманітних факторів, важливо розуміти, як різні соціо-демографічні характеристики тренерів можуть впливати на їхні відповіді та, відповідно, поведінку. Мета дослідження: здійснення порівняльного аналізу сприйняття тренерами своєї здатності, можливостей та мотивації до тренування спортсменів з особливими





освітніми потребами, які формують їх поведінку, залежно від соціо-демографічних відмінностей та власного досвіду тренерської діяльності.

**Матеріал і методи.** В опитуванні з вересня 2023 по березень 2024 рр. взяли участь 379 тренерів України з 58 видів спорту; середній вік – 37 ( $\pm 14$ ) років. Збір даних проводився за допомогою Google Form, статистичні розрахунки – з використанням Microsoft Office Excel 2010 та IBM SPSS Statistics Версія 27. Застосовані: анкетування, низка загальнонаукових та математико-статистичних (описова статистика, U-критерій Манна-Уїтні, Н-Краскела-Уолліса) методів.

**Результати.** Доведено статистично значущу різницю у сприйнятті тренерів своєї здатності, можливості та мотивації до тренування спортсменів з ООП залежно від: статі ( $2,09 \leq |Z| \leq 3,41$ ;  $0,01 < p \leq 0,04$ ; розмір ефекту – малий); наявності досвіду ( $5,90 \leq |Z| \leq 8,06$ ;  $p < 0,01$ ; розмір ефекту – середній); самоідентифікації себе як інклюзивного тренера ( $5,67 \leq |Z| \leq 8,84$ ;  $p < 0,01$ ; розмір ефекту – середній та великий). Статистично значущі відмінності залежно від віку, стажу роботи, рівня освіти та спеціальності відсутні.

**Висновки.** Відсутність відмінностей у відповідях тренерів, які пройшли та не пройшли навчання за тренерською спеціальністю, свідчить про те, що на сьогоднішній день фахова підготовка тренерів не сприяє формуванню їхньої готовності до роботи зі спортсменами з ООП. Отримані результати дослідження варто враховувати під час розробки програм навчання тренерів, їх професійного розвитку з інклюзивної проблематики.

**Ключові слова:** інклюзія, спорт, COM-B, соціо-демографічні показники, досвід, тренер.

## Introduction

In today's society, which strives for equality and inclusion, sports serve as an important tool for overcoming barriers and promoting social integration [1, 2]. It provides an opportunity not only for physical development but also for personal growth and social interaction [3, 4]. Given this, it is essential to ensure equal opportunities for all athletes, including those with special educational needs (SEN). National data highlight a significant number of barriers to sports participation among children with disabilities, including a lack of qualified personnel, limited sports infrastructure, low awareness of adaptive sports opportunities, and others. This issue is particularly pertinent in the context of martial law in Ukraine, where barriers – especially those resulting from armed aggression – further complicate access to sports and physical activity [5].

Coaches play a critical role in this process, as their inclusive competence determines the creation of an inclusive sports environment and directly impacts the quality of the training process and the achievements of all athletes. However, preliminary results of the study using the COM-B model indicate that Ukrainian coaches have a low assessment of their readiness to train athletes with SEN [6].

Since this study represents an in-depth analysis and continuation of previous work, within this article, we utilize concepts described in prior research [6]. Thus, when referring to athletes with special educational needs (SEN), we mean a spectrum of individuals encompassing the full range of human diversity, differing in characteristics such as gender, age, sexual orientation,

gender identity, race, ethnicity, indigenous or migratory background, language, culture, religion, financial capabilities, and presence of disabilities. Recognizing this diversity allows us to understand that each person has a unique experience related to discrimination or barriers to participation in sports. In practice, a coach's readiness to train athletes with SEN implies readiness to train any person/all individuals. Generally, the «coaches' readiness to work with SEN is a multifaceted concept that goes beyond psychological, pedagogical, physical, and technical-tactical structural components. In the context of this study, coaches who demonstrate readiness are specialists who possess not only the necessary competencies but also the resources and intention to effectively train athletes with SEN. This means they have the requisite knowledge and skills, tools and support, as well as the desire and commitment to implement inclusive practices in the sports environment. This readiness transforms into inclusive coaching behavior» [6].

Coaches' perception of their capability, opportunity, and motivation (COM-B) to effectively work with athletes with SEN is influenced, to some extent, by a variety of factors that can shape their behavior and approaches to the training process. It is essential to understand how different socio-demographic characteristics of coaches—such as gender, age, work experience, and the level and focus of their education—affect their responses and, consequently, their behavior. This understanding will not only help identify key aspects requiring attention but also enable the development of more targeted and effective training and professional development programs for coaches.



*Relationship of the Study with Scientific Programs, Plans, and Themes.* This research was conducted in accordance with the Research Plan of the National University of Physical Education and Sport of Ukraine for 2021–2025, under the theme 1.4, “Theoretical and Methodological Foundations for the Development of Professional, Non-Olympic, and Adaptive Sports in Ukraine in the Context of Reforms in the Field of Physical Culture and Sports” (State Registration Number 0121U108294).

**The purpose of the study is** to conduct a comparative analysis of Ukrainian coaches’ perceptions of their capability, opportunities, and motivation to train athletes with special educational needs, which shape their behavior, based on socio-demographic differences and their own coaching experience.

## Material and methods

### Participants

The survey involved 379 coaches in 58 different sports (including adaptive sports disciplines) who train athletes aged 3 to 70 years with an average work experience of 12 ( $\pm 11$ ) years. The average age of the respondents was 37 ( $\pm 14$ ) years, including 217 (57.3%) men and 162 (42.7%) women.

### Procedure

The capability, opportunity, and motivation of Ukrainian coaches to train athletes with SEN were studied using a Ukrainian-translated and adapted version of the COM-B questionnaire [7], which included 11 questions (4 items related to capability, 5 to opportunity, and 2 to motivation):

#### Capability:

1. I have the necessary knowledge to coach athletes with SEN (including athletes with varying degrees of disability) and to ensure quality training for all.

2. I have the necessary technical/tactical skills to coach athletes with SEN (including athletes with varying degrees of disability) and to ensure quality training for all.

3. I have the necessary interpersonal communication skills to coach diverse athletes, including those with SEN, and to ensure quality training for all.

4. I have received training to coach athletes with SEN and to ensure quality training for all.

#### Opportunity:

5. I have the necessary time to coach athletes with SEN and to ensure quality training for all.

6. I have the necessary methodological resources (manuals, professional development courses, etc.) to coach athletes with SEN and to ensure quality training for all.

7. I have the necessary equipment and condi-

tions to coach athletes with SEN and can ensure quality training for all.

