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Multidimensional assessment of student teachers' self-esteem and attitudes towards inclusive education and people with disabilities

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ABSTRACT

This research aims to investigate the relationship between the self-esteem of student teachers, their attitudes towards inclusive education for children with disabilities, and the mediating factor of their attitudes towards people with disabilities. The study involved 562 student teachers from Poland. Significant correlations were found between the student teachers' attitudes towards inclusion, self-esteem and attitudes towards people with disabilities. Higher self-esteem was associated with more positive attitudes, manifested as thoughts about people with disabilities, emotions felt towards them, and behaviours directed at them. The results show that the correlation between self-esteem and negative attitudes towards inclusion is mediated by negative attitudes towards persons with disabilities. These results correspond to findings pointing to the importance of self-esteem as a psychological resource that affects one's interpretation of difficulties, life situations, and other people. The correlations of these three complex variables form a basis for a model of how to educate student teachers on inclusion.

Introduction

Student teachers form a unique population: they are future leaders who will make decisions that directly or indirectly affect people with disabilities (PWD) and/or special educational needs. Scholars have argued that measuring attitudes towards PWD does not directly affect the lives of PWD or influence people's behaviour. However, the ability to understand and articulate predictors of student teachers' attitudes towards PWD is perceived as a major factor in improving teacher training, promoting an inclusive school environment, and increasing social and vocational integration. Attitudes are recognised as a significant element of any social change: they may support vulnerable groups to overcome barriers and prejudices or – on the other hand – may hamper their inclusion (Vilchinsky & Findler, 2004). Even in the third decade of the 21st century, negative attitudes towards PWD are still pervasive and often lead to adverse treatments of PWD such as

bullying, obstacles in full participation in social life, and employment discrimination (cf. Antonak & Livneh, 2000).

The aim of the research presented here is to investigate the relationship between the self-esteem of student teachers, their attitudes towards inclusive education for children with disabilities, and the mediating factor of their attitudes towards people with disabilities. The correlations of these three complex variables may form a basis for a model of more effective teacher training around inclusion. We know that student teachers' attitudes may alter after they have started working at inclusive schools (Mintz et al., 2020). However, it is necessary to help them cope with the eventual reality of this work by supporting them to acquire positive attitudes towards inclusion for students with disabilities early on, during their training.

Student teachers' beliefs on inclusion of students with disabilities

The attitudes of student teachers towards inclusive education have been shown to be a significant predictor of future implementation of education for students with special needs (Ruppar, 2017), especially inclusive education (Sze, 2009). Student teachers are supposed to develop different skills to attend to the diversity and special needs of students with disabilities and other conditions. Their attitudes and the activities that result from those attitudes might either facilitate or inhibit inclusion in the educational context.

Generally, teachers express attitudes towards inclusion that range from *positively inclined* (Protic-Gava, Boskovic, Smajic, Simic-Panic, & Naumowic, 2018) to *fairly positive* (Logan & Bogart, 2020) and *definitely positive* (Chrzanowska, 2018). Research also indicates that a positive attitude towards inclusion is even more important for the success of inclusive education than either knowledge or skills (Pearce, 2009; Pearce, Gray, & Campbell-Evans, 2009).

Teachers' attitudes towards inclusion are reported to be influenced by several factors, the first being the type and severity of disability: the more severe the child's disability, the less positive the teacher's attitude towards inclusion (Bąbka & Podgruszewska, 2016; Forlin & Chambers, 2011; Ćwirynkało & Żyta, 2015; Ellins & Porter, 2005; Hastings & Oakford, 2003). Teachers were generally found to be more supportive of including children with physical and sensory disabilities than those with intellectual, learning and behavioural disabilities (Avramidis & Norwich, 2002; Bąbka & Podgruszewska, 2016; Ćwirynkało & Żyta, 2015; de Boer, de Pijl, & Minnaert, 2011; Ellins & Porter, 2005; Hastings & Oakford, 2003). The amount of experience that the teacher has is also crucial, with newer teachers being more positive towards inclusion than more established teachers (Chrzanowska, 2018, 2019).

