

Contact with people with disabilities in relation to the socio-demographic characteristics of the respondents

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Abstract

Contact with people with disabilities is one of the most commonly examined variables that can influence changes in attitudes toward persons with disabilities, while positive social interactions may lead to a reduction in prejudice and discrimination. The aim of this study was to examine the frequency of contact with people with disabilities in relation to the gender and age of the respondents in inclusive and non-inclusive classrooms. The sample included 331 participants from third to fifth grade of regular primary schools. The total sample consisted of 161 (48.6%) boys and 170 (51.4%) girls. Data were collected using a socio-demographic questionnaire and the Contact with Disabled Persons Scale (CDP). The results showed that there was no statistically significant difference in the frequency of contact with people with disabilities in relation to the gender of the respondents ($p = 0.178$; $p = 0.280$). On the other hand, a statistically significant difference was found in the frequency of contact in relation to the grade level of the students in both groups of respondents ($p = 0.000$; $p = 0.007$). Third-grade students reported a lower frequency of contact compared to fifth-grade students. Contact with people with disabilities is an important social dimension of inclusive education and therefore requires attention in future research.

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Introduction

According to the Law on Primary Education from 2017, inclusive education implies the right to equal opportunities in education for all individuals, particularly the right of children with developmental disabilities, as well as gifted children, to maximize the development of their potentials (Government of the Republic of Srpska, 2017).

Inclusive education is a concept that has raised numerous questions regarding the academic outcomes of both typically developing children and children with disabilities. In addition, an essential area of interest concerns the social outcomes of inclusive education, which include contact with individuals with disabilities. Theorists of inclusion expect that students with typical development in such educational environments will achieve numerous positive outcomes, such as greater tolerance and easier acceptance of diversity (Peck et al., 1990; Staub et al., 1994). Furthermore, positive social outcomes include the reduction of prejudice toward individuals with disabilities, acceptance of others, developing understanding, and readiness to confront disability within their personal lives (Hehir et al., 2016; Ruijs & Peetsma, 2009). Salend and Duhaney (1999) conclude that students in inclusive classrooms demonstrate progress in acceptance, understanding, and tolerance toward individual differences. On the other hand, students in non-inclusive classrooms maintain stereotypes and a more negative perception of diversity and peers with disabilities. For these reasons, it is considered that inclusive education can have a positive impact on typically developing students, primarily because interactions with students with disabilities may contribute to reducing prejudice toward individuals who behave, act, or look differently (Krampač Grljušić & Kolak, 2018).

One of the most cited theories regarding attitude change toward members of different groups is Allport's Intergroup Contact Theory (Allport, 1954). Allport's contact hypothesis states that contact can lead to more positive attitudes if certain preconditions are met. These conditions define that contact must not be superficial, must be supported and encouraged by authority figures, must be pleasant, and participants entering the interaction must have equal status. The goals should be cooperative rather than competitive, and members of the minority group should be perceived as positive representatives of that group (Allport, 1954, as cited in Bridges & John, 2010; Barr & Bracchitta, 2015).

Contact is a variable that is often associated with the expression of attitudes toward people with disabilities. The results of most studies indicate the existence of a positive relationship between these variables (Armstrong et al., 2016; Cairns & McClatchey, 2013; Gonçalves & Lemos, 2014; Hong et al., 2014; Kalyva & Agaliotis, 2009; MacMillan et al., 2014). Researchers agree that children's understanding of disability and previous contact with individuals with disabilities has a positive influence on their feelings toward people with disabilities and their behavioral intentions (MacMillan et al., 2014). However, research findings are not always so optimistic. For example, studies show that 90% of students with disabilities occasionally maintain friendships with peers outside of school. Additionally, about 10% of them never visit friends outside of school nor participate in social activities organized by their typically developing peers (Wagner et al., 2002). Moreover, they participate far less frequently in school activities during classes and breaks when compared to typically developing children (see Krampač Grljušić & Kolak, 2018).

The aim of this study was to examine the frequency of contact with individuals with disabilities in relation to the gender and age of participants in inclusive and non-inclusive classrooms.

Methods

Sample

The sample included 331 participants, from third to fifth grade of regular primary schools in the Sarajevo-Romanija and Herzegovina regions. The initial sample was divided into two subsamples: participants who attend classes together with a student with intellectual disability (inclusive classrooms) and participants from classrooms where there were no children with disabilities (non-inclusive classrooms). Accordingly, there were 163 students (49.2%) in inclusive classrooms and 168 (50.8%) in non-inclusive classrooms. The total sample consisted of 161 boys (48.6%) and 170 girls (51.4%). Table 1 presents the distribution of participants according to the grade they attend.