8. I have the necessary social support from my sports organization/club/federation to coach athletes with SEN.

9. I have the necessary social support from my colleagues to coach athletes with SEN.

#### Motivation:

10. I intend to start/continue coaching athletes with SEN (including athletes with varying degrees of disability) over the next 2 years and ensure quality training for all.

11. I want (have the desire) to coach athletes with SEN (including athletes with varying degrees of disability) over the next 2 years and ensure quality training for all.

The COM-B questionnaire was adapted according to the guidelines of the International Test Commission. For linguistic and contextual adaptation, two linguists performed forward and backward translations (English–Ukrainian–English) of the scale items. This process was supplemented by a review from experts in adaptive sports to ensure the appropriateness of the statements within the Ukrainian context and the sports field [6]. Respondents provided their answers between September 2023 and March 2024 using the Google Forms tool, based on a 5-point Likert scale (ranging from 1 – Strongly Disagree to 5 – Strongly Agree). The study was conducted in accordance with the ethical standards of the Helsinki Declaration on research involving human participants. All participants were informed about the anonymity of the survey and the voluntary nature of their participation. The questionnaire demonstrated a high level of internal consistency, with a Cronbach’s alpha coefficient of 0.945.

#### Statistical analysis

General scientific research methods were employed, including analysis, synthesis, generalization, induction and deduction, as well as methods of systemic and logical analysis. Among sociological methods, the survey method—specifically, questionnaire-based surveying—was applied. The study data were subjected to statistical processing using non-parametric analysis methods. Data collection, correction, systematization, and visualization of the results were conducted using Microsoft Office Excel 2016 spreadsheets, while statistical analysis was performed with IBM SPSS Statistics v.27 (IBM Corporation). Quantitative indicators were described using median values (Me) and the 25th and 75th percentiles (25%; 75%). The non-parametric Mann-Whitney U test was used to assess differences between two independent samples (sub-samples) based on the level of various qualitatively measured characteristics. Since the sample sizes were large ( $n >$

20), the distribution of the Mann-Whitney U statistic tended to approximate normality. In such cases, Mann-Whitney hypotheses could be evaluated using the z-statistic. The effect size for the Mann-Whitney U statistic can be calculated using the following formula:

$$r_{effect} = \frac{z}{\sqrt{n}}$$

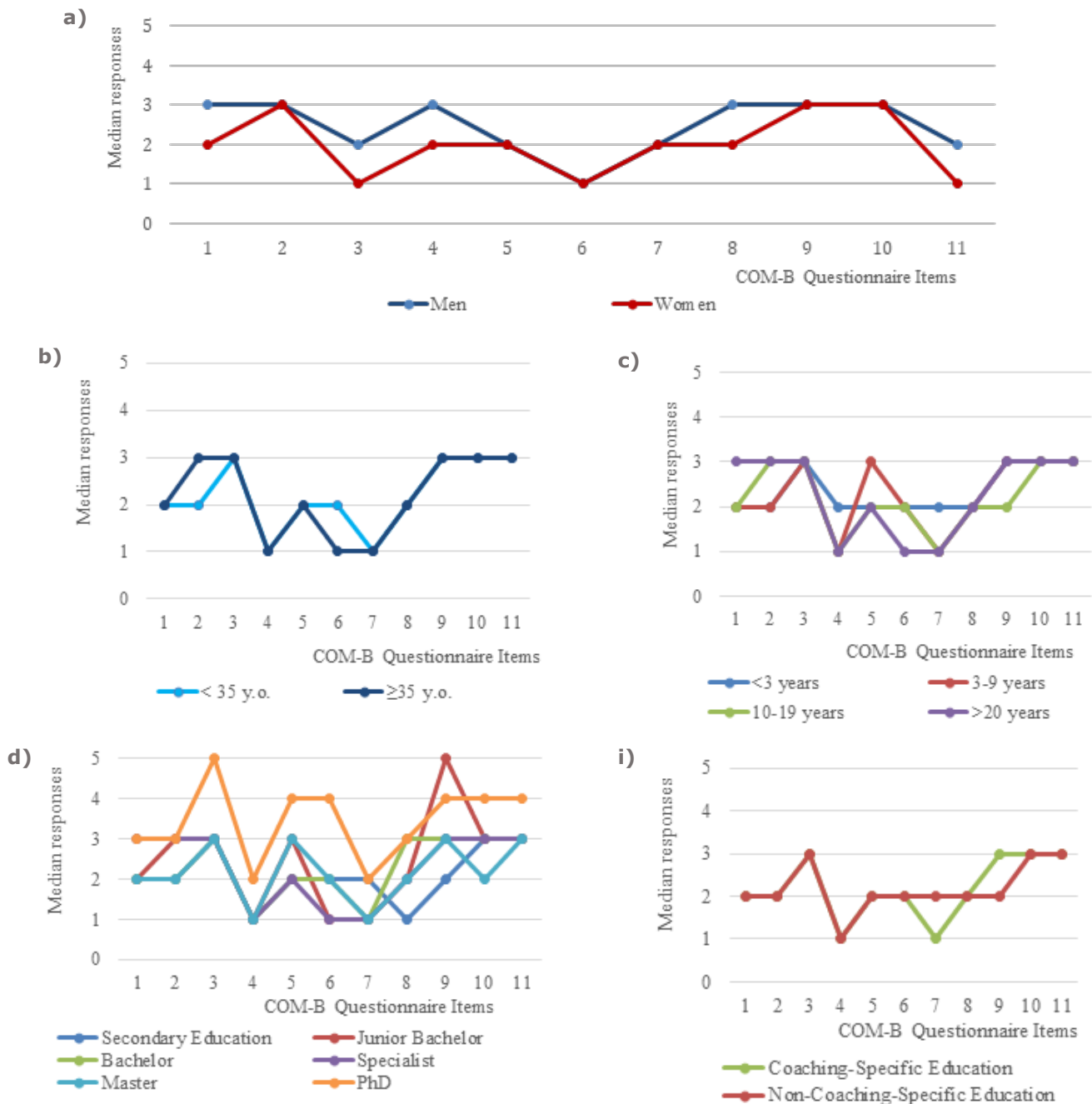
where  $z$  is the standardized score for the U value, and  $n$  is the total sample size.

The effect size for the Mann-Whitney U statistic was interpreted according to J. Cohen's criteria:  $0,10 \leq r_{effect} < 0,30$  – small effect,;  $0,30 \leq$

$r_{effect} < 0,50$  – medium effect;  $r_{effect} \geq 0,50$  – large effect. To assess differences between three or more sub-samples based on the level of a characteristic, the non-parametric Kruskal-Wallis H test was applied. This test allows for determining whether the level of the characteristic changes across groups. Statistical hypotheses were tested at a significance level of  $\alpha = 0,05$ .