Inclusive trends in Poland, including contemporary recommendations for teacher training, mirror those of other Central European countries. Since the early 1990s, Polish schools have offered three forms of education for students with special educational needs (SEN): special, integrated,[1] and mainstream/inclusive. In recent years there has been an especially intensive discussion about the aims, scope and tools of inclusive education. Poland's Ministry of Education reports that in 2019, more than 63% of SEN children were attending mainstream schools, and this tendency has become increasingly prevalent. The Ministry, in cooperation with the European Agency for Special

Needs and Inclusive Education, analysed in detail the conditions for the successful implementation of inclusion and created a new model for this, which is being evaluated now by consultants and stakeholders. It is compatible with the worldwide trends of preparing teachers for inclusive education (Domagała-Zyśk, 2018a; Florian & Camedda, 2020; Florian & Rouse, 2009). In Poland, it is typical for parents of SEN children to form groups who advocate for good quality education, which is understood mainly as inclusive education. Teachers and principals are more reluctant: Kubicki's (2016) report on the opinions of mainstream school principals (N = 1261) about inclusion shows that only 38% of them described their school as barrier-free in the context of inclusive education. However, 71% thought their school was well equipped for SEN children. Research on teachers' attitudes towards inclusion shows that teachers generally perceive integrated education as beneficial for SEN children (Barańska & Sirak, 2015; Domagała-Zyśk, 2018a), especially their social development (Bartnikowska, Ćwirynkało, & Żyta, 2016). At the same time, teachers express their anxiety over not being prepared for inclusive education and needing more continuing professional development courses on inclusive education (Bartnikowska, Ćwirnkało, & Żyta, 2016; Uberman & Mach, 2016). Less than half of the general teachers want to work with students with intellectual disabilities (Skura, 2018) or autism (Nowakowska & Pisula, 2018). Research shows that these attitudes extend to social contexts: only 27% of teachers in Żuraw's (2016) study (N = 200) agreed they would feel happy if their own child had a friend with disability.

Attitudes towards people with disabilities – a multidimensional perspective

Attitudes are generally defined in a classical way (Antonak & Livneh, 2000) as a tripartite – though multifaceted – construct, including affective, cognitive and behavioural components. The cognitive component deals with one's ideas, thoughts, perceptions, beliefs, opinions, and mental conceptualizations of a referent. The affective component reflects the emotional underpinning of an attitude – the amount of positive or negative feeling towards the referent. The behavioural element pertains to the individual's intent or willingness to behave in a certain manner towards the referent.

Research shows that attitudes towards PWD differ according to many demographic factors. More positive attitudes towards PWD have been observed among women (e.g. Akrami, Ekehammar, Claesson, & Sonnander, 2006; Findler, Vilchinsky, & Werner, 2007; Shalev, Asmus, Carter, & Moss, 2016) and people of higher education and social status (Quelette-Kuntz, Burge, Brown, & Arsenault, 2010).

Some personal characteristics are also crucial, like self-esteem. Psychological research suggests that a reciprocal connection between an individual's self-esteem and the quality of their social relationships can be found in all developmental stages across the life span, reflecting a positive feedback loop between the constructs (Cameron & Granger, 2018; Harris & Orth, 2019). Increases in self-esteem lead to improvement in a person's relationships. If we apply this pattern to different kinds of relationships with persons with disabilities (familial, occupational, social), we may suppose that people with more positive and secure self-concepts tend to show more accepting attitudes towards persons with disabilities, while people with more negative self-concepts may exhibit more rejecting attitudes. Though knowledge of the link between self-esteem and relationships is widespread among the lay public, few academic studies have explored this pattern within the

context of disability (Findler et al., 2007; Magsamen-Conrad, Tetteh, & Lee, 2016; Vilchinsky, Werner, & Findler, 2010).

A crucial element of one's attitudes and beliefs is the scope of contacts with PWD. Interaction and direct experience with SEN students can help trainee teachers analyse their own map of beliefs about working with these students in the classroom. Regular contact with family members or friends with SEN or disabilities can improve future teachers' attitudes towards inclusive education (Barr & Bracchita, 2015). Favourable attitudes were observed even in students who maintained sporadic contact (Sanchez et al., 2020, N = 700) and limited but quality contact involving intellectual, social and emotional engagement. It may be that the quality of contact is a greater predictor of attitudes than the quantity of contact and increased knowledge of disabilities (Barr & Bracchitta, 2012; McManus, 2010).