Table 1

Distribution of the sample according to grade level

Students	Grade level					
	Third		Fourth		Fifth	
	N	%	N	%	N	%
IC	67	41.1	36	22.1	60	36.8
NIC	67	39.9	35	20.8	66	39.3
Σ	134	40.5	71	21.4	126	38.1

IC = Inclusive Classrooms, NIC = Non-Inclusive Classrooms

Instruments

A questionnaire was constructed specifically for this study to collect data related to the socio-demographic characteristics of the participants. Contact with individuals with disabilities was assessed using the Contact with Disabled Persons Scale (CDP; Yuker & Hurley, 1987). The scale consists of 20 items, with response options ranging from 1 (never), 2 (once or twice), 3 (a few times), 4 (often) to 5 (very often). The instrument is designed to measure the quantity of an individual's previous contact with persons with disabilities. Higher scores indicate a greater frequency of contact. The authors report good reliability measured by Cronbach's alpha coefficient of 0.92. In our sample, the reliability was also satisfactory, with a Cronbach's alpha value of 0.84.

Statistical Data Analysis

Before applying the appropriate statistical tests, indicators of skewness and normality of the distribution of results on the instrument were examined. The Kolmogorov–Smirnov test showed that the distribution significantly deviates from normality ($p = 0.000$). Therefore, non-parametric statistical tests were used in the subsequent analysis: the Mann–Whitney U test and the Kruskal–Wallis rank test. Percentages, medians, and minimum and maximum values were used to present the relevant parameters. Data analysis and statistical processing were conducted using the Statistical Package for the Social Sciences – SPSS (version 23.0). The obtained results are presented in tables.

Results

Table 2 presents the results of assessing the frequency of contact with individuals with disabilities in relation to the gender of the participants. No statistically significant difference was found among students in either inclusive ($p = 0.178$) or non-inclusive classrooms ($p = 0.280$). Median values indicate a relatively low frequency of contact among both boys and girls.

Table 2

Differences in contact with students with disabilities by participant gender

Scale	Students	Gender	Mdn	IQR	Min	Max	Man-Vitni U test	Z	p
CDP	IOD	M	37,00	12,00	21,00	59,00	2909,500	-1,348	0,178
		$\bar{Z}$	38,00	14,00	20,00	86,00			
	NIOD	M	29,000	12,00	20,00	58,00	3187,500	-1,080	0,280
		$\bar{Z}$	32,00	11,00	20,00	66,00			

IC = Inclusive Classrooms, NIC = Non-Inclusive Classrooms

The results presented in Table 3 show that there is a statistically significant difference in the frequency of students' contact with individuals with disabilities according to grade level in both groups of participants. Post hoc tests with Bonferroni correction ($p < 0.017$ considered significant) indicate a significant difference in contact frequency between third- and fifth-grade students ($U = 1253.000$, $Z = -3.659$, $p = 0.000$; $U = 1608.500$, $Z = -2.714$, $p = 0.007$), with third-grade students showing a lower frequency of contact compared to fifth-grade students.

Table 3

Differences in the frequency of contact with individuals with disabilities among student groups according to grade level

Scale	Students	Grade	Mdn.	IQR	Min	Max	Man-Whitney U	3rd	4rd
CDP	IC	3rd	34,00	12,00	21,00	65,00	U		
							Z		
							p		
		4rd	37,00	14,50	20,00	62,00	U	1002,500	
							Z	-1,403	
							p	0,161	
	NIC	5rd	40,50	12,50	24,00	86,00	U	1253,000	902,50
							Z	-3,659	0
							p	0,000	-1,345
									0,179
		3rd	28,00	11,00	20,00	61,00	U		
							Z		
							p		
	NIC	4rd	30,00	11,00	20,00	55,00	U	1105,500	
							Z	-0,473	
							p	0,636	
		5rd	33,00	12,25	20,00	66,00	U	1608,500	893,00
							Z	-2,714	0
							p	0,007	-1,871
									0,061

Kruskal–Wallis Rank Test Values: IC – $\chi^2 = 12,732$, $df = 2$, $p = \mathbf{0,002}$; NIC – $\chi^2 = 8,088$, $df = 2$, $p = \mathbf{0,018}$

Table 4 presents the descriptive parameters of the assessment of students' frequency of contact with individuals with disabilities. The situations in which contact was perceived by the participants as least or most frequent are highlighted. In inclusive classrooms, students reported the lowest frequency of contact in situations that require more intimate interactions, such as talking with individuals with disabilities or socializing through home visits. On the other hand, slightly higher contact frequency was observed in situations where students were expected to provide some form of assistance to a person with a disability.