## Results

To investigate the impact of socio-demographic factors on coaches' responses regarding their capability, opportunity, and motivation in the



**Figure 1. The Impact of Socio-Demographic Factors on Coaches' Responses Regarding Their Capability, Opportunity, and Motivation in the Context of Professional Inclusive Activities; the distribution by: a) sex, b) age; c) work experience; d) educational (academic) level; e) specialty.**

\* The COM-B questionnaire items are numbered from 1 to 11, and their full description is provided in the Materials and Methods section.



context of professional inclusive activity, a survey was conducted using the COM-B questionnaire [7]. The responses were categorized into groups accordingly. Figure 1 presents line charts illustrating the median responses of participants to the COM-B questionnaire, segmented by various socio-demographic indicators. Each group exhibits unique response patterns, indicating that factors such as gender, age, work experience, and education may influence coaches' capability, opportunity, and motivation to train athletes with SEN, as assessed by the COM-B questionnaire. The study enabled the comparison of the statistical significance of these differences.

### Sex

A comparative analysis was conducted to examine male and female coaches' perceptions of various components of their capability, opportunity, and motivation to train athletes with SEN. Based on the data presented in Figure 1a, it can be inferred that while the median responses of male and female coaches show some differences, overall, both sexes demonstrate similar trends. However, differences in the perception of specific components between the two groups were found to be statistically significant. Male and female coaches differed in their self-assessed knowledge ( $U=14115,5$ ,  $Z=-3,38$ ,  $p<0,001$ ), technical and tactical skills ( $U=14082,5$ ,  $Z=-3,41$ ,  $p<0,001$ ), and interpersonal communication skills ( $U=14697$ ,  $Z=-2,80$ ,  $p=0,005$ ) necessary for training athletes with SEN. Additionally, male respondents were more likely than female respondents to report having received the necessary training to coach athletes with SEN ( $U=15112$ ,  $Z=-2,57$ ,

$p=0,010$ ). It is worth noting, however, that the median responses of both groups to the question about prior training—1 (1; 3) for women and 2 (1; 3) for men—fall below the midpoint value (Tab. 1). This highlights a broader need for training and professional development to ensure coaches have sufficient confidence and competence to work effectively with all athletes [8].

The study results indicate that male coaches evaluate their opportunities to train athletes with SEN significantly higher than female coaches in several areas. These include availability of time ( $U=14897$ ,  $Z=-2,63$ ,  $p=0,009$ ), necessary equipment and conditions ( $U=15348,5$ ,  $Z=-2,30$ ,  $p=0,021$ ), level of social support from their organization ( $U=14344$ ,  $Z=-3,20$ ,  $p=0,001$ ), and support from colleagues ( $U=14949$ ,  $Z=-2,56$ ,  $p=0,010$ ). However, there are no statistically significant differences between male and female coaches regarding the availability of methodological resources ( $U=16550$ ,  $Z=-1,03$ ,  $p=0,302$ ). Nevertheless, the median group-level results, reported as 2 (1; 3) (Table 1), highlight the need for the development and provision of necessary methodological resources to ensure coaches have access to the tools required for working with diverse athletes in inclusive settings [8].

For two questions related to motivation, a statistically significant difference was identified between the mean ranks of the two groups at  $\alpha=0,05$ . Male coaches more frequently expressed their willingness ( $U=15430,5$ ,  $Z=-2,09$ ,  $p=0,037$ ) and intention ( $U=14921,5$ ,  $Z=-2,59$ ,  $p=0,010$ ) to train athletes with SEN over the next two years. The standardized effect size for the Mann-Whitney U statistic corresponds to a small level for

**Table 1. Comparative Analysis of Perceptions of Male and Female Coaches Regarding Various Components of Their Capability, Opportunity, and Motivation to Train Athletes with SEN**

COM-B Questionnaire Items*	Women (N=162)			Men (N=217)			U	Z**	p**	r <sub>effect</sub>
	Me	25%	75%	Me	25%	75%				
1	2	1	3	3	2	4	14115,5	-3,38	<0,001	0,17
2	2	1	3	3	2	4	14082,5	-3,41	<0,001	0,18
3	3	2	4	3	2	4	14697	-2,80	0,005	0,14
4	1	1	3	2	1	3	15112	-2,57	0,010	0,13
5	2	1	3	3	1	4	14897	-2,63	0,009	0,14
6	2	1	3	2	1	3	16550	-1,03	0,302	0,05
7	1	1	2	2	1	3	15348,5	-2,30	0,021	0,12
8	1	1	3	2	1	3	14344	-3,20	0,001	0,17
9	2	1	3	3	1	4	14949	-2,56	0,010	0,13
10	2	1	4	3	2	4	14921,5	-2,59	0,010	0,13
11	3	1	4	3	2	4	15430,5	-2,09	0,037	0,11

#### Note.

\* The COM-B questionnaire items are numbered from 1 to 11, and their full descriptions are provided in the Materials and Methods section.

\*\* Statistically significant differences in indicator values between subgroups ( $|Z_{crit}|=1,96$ ;  $\alpha=0,05$ ) are highlighted in red.

U – Mann-Whitney U statistic; Z – z-score corresponding to U; p – Significance level; r<sub>effect</sub> – Effect size for the Mann-Whitney U statistic.



almost all elements of the questionnaire, with the exception of the sixth question, for which the intergroup difference in responses was not statistically significant (Table 1).

**Age**

To assess whether the capability, opportunity, and motivation of coaches differ significantly by age, the respondent sample was divided into two groups: under 35 years old (n=188) and 35+ years old (n=191). Table 2 presents the group-level indicators, while Figure 1b illustrates individual differences in the group means. The results of the comparative analysis using the Mann-Whitney U test indicate that for 10 out of the 11 questions, there were no statistically significant differences between the two age groups (Tab. 2). However,

for Question 2, statistically significant differences were observed between the groups (p=0,046; z=-2,00). The mean ranks for respondents over 35 years old were significantly higher than those for respondents under 35 years old ( $R_1 = 178,35$ ,  $R_2 = 201,47$ ;  $U_{188,191} = 15882,5$ ). This indicates that older respondents rated their technical and tactical skills for training athletes with SEN significantly higher (Me = 3, 1; 4) than their younger counterparts (Me = 2, 1; 3). The standardized effect size is small ( $r_{effect} = 0,10$ ).