Attitudes in general and attitudes towards disability in particular seem to be rather stable in an individual over time, and it is not easy to change them. In the literature, there are reports of some successful interventions that improved attitudes towards disability by altering factors that were amenable to change (i.e. not demographic factors). For instance, Logan and Bogart (2020) noticed a significant change in college students' attitudes following an intervention programme that included education and voluntary, humanizing personal contact with children with motor disabilities. In Huskin et al.'s (2018) research, contact with PWD was regarded as a significant factor, related to decreased social distance. On the other hand, Meyers and Lester (2016) reveal obstacles in attitude-changing interventions. They compared two groups of students: a control group who participated in a standard course on the psychology of disability, and an experimental group who participated in a specialized university course on disability issues, including readings, films, reflective writings, debates, discussions and meetings with PWD. The students' attitudes were assessed before and after their one-semester courses. Across both groups, their attitudes were moderately positive at the beginning and end of the course, notwithstanding the instructional differences. The authors assume that the students' results might mirror the generally positive attitudes towards disability as expressed by the majority of citizens nowadays. They also report that in the experimental group, the students' reflective writing stressed the personal growth and life wisdom that they had developed through this experience.

Numerous instruments have been developed to examine attitudes towards PWD. In Poland, the most widely used tool is Sękowski's scale of attitudes towards persons with disability (Sękowski & Witkowska, 2002). Though it reflects the tripartite model commonly used in Poland, the tool seems to give too much weight to the influence of respondents' sociability (desire for social acceptance). Both here and in other countries there is an urgent need to utilize new indirect tools that can assist scholars in culturally relevant studies from a multidimensional perspective. Recommendations for such a tool measuring attitudes (Antonak & Livneh, 2000) include using indirect attitude measurement and also multidimensional instruments to measure the cognitive, emotional and behavioural aspects and relationship between each of these components and a range of demographic variables. The *Multidimensional Attitudes Scale Toward People With Disabilities (MAS)* by Findler et al. (2007) fulfils these principles and thus an effort was undertaken to translate it into Polish and use it in our research. MAS is general in nature and has a significant number of neutral items. These can easily be used to measure attitudes towards different
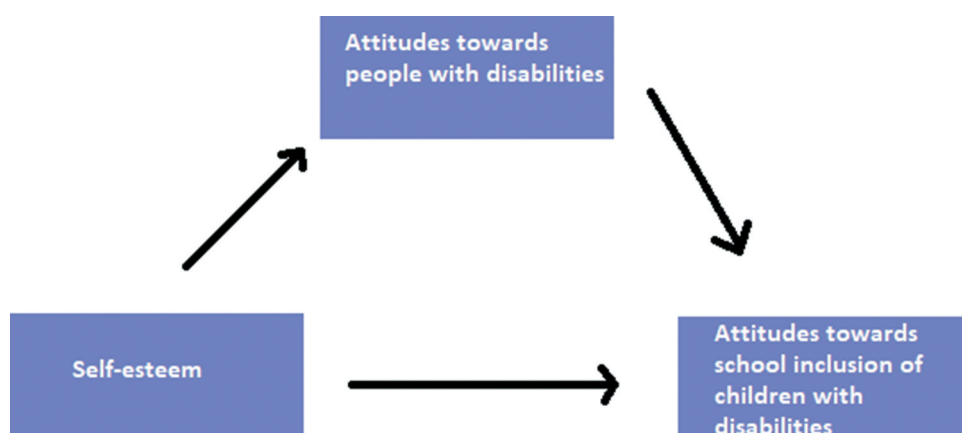
Figure 1. A conceptual model of the relationship between the variables.

disabilities. As an indirect instrument, the MAS might enable a more precise insight into the respondents' affective, cognitive and behavioural motives for certain attitudes.

Purpose of the study

The purpose of the study was to investigate the mediating effect of attitudes towards people with disabilities on the relationship between self-esteem and attitudes towards inclusive education for children with disabilities among student teachers.

Based on previous findings (e.g. Magsamen-Conrad et al., 2016; Vilchinsky, Findler, & Werner, 2010; Garske, 2002), it was assumed that student teachers' attitudes towards inclusion are associated with their self-esteem. Also, the relationship between these variables was expected to be indirect and shaped by other related factors, especially attitudes towards people with disabilities generally, which was presumed to be an important mediator of this relationship. Thus, the following hypotheses were posited in the present study: 1) Higher self-esteem will be correlated with more positive attitudes towards the inclusion of children with disabilities among student teachers; 2) Attitudes towards people with disabilities will mediate the relationship between self-esteem and attitudes towards inclusion. The assumed relationships between these variables are presented in Figure 1.