Table 4

Descriptive parameters of contact frequency in inclusive classrooms

Items	M
How often did individuals with developmental disabilities talk to you about their life or problems?	1,34
How often did you talk to an individual with developmental disabilities about your life or problems?	1,43
How many times did an individual with developmental disabilities visit you at home?	1,47
How many times did you visit friends with developmental disabilities at their homes?	1,49
How often did you participate in charity or fundraising activities for individuals with developmental disabilities?	3,31
How often did you have a brief conversation with individuals with developmental disabilities?	2,52
How often did you have the opportunity at school to help a student with developmental disabilities?	2,55
How often did you try to help individuals with developmental disabilities solve their problems?	2,44

Table 5 presents the descriptive parameters of contact frequency among students in non-inclusive classrooms. Similar to the previous group of participants, the lowest frequency of contact was observed in situations requiring closer interactions (e.g., conversations, home visits). In contrast, mean values were higher in situations related to actions providing assistance to individuals with disabilities, as well as in situations assessing contact frequency with individuals toward whom the students expressed sympathy or whose behavior they found satisfactory.

Table 5*Descriptive parameters of contact frequency in non- inclusive classrooms*

Items	M
How often did you talk to an individual with developmental disabilities about your life or problems?	1,21
How often did you work on tasks or study together with a student with developmental disabilities at school?	1,29
How many times did an individual with developmental disabilities visit you at home?	1,29
How often did you participate in charity or fundraising activities for individuals with developmental disabilities?	3,00
How many times did you meet an individual with developmental disabilities toward whom you felt sympathy?	2,19
How often were you satisfied with the behavior of an individual with developmental disabilities?	1,89

Discussion

The aim of this study was to examine differences in the frequency of contact with individuals with disabilities in relation to the socio-demographic characteristics of the participants. The results showed no difference in contact frequency based on gender. On the other hand, the grade level attended by the students produced a statistically significant difference, with higher contact frequency observed among students in higher grades. Furthermore, analyses of descriptive parameters indicate that typically developing students have lower contact frequency in situations that require closer interactions.

Although it was expected that girls would have a higher frequency of contact with individuals with disabilities because girls generally tend to hold more positive attitudes toward peers with disabilities, and previous research often finds a positive relationship between attitudes and contact (Armstrong et al., 2016; Gonçalves & Lemos, 2014; Schwab, 2017), the results did not confirm this. A study with an almost identical methodological design conducted on a sample of students from Bosnia and Herzegovina reported opposite findings, indicating that girls have a higher frequency of contact with individuals with disabilities (Đorem et al., 2021). Similarly, a study conducted in Serbia found that girls maintain lower social distance toward students with disabilities (Kovačević & Radovanović, 2020).

Students in higher grades demonstrate a greater frequency of contact compared to students in lower grades in both participant groups. The results of the aforementioned study by Đorem et al. (2021) also indicate that students in higher grades achieved higher scores on the scale, although the observed difference was not statistically significant. In contrast, older children showed lower social distance toward peers with disabilities in a study conducted on a sample of children aged seven to fifteen years (Kovačević & Radovanović, 2021).

The analyzed results showed that students in our sample engage in the lowest frequency of contact with individuals with disabilities in situations that require closer, more intimate

interactions (e.g., home visits, brief or social conversations). These findings are not particularly surprising, as the participants, on average, have very infrequent contact with this population. The low variability in the descriptive results did not allow for a clear distinction between situations in which students have lower or higher contact frequency.

The obtained results are consistent with those of other studies (Đorem et al., 2021; Talijan, 2017). Furthermore, they align with findings indicating that students with disabilities rarely visit their peers outside of the school context (Wagner et al., 2002). Such findings may also be explained by research reporting that social distance among typically developing students increases in areas requiring emotional and physical closeness (Kovačević & Radovanović, 2021). Additionally, students with disabilities are less likely to initiate social interactions with typically developing peers and participate less frequently in classroom activities and school breaks compared to their typically developing peers (Đević, 2015).

Given that students in our sample rarely engage in contact with individuals with disabilities, it is necessary to work on creating conditions that allow students to interact with peers with disabilities, not only within their own classrooms. This is particularly important because superficial contact alone is insufficient to change attitudes. In contrast, contact during joint activities, chosen by the students themselves, is associated with more positive attitudes (Schwab, 2017). Moreover, during joint activities, children with disabilities develop a sense of security and belonging to the group, which can serve as a foundation for later social relationships.

The lack of research in our country gives this study an advantage, as the results provide the first insight into the extent to which contact with individuals with disabilities occurs. However, future research should focus not only on examining the frequency of contact but also its quality. Additionally, future studies should consider contact with individuals with various types of disabilities. It would also be desirable to include older students in such research.

Conclusion

The study conducted on a sample of primary school students provides insight into the frequency of their contact with individuals with disabilities in relation to socio-demographic characteristics. The results show no difference in contact frequency based on the participants' gender. Students in higher grades demonstrated somewhat more frequent contact. Regardless of gender and age, our participants, on average, engage in infrequent contact with this population. These findings highlight the importance of facilitating contact with individuals with disabilities from an early age, as well as creating opportunities for interaction while ensuring all conditions that can lead to a positive experience are met. In this context, contact represents an important social dimension of inclusive education and therefore warrants attention in future research.

Conflict of interest

None.

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