**Coaching Experience**

Based on coaching experience, the sample was divided into four groups: coaches with limited experience (<3 years), those with experience <10 years, <20 years, and experienced coach-

**Table 2. Comparative Analysis of Perceptions of Coaches of Different Age Groups Regarding Various Components of Their Capability, Opportunity, and Motivation to Train Athletes with SEN**

COM-B Questionnaire Items*	<35 y.o. (N=188)			≥ 35 y.o. (N=191)			U	Z	p
	Me	25%	75%	Me	25%	75%			
1	2	1	3	3	1	4	16367,5	-1,53	0,126
2	2	1	3	3	1	4	15882,5	-2,00** (r=0,10)	0,046
3	3	2	4	3	2	4	16059	-1,83	0,068
4	1	1	3	1	1	3	17580	-0,39	0,699
5	2	1	3	2	1	4	17279	-0,66	0,512
6	2	1	3	1	1	3	16708	-1,24	0,215
7	1	1	3	1	1	3	17920,5	-0,04	0,972
8	2	1	3	2	1	3	16974	-0,96	0,337
9	3	1	4	3	1	4	17593,5	-0,35	0,728
10	3	1	4	3	1	4	17861,5	-0,09	0,928
11	3	1	4	3	1	4	17374	-0,56	0,576

**Note.**

\* The COM-B questionnaire items are numbered from 1 to 11, and their full descriptions are provided in the Materials and Methods section.

\*\* Statistically significant differences in indicator values between subgroups ( $|Z_{crit}|=1,96$ ;  $\alpha=0,05$ ). are highlighted in red.

U – Mann-Whitney U statistic; Z – z-score corresponding to U; p – Significance level.

**Table 3. Comparative Analysis of Perceptions of Coaches with Different Levels of Work Experience Regarding Various Components of Their Capability, Opportunity, and Motivation to Train Athletes with SEN**

Work Experience	COM-B Questionnaire Items*											
	Me (25%; 75%)	1	2	3	4	5	6	7	8	9	10	11
< 3 years (N=75)	2 (1;3)	2 (2;3)	3 (2;4)	2 (1;3)	2 (1;3)	2 (1;3)	2 (1;3)	2 (1;3)	2 (1;3)	3 (2;4)	3 (2;4)	3 (2;4)
3-9 years (N=119)	2 (1;3)	2 (1;3)	3 (2;4)	1 (1;3)	3 (1;4)	2 (1;3)	1 (1;3)	2 (1;4)	3 (1;4)	3 (1;4)	3 (2;4)	3 (2;4)
10-19 years (N=88)	2 (1;3)	3 (1;4)	3 (2;4)	1 (1;3)	2 (1;3)	2 (1;3)	1 (1;3)	2 (1;3)	2 (1;3)	3 (1;4)	3 (1;4)	3 (1;4)
≥ 20 years (N=93)	3 (2;4)	3 (2;4)	3 (2;5)	1 (1;3)	2 (1;4)	1 (1;3)	1 (1;3)	2 (1;4)	3 (1;4)	3 (1;4)	3 (1;4)	3 (1;4)
H	4,05	3,10	3,13	1,94	4,47	1,63	2,69	0,21	3,40	0,36	2,22	
p	0,256	0,377	0,372	0,584	0,215	0,652	0,442	0,976	0,334	0,948	0,528	

**Note.**

\* The COM-B questionnaire items are numbered from 1 to 11, and their full descriptions are provided in the Materials and Methods section.

H – Empirical value of the Kruskal-Wallis H test (df=3,  $\chi^2_{krit}=7,815$ ); p – Significance level.



es ( $\geq 20$  years). In four cases, the respondents' coaching experience could not be determined due to missing data, resulting in a total of  $n = 375$  participants whose responses were compared using non-parametric variance analysis. Notably, the median responses of novice coaches with  $< 3$  years of experience did not fall below 2 points. Despite observed differences in the mean scores across groups (Figure 1c), the Kruskal-Wallis H test revealed no statistically significant differences in the mean ranks of responses among the groups

differentiated by coaching experience across all measures of their perceived capability, opportunity, and motivation to train athletes with SEN. At the significance level of  $\alpha=0,05$ , the null hypothesis ( $H_0$ ) is accepted ( $df=3; \chi^2_{emp} < \chi^2_{krit}$ ) (Tab. 3).

**Educational/Academic Level**

To evaluate differences in the studied characteristics based on the educational or academic level of attained qualifications, the sample of coaches was divided into six groups. Respons-

**Table 4. Comparative Analysis of Perceptions of Coaches with Different Educational/Academic Levels Regarding Various Components of Their Capability, Opportunity, and Motivation to Train Athletes with SEN**

Educational/ Academic Level	COM-B Questionnaire Items*											
	1	2	3	4	5	6	7	8	9	10	11	
<b>Me</b> (25%; 75%)												
Secondary Education (N=49)	<b>2</b> (1;3)	<b>2</b> (1;3)	<b>3</b> (2;3)	<b>1</b> (1;3)	<b>2</b> (1;3)	<b>2</b> (1;3)	<b>2</b> (1;3)	<b>1</b> (1;3)	<b>2</b> (1;3)	<b>3</b> (2;3)	<b>3</b> (2;4)	
Junior Bachelor (N=5)	<b>2</b> (1;3)	<b>3</b> (1;3)	<b>3</b> (3;4)	<b>1</b> (1;1)	<b>3</b> (2;4)	<b>1</b> (1;2)	<b>1</b> (1;2)	<b>2</b> (1;3)	<b>5</b> (3;5)	<b>3</b> (2;3)	<b>3</b> (3;4)	
Bachelor (N=51)	<b>2</b> (1;3)	<b>2</b> (1;3)	<b>3</b> (3;4)	<b>1</b> (1;3)	<b>2</b> (1;3)	<b>2</b> (1;3)	<b>1</b> (1;3)	<b>3</b> (1;4)	<b>3</b> (1;4)	<b>3</b> (1;4)	<b>3</b> (2;4)	
Specialist (N=142)	<b>3</b> (1;4)	<b>3</b> (1;4)	<b>3</b> (2;4)	<b>1</b> (1;3)	<b>2</b> (1;4)	<b>1</b> (1;3)	<b>1</b> (1;3)	<b>2</b> (1;3)	<b>3</b> (1;3)	<b>3</b> (1;4)	<b>3</b> (1;4)	
Master (N=121)	<b>2</b> (1;3)	<b>2</b> (1;3)	<b>3</b> (1;4)	<b>1</b> (1;3)	<b>3</b> (1;4)	<b>2</b> (1;3)	<b>1</b> (1;3)	<b>2</b> (1;3)	<b>3</b> (1;4)	<b>2</b> (1;4)	<b>3</b> (1;4)	
PhD (N=7)	<b>3</b> (3;4)	<b>3</b> (2;5)	<b>5</b> (4;5)	<b>2</b> (1;4)	<b>4</b> (3;5)	<b>4</b> (3;5)	<b>2</b> (1;4)	<b>3</b> (3;5)	<b>4</b> (3;5)	<b>4</b> (4;5)	<b>4</b> (4;5)	
H	9,05	7,96	5,92	2,25	4,61	7,26	1,93	7,43	9,65	5,66	8,18	
p	<b>0,107</b>	<b>0,158</b>	<b>0,314</b>	<b>0,814</b>	<b>0,465</b>	<b>0,202</b>	<b>0,858</b>	<b>0,191</b>	<b>0,086</b>	<b>0,341</b>	<b>0,147</b>	

Note.

\* The COM-B questionnaire items are numbered from 1 to 11, and their full descriptions are provided in the Materials and Methods section.

H – Empirical value of the Kruskal-Wallis H test ( $df=5, \chi^2_{kp}=11,070$ ); p – Significance level.

**Table 5. Comparative Analysis of Perceptions of Coaches with Coaching-Specific and Non-Coaching-Specific Education Regarding Various Components of Their Capability, Opportunity, and Motivation to Train Athletes with SEN**

COM-B Questionnaire Items*	Coaching-Specific Education (N=304)			Non-Coaching-Specific Education (N=75)			U	Z	p
	Me	25%	75%	Me	25%	75%			
1	<b>2</b>	1	4	<b>2</b>	1	3	9889	-1,83	<b>0,067</b>
2	<b>2</b>	1	3	<b>2</b>	1	3	10663,5	-0,89	<b>0,373</b>
3	<b>3</b>	2	4	<b>3</b>	2	4	11344	-0,07	<b>0,946</b>
4	<b>1</b>	1	3	<b>1</b>	1	3	11366,5	-0,04	<b>0,965</b>
5	<b>2</b>	1	4	<b>2</b>	1	3	11396,5	0,00	<b>0,997</b>
6	<b>2</b>	1	3	<b>2</b>	1	3	11395	-0,01	<b>0,995</b>
7	<b>1</b>	1	3	<b>2</b>	1	3	11166	-0,30	<b>0,764</b>
8	<b>2</b>	1	3	<b>2</b>	1	3	11247	-0,19	<b>0,851</b>
9	<b>3</b>	1	4	<b>2</b>	1	3	10873,5	-0,64	<b>0,524</b>
10	<b>3</b>	1	4	<b>3</b>	1	3	10657,5	-0,90	<b>0,369</b>
11	<b>3</b>	2	4	<b>3</b>	2	4	10936,5	-0,56	<b>0,576</b>

Note.

\* The COM-B questionnaire items are numbered from 1 to 11, and their full descriptions are provided in the Materials and Methods section.

\*\* Statistically significant differences in indicator values between subgroups ( $|Z_{crit}|=1,96; \alpha=0,05$ ). are highlighted in red.

U – Mann-Whitney U statistic; Z – z-score corresponding to U; p – Significance level;  $r_{effect}$  – Effect size for the Mann-Whitney U statistic.

es from four participants, who reported obtaining multiple higher education degrees and/or did not specify their educational or academic level, were excluded from the analysis ( $n=375$ ). Figure 1d illustrates the heterogeneity of the survey results across groups. However, the application of the non-parametric Kruskal-Wallis H test revealed that coaches' perceptions of their capability, opportunity, and motivation do not depend on their level of education ( $df=5$ ;  $\alpha=0,05$ ;  $\chi^2_{emp} < \chi^2_{krit}$ ). Thus, the null hypothesis ( $H_0$ ) is accepted (Tab. 4).

### Specialty

To identify differences between the responses of participants who completed training in different specialties, the null hypothesis was formulated as follows:  $H_0$ : The level of perception of their capability, opportunity, and motivation among coaches who underwent coaching-specific education is similar to that of coaches with education in other fields. The results of the comparative analysis indicate that differences based on this criterion are not supported at the significance level of  $\alpha=0,05$ . The calculated standardized z-scores for all questionnaire items do not fall within the critical region ( $|Z| < 1,96$ ), and therefore,  $H_0$  is accepted (Tab. 5). Coaches who have undergone specialized training (coaching-specific education) and those who have not show — no significant differences in their responses. This suggests that, at present, specialized education in coaching does not determine or significantly contribute to the formation of coaches' readiness to work with SEN.

### Experience Working with Athletes with SEN

As part of the study, the presence of experi-

ence in coaching athletes with SEN was examined (Tab. 6). Based on the responses, participants were divided into two groups ( $n=262$ ), excluding those who preferred not to specify ( $n=117$ ). The comparative analysis rejected the null hypothesis of equality between the two subgroups for the studied characteristic. Coaches with relevant experience in training athletes with SEN provided significantly higher responses regarding their capability, opportunity, and motivation to train such athletes than those without experience ( $p > 0,05$ ,  $|Z| > 1,96$ ). The standardized effect size for all questionnaire items was moderate ( $0,30 < r_{effect} < 0,50$ ) (Fig. 2a).

### Coaches' Self-Identification as Inclusive

One of the survey questions asked whether respondents considered themselves inclusive coaches. Based on their answers, the sample was divided into groups. A total of 119 respondents were unable to provide a definitive answer, and their responses were excluded from the analysis ( $n=260$ ). Figure 2b clearly illustrates differences in the group-level averages for all COM-B questionnaire items. Comparative analysis of the mean ranks between the two groups showed that these differences were statistically significant at  $\alpha=0,05$ , with the z-score exceeding the critical value ( $|Z_{krit}| = 1,96$ ). For seven questionnaire items, the standardized effect size was moderate. For four other items—related to the presence of relevant knowledge (Question 1), technical and tactical skills (Question 2), interpersonal communication skills (Question 3), and intention to train athletes with SEN over the next two years (Ques-

**Table 6. Comparative Analysis of Perceptions of Coaches With and Without Experience Training Athletes with SEN Regarding Various Components of Their Capability, Opportunity, and Motivation**

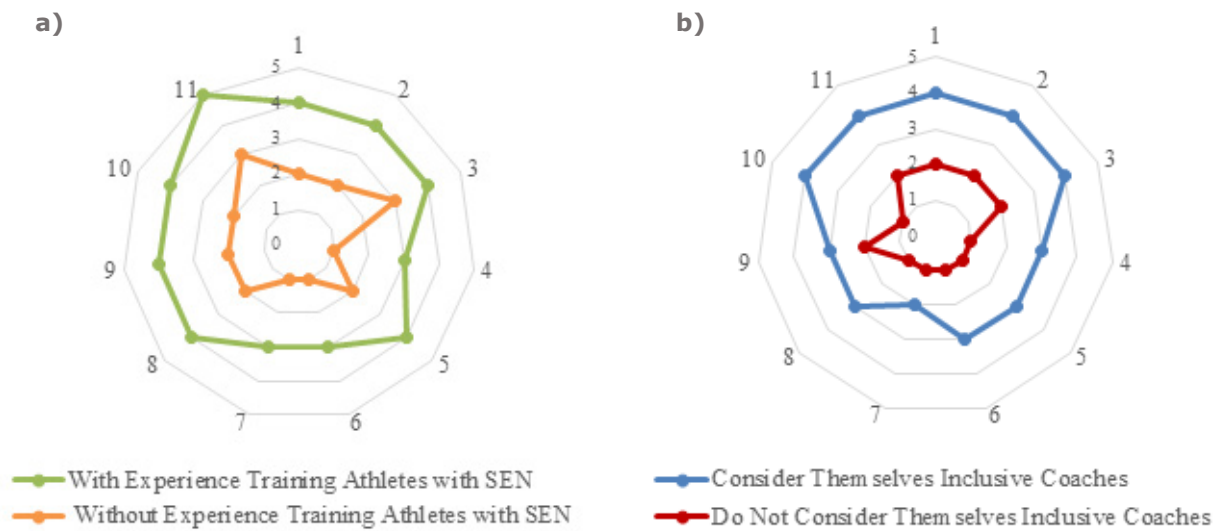
COM-B Questionnaire Items*	With Experience (N=91)			Without Experience (N=171)			U	Z**	p	r <sub>effect</sub>
	Me	25%	75%	Me	25%	75%				
1	4	2	5	2	1	3	6215,5	-7,29	<0,001	0,38
2	4	2	5	2	1	3	6243	-7,24	<0,001	0,38
3	4	3	5	3	2	3	6185,5	-7,31	<0,001	0,38
4	3	1	5	1	1	2	7623,5	-6,02	<0,001	0,31
5	4	2	5	2	1	3	7258,5	-6,08	<0,001	0,32
6	3	2	4	1	1	3	7521	-5,90	<0,001	0,31
7	3	2	4	1	1	2	7048	-6,66	<0,001	0,35
8	4	2	5	2	1	3	6287,5	-7,31	<0,001	0,38
9	4	2	5	2	1	3	7025,5	-6,31	<0,001	0,33
10	4	3	5	2	1	3	5573,5	-8,06	<0,001	0,42
11	5	3	5	3	1	3	6264,5	-7,21	<0,001	0,38

**Note.**

\* The COM-B questionnaire items are numbered from 1 to 11, and their full descriptions are provided in the Materials and Methods section.

\*\* Statistically significant differences in indicator values between subgroups ( $|Z_{crit}| = 1,96$ ;  $\alpha=0,05$ ). are highlighted in red.

U – Mann-Whitney U statistic; Z – z-score corresponding to U; p – Significance level; r<sub>effect</sub> – Effect size for the Mann-Whitney U statistic.



**Figure 2. The Impact of Professional Experience on Coaches' Responses Regarding Their Capability, Opportunity, and Motivation in the Context of Professional Inclusive Activities. Distribution by: a) the presence of experience working with athletes with SEN; b) coaches' self-identification as inclusive.**

\* The COM-B questionnaire items are numbered from 1 to 11, with full descriptions provided in the Materials and Methods section.

**Table 7. Comparative Analysis of Perceptions of Coaches Regarding Various Components of Their Capability, Opportunity, and Motivation to Train Athletes with SEN Depending on Their Self-Identification as Inclusive**

COM-B Questionnaire Items*	Consider Themselves Inclusive Coaches (N=109)			Do Not Consider Themselves Inclusive Coaches (N=151)			U	Z**	p	r <sub>effect</sub>
	Me	25%	75%	Me	25%	75%				
1	4	3	5	2	1	2	3267,5	-8,53	<0,001	0,53
2	4	3	5	2	1	3	3080,5	-8,84	<0,001	0,55
3	4	3	5	2	1	3	3283	-8,49	<0,001	0,53
4	3	1	4	1	1	2	4280	-7,34	<0,001	0,46
5	3	2	5	1	1	3	3978,5	-7,39	<0,001	0,46
6	3	2	4	1	1	2	4075,5	-7,40	<0,001	0,46
7	2	1	4	1	1	2	4709,5	-6,41	<0,001	0,40
8	3	1	5	1	1	3	4998,5	-5,67	<0,001	0,35
9	3	2	5	2	1	3	4608	-6,24	<0,001	0,39
10	4	3	5	1	1	3	3506	-8,15	<0,001	0,51
11	4	3	5	2	1	3	3827,5	-7,56	<0,001	0,47

**Note.**

\* The COM-B questionnaire items are numbered from 1 to 11, and their full descriptions are provided in the Materials and Methods section.

\*\* Statistically significant differences in indicator values between subgroups ( $|Z_{crit}|=1,96; \alpha=0,05$ ). are highlighted in red.

**U** – Mann-Whitney U statistic; **Z** – z-score corresponding to U; **p** – Significance level; **r<sub>effect</sub>** – Effect size for the Mann-Whitney U statistic.

tion 10)—the effect size was large ( $r_{effect} > 0,50$ ) (Tab. 7).

**Discussion**

Many researchers [9, 10, 11] emphasize the benefits of inclusive education and the importance of implementing inclusivity in sports. Inclusive sports practices involve providing expanded opportunities for individuals with diverse characteristics to participate in sports activities of their choice. However, the question of how individual

characteristics of coaches influence their readiness to train athletes with SEN remains open to this day.

A study by K. E. Sakalidis et al. confirmed that a potential barrier to the inclusion of individuals with intellectual disabilities is the lack of emphasis on inclusivity among coaches without experience in inclusive activities. In contrast, coaches who work with athletes with disabilities strive to support and develop their athletes' life skills and engage them in sports to the greatest extent



possible. While both groups of coaches (those working with athletes with and without disabilities) prioritize the athletic progress of their trainees, the latter group tends to be more focused on performance outcomes. Researchers suggest that this difference may be due to the fact that coaches without inclusive experience are more motivated by career ambitions, leading them to adopt a results-oriented approach. This contrasts with the participation-focused and inclusion-driven approach observed among coaches of athletes with disabilities [12]. This difference in coaching motivation and behavior, as documented in the scientific literature, aligns with the findings of the current study. Specifically, the results indicate that coaches with relevant experience in training athletes with SEN rate their capability, opportunity, and motivation significantly higher than coaches without such experience.

Our findings are also supported by previous national studies conducted in Canada on coaches' perceptions of their capabilities, opportunities, and motivation to train athletes with disabilities. The Canadian sample of coaches working with both athletes with and without disabilities exhibits similar response trends. Coaches with experience training athletes with disabilities reported significantly higher levels of perceived capability, opportunity, and motivation compared to those without such experience. These differences were statistically significant ( $p < 0,001$ ) across all three dimensions [13]. Overall, coaches without inclusive experience reported lower intentions to train athletes with disabilities over the next two years compared to those with prior experience. However, this indicator increased slightly over five years, compared to 2018, when the intention score for coaches working with athletes without disabilities was 2.78 points [14]. It can be hypothesized that this shift in results may be influenced by the fact that, over the five years following the initial survey, coaches may have participated in specialized training programs and events, which could have impacted the study outcomes.

Additionally, Hammond A. M. highlights that the context in which coaches worked had a significant impact on how they translated their pedagogical knowledge and skills into practice and interpreted external policy texts. Several factors—including the location of the institutions where coaches were employed, their personal backgrounds, material resources, and external stakeholders—influenced how they implemented inclusion policies. Material conditions, particularly economic and financial constraints, as well as local circumstances such as geography and the historical development of local clubs, affected the adoption of inclusive policies. These factors determined the resources available for inclusive

practices and the ability of coaches to implement them effectively. Moreover, a sense of social justice and previous positive experiences working with athletes with disabilities also played a role in shaping a coach's readiness and effectiveness in adopting inclusive practices [15].

Regarding gender, some pedagogical studies have shown that female teachers generally demonstrate a more positive attitude toward inclusion than their male counterparts [16, 17], while another study by Dorji R. et al. [18] reported opposite findings. Several additional factors may also influence these attitudes, including prior experience teaching students with SEN [18], physical and human resources [19], and years of teaching experience [20]. In the study by Chow W. S. and Sharma U., teachers' perceived need for support was used as a proxy indicator for subjective norms. In other words, due to the anticipated need for support, teachers may have experienced social pressure, compelling them to provide support to students with SEN. Consequently, it was concluded that teachers were more willing to implement inclusion principles in the educational process when they received adequate institutional support [21]. In their review, Wray E. et al. [22] also emphasized the influence of demographic and professional variables (such as knowledge, teaching experience, experience working with children with SEN, age, and gender) on teachers' self-efficacy [23]. However, these findings are only partially confirmed by the survey results of Ukrainian coaches.

At the national level in Ukraine, there is growing awareness of the challenges related to ensuring inclusion in sports, and several initiatives have been implemented to address these issues. One significant step in this direction has been the approval of competition rules incorporating adaptive sports components by the Ministry of Youth and Sports of Ukraine, in collaboration with various sports federations [24]. In particular, the adaptation of competition rules for grappling, pankration, chess, strongman, and WKC karate for war veterans and individuals with disabilities demonstrates a commitment to expanding opportunities for these populations. These actions contribute to the development of adaptive sports and the engagement of veterans and individuals with disabilities in sports activities, playing a key role in their physical and psychological rehabilitation as well as their reintegration into society. Although these initiatives are partial solutions, they represent a gradual response to contemporary challenges and a commitment to fostering inclusive sports environments. At the same time, they highlight the need for further improvements, such as: expanding adaptive practices to other sports, supporting infrastructure modifications, and pro-



viding specialized training for coaches to work with diverse populations, including those with or potentially developing special educational needs. This approach will not only contribute to the development of adaptive sports but also facilitate the integration of equal opportunity principles into the broader context of sports activities in Ukraine.

## Conclusions

A comparative analysis was conducted on coaches' perceptions of various components of their capability, opportunity, and motivation to train athletes with special educational needs (SEN)—factors that shape their coaching behavior—depending on their socio-demographic differences and coaching experience.

1. Male coaches generally rate their capability, opportunity, and motivation for training athletes with SEN statistically significantly higher than female coaches. The effect size is small.

2. Coaches of different ages do not show significant differences, except in the perceived presence of technical and tactical skills for training athletes with SEN, which coaches over 35 years old rate significantly higher than younger coaches. The effect size is small.

3. There is no statistically significant difference ( $\alpha=0,05$ ) in responses between groups with different coaching experience levels.

4. Coaches' perceptions of their capability, opportunity, and motivation do not significantly differ across educational or academic levels.

5. The perceived readiness of coaches with coaching-specific education to train athletes with SEN is similar to that of coaches with other specialties.

6. Coaches with experience training athletes with SEN provide significantly higher responses compared to those without such experience. The effect size is moderate.

7. Differences in responses between coaches who self-identify as inclusive and those who do not are statistically significant, with higher ratings among the first group. The effect size ranges from moderate to high.

Given the proven significance of coaching experience with athletes with SEN and self-identification as an inclusive coach in shaping a coach's readiness for inclusive training, **future research** should focus on enhancing and developing educational and methodological support for coaches' professional training, with a strong emphasis on inclusive practices.

## References

1. Lange S, Bolt G, Vos S, Völker B. Inclusion of the marginalized: the case of sport participation. *J Glob Sport Manag* [Internet]. 2024 Mar 12 [cited 2025 Jan 30]:1-29.

Available from: <https://doi.org/10.1080/24704067.2024.2317121>

- Campos MJ, Pečnikar Oblak V, Massart A, Ljubotina P, Perényi S, Farkas J, Sarmiento H, Doupona M. Listening to stakeholders' voices on funding social inclusion in sport for people with disabilities—proposal for criteria. *Sports* [Internet]. 2024 May 27 [cited 2025 Jan 30];12(6):147. Available from: <https://doi.org/10.3390/sports12060147>
- Morgan H, Parker A. Generating recognition, acceptance and social inclusion in marginalised youth populations: the potential of sports-based interventions. *J Youth Stud* [Internet]. 2017 Mar 14 [cited 2025 Jan 30];20(8):1028-43. Available from: <https://doi.org/10.1080/13676261.2017.1305100>
- Borland RL, Hu N, Tonge B, Einfeld S, Gray KM. Participation in sport and physical activity in adults with intellectual disabilities. *J Intellect Disabil Res* [Internet]. 2020 Oct [cited 2025 Jan 29];64(12):908-22. Available from: <https://doi.org/10.1111/jir.12782>
- The level of involvement of children and youth in motor and physical activity and the impact of sport on physical and mental health: a report on the results of the study [Riven zaluchenosti ditei ta molodi do rukhvoi i fizychnoi aktyvnosti ta vplyv sportu na fizychni i mentalne zdorovia: zvit za rezultatamy doslidzhennia] [Internet]. Kyiv: [publisher unknown]; 2023. 62 p. Available from: [https://dismp.gov.ua/wp-content/uploads/Zvit\\_ruhova-aktivnist.pdf](https://dismp.gov.ua/wp-content/uploads/Zvit_ruhova-aktivnist.pdf) (in Ukrainian)
- Shevchuk O, Kohut I, Marynych V. Coaches readiness to work with athletes with special educational needs: a nationwide study based on the COM-B model. *Slobozhanskyi Her Sci Sport* [Internet]. 2024 Dec 30;28(4):175-84. Available from: <https://doi.org/10.15391/snsv.2024-4.001>
- Michie S, van Stralen MM, West R. The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implement Sci* [Internet]. 2011 Apr 23 [cited 2025 Jan 30];6(1). Available from: <https://doi.org/10.1186/1748-5908-6-42>
- Shevchuk O, Kohut I, Marynych V. Swot analysis of implementing inclusivity in coaches' work. *Phys Educ Sport Health Cult Mod Soc* [Internet]. 2024 Sep 30 [cited 2025 Jan 30];3(67):67-74. Available from: <https://doi.org/10.29038/2220-7481-2024-03-67-74> (in Ukrainian)
- European Agency for Special Needs and Inclusive Education. Teacher education for inclusion: profile of inclusive teachers [Internet]. Odense, Denmark: [publisher unknown]; 2012 [cited 2025 Jan 30]. 50 p. Available from: <https://www.european-agency.org/resources/publications/teacher-education-inclusion-profile-inclusive-teachers>
- European Agency for Special Needs and Inclusive Education. Profile for inclusive teacher professional learning: including all education professionals in teacher professional learning for inclusion [Internet]. Odense, Denmark: [publisher unknown]; 2022 [cited 2025 Jan 30]. 67 p. Available from: <https://www.european-agency.org/resources/publications/TPL4I-profile>
- Darcy S, Lock D, Taylor T. Enabling inclusive sport participation: effects of disability and support needs on constraints to sport participation. *Leis Sci* [Internet]. 2016 May 18 [cited 2025 Jan 30];39(1):20-41. Available from: <https://doi.org/10.1080/01490400.2016.1151842>
- Sakalidis KE, Fadeeva A, Hettinga FJ, Ling FC. The role of the social environment in inclusive sports participation—Identifying similarities and challenges in athletes with and without Intellectual Disabilities through coaches' eyes: a qualitative inquiry. *Plos One* [Internet]. 2023 Jan 11 [cited 2025 Jun 30];18(1). Available from: <https://doi.org/10.1371/journal.pone.0280379>
- Canadian Disability Participation Project & Ontario Paraspport Collective. An investigation of coaches' and classifiers' perceptions of working with athletes with



- a disability. [Internet]. Kingston: Queen's University; 2018. 70 p. Available from: [https://cdpp.ca/sites/default/files/REPORT%20An%20Investigation%20of%20Coaches%20And%20Classifiers%20Perceptions%20of%20Working%20with%20Athletes%20with%20a%20Disability\\_FINAL.pdf](https://cdpp.ca/sites/default/files/REPORT%20An%20Investigation%20of%20Coaches%20And%20Classifiers%20Perceptions%20of%20Working%20with%20Athletes%20with%20a%20Disability_FINAL.pdf)
14. Canadian Disability Participation Project & Ontario Parasport Collective. An investigation of coaches' and classifiers' perceptions of working with athletes with a disability. [Internet]. Kingston: Queen's University; 2023. 85 p. Available from: <https://parasportontario.ca/images/opc/opc-resources/coaching-perspectives-2023.pdf>
  15. Hammond AM. The relationship between disability and inclusion policy and sports coaches' perceptions of practice. *Int J Sport Policy Politics* [Internet]. 2022 May 20 [cited 2025 Jun 30]:1-17. Available from: <https://doi.org/10.1080/19406940.2022.2074515>
  16. Boyle C, Topping K, Jindal-Snape D. Teachers' attitudes towards inclusion in high schools. *Teach Teach* [Internet]. 2013 Oct [cited 2025 Jan 30];19(5):527-42. Available from: <https://doi.org/10.1080/13540602.2013.827361>
  17. Saloviita T. Attitudes of teachers towards inclusive education in Finland. *Scand J Educ Res* [Internet]. 2018 Nov 27 [cited 2025 Jan 30];64(2):270-82. Available from: <https://doi.org/10.1080/00313831.2018.1541819>
  18. Dorji R, Bailey J, Paterson D, Graham L, Miller J. Bhutanese teachers' attitudes towards inclusive education. *Int J Incl Educ* [Internet]. 2019 Jan 13 [cited 2025 Jan 30]:1-20. Available from: <https://doi.org/10.1080/13603116.2018.1563645>
  19. Monsen JJ, Ewing DL, Kwoka M. Teachers' attitudes towards inclusion, perceived adequacy of support and classroom learning environment. *Learn Environ Res* [Internet]. 2013 Oct 2 [cited 2025 Jan 30];17(1):113-26. Available from: <https://doi.org/10.1007/s10984-013-9144-8>
  20. Yada A, Savolainen H. Japanese in-service teachers' attitudes toward inclusive education and self-efficacy for inclusive practices. *Teach Teach Educ* [Internet]. 2017 May [cited 2025 Jan 30];64:222-9. Available from: <https://doi.org/10.1016/j.tate.2017.02.005>
  21. Chow WS, Sharma U. Are in-service teachers supported in Hong Kong? Teachers' perceived support needs in the implementation of inclusive education. *Int J Incl Educ* [Internet]. 2022 Aug 30 [cited 2025 Jan 30]:1-17. Available from: <https://doi.org/10.1080/13603116.2022.2118379>
  22. Wray E, Sharma U, Subban P. Factors influencing teacher self-efficacy for inclusive education: a systematic literature review. *Teach Teach Educ* [Internet]. 2022 Sep [cited 2025 Jan 30];117. Available from: <https://doi.org/10.1016/j.tate.2022.103800>
  23. Mentel H, Förster N, Forthmann B, Souvignier E. Predictors of teachers' behavioral intentions in inclusive education and their changes over time: a competitive test of hypotheses. *Teach Teach Educ* [Internet]. 2024 Apr [cited 2025 Jan 30];141. Available from: <https://doi.org/10.1016/j.tate.2024.104509>
  24. Ministry of Youth and Sports of Ukraine [Internet]. Rules for competitions with an adaptive sports component approved [Zatverdzheno Pravyla zmahan z komponentom adaptivnoho sportu]; [cited 2025 Jan 30]. Available from: <https://mms.gov.ua/news/zatverdzheno-pravyla-zmahan-z-komponentom-adaptivnoho-sportu> (in Ukrainian)

## Supplementary Information

### Article details

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