Materials and methods

Respondents

The study group comprised student teachers, as the analysis of their attitudes towards the inclusion of children with disabilities is important not only from the perspective of their future professional work but also from the perspective of the process of teaching future educators at the university. The research was conducted at two large universities (teaching about 20 and 12 thousand students respectively) which have been specializing in teacher training programmes for decades. Students of the last two years of teacher

training programmes were drawn for the research; they were informed about the purpose of the study, voluntary participation and anonymity. Students who agreed to participate in the study completed a set of questionnaires, which they forwarded to the supportive researchers who secured the anonymity of the study. Supportive researchers were trained academic teachers and doctoral students. The study was approved by the university ethics committee.

There were 562 respondents; their average age was 21.01 (SD = 1.36). Most of them live in the city (61.24%) and most were women (92.06%). The respondents were students of pedagogy (28.6%), special education (24.9%), pre-school and early childhood education (24.4%), childcare and educational pedagogy (12.8%) and rehabilitation pedagogy with sociotherapy (9.3%). Around 79% of respondents stated that they had regular contact with a disabled person, which is connected with the fact that Polish student teachers have to complete at least 180 hours of teaching internship before starting their professional career. Nowadays, more than 70% of students with disabilities in Poland attend mainstream schools so they are present in almost every classroom. The respondents rated their economic status as average on a scale from 1 to 5 (M = 3.23; SD = 0.56).

Methods

Data were collected using Polish versions of the following inventories: The *Multidimensional Attitudes Scale Toward Persons With Disabilities (MAS)* by L. Findler et al. (2007), *Scale Measuring Attitudes Toward Mainstreaming (SMATM)* by P. Chow and M. W. Winzer, and *Rosenberg Self-Esteem Scale (SES)*.

The study utilized the Polish version of the *Multidimensional Attitudes Scale Toward Persons with Disabilities* (MAS, Findler et al., 2007). After obtaining consent from the authors of the original scale, the tool was translated from English into Polish by three experienced linguists, specialists in HE; one of them was a native speaker. Then, the Polish version was analysed and back-translated into English. The tool was discussed in a group of 30 HE seminar students of special education (two sessions, 1.5 hours each) to evaluate the content understanding, rationality and suitability of the items. The participants of the seminar were 19–24 year-olds and they added numerous valuable comments to the tool itself and to rationale of the probability of experiencing a situation like the one described in the Polish context. This process led to several changes in the tool: 1) It was agreed that the respondents' attitudes may vary with people of different disabilities, so four versions of the questionnaires were proposed, in which a person with disability might experience: motor disability, intellectual disability (Down Syndrome), hearing loss or vision impairment; 2) The situation descriptions were revised so as to ensure the usage of natural-sounding Polish; 3) Original names "Joseph" and "Michelle" were changed into more typical Polish names "Joanna" and "Maciek".

Originally, the *Multidimensional Attitudes Scale Toward Persons With Disabilities (MAS)* was a self-report instrument, which in the Israeli version consists of 34 items. The Polish version, MAS-POL, tested with university students, includes 29 items and has a four-factor structure: 1) Positive cognitions and behaviours initiating the contact (Cronbach's α = 0.76); 2) Behavioural avoidance (Cronbach's α = 0.84); 3) Calm (Cronbach's α = 0.91); 4) Negative affect (Cronbach's α = 0.72). Cronbach's α of the total score of MAS was 0.87. Higher scores indicate more negative attitudes towards people with disabilities.

The *Scale Measuring Attitudes Toward Mainstreaming* (SMATM) in the Polish version developed by W. Pilecka and J. Kossewska consists of 20 items and two subscales: A) Recognising the positive aspects and benefits of inclusion; B) Recognising the negative effects of inclusion and the associated costs. Individual items are rated on a 5-point scale from 1 – I completely disagree to 5 – I totally agree. A higher score on subscale A indicates more positive attitudes towards inclusion, while a higher score on subscale B implies the perception of weaker negative effects of school inclusion. Satisfactory indicators of reliability and validity of the Polish version of SMATM were obtained (Kossewska, 2000). In this sample, Cronbach's α for subscale A was 0.87 and for subscale B 0.78.

Rosenberg's *Self-Esteem Scale (SES)* in the Polish adaptation by Dzwonkowska, Lachowicz-Tabaczek, and Łaguna (2008) was used to measure self-esteem of university students. The scale consists of 10 statements rated on a 4-point Likert scale from 1 – definitely agree to 4 – definitely disagree. This scale is used to obtain an overall evaluation of a person's self-esteem. The reliability of the scale (Cronbach's α) was 0.83, and in this sample it was 0.82.

Data analysis

Data were analysed in several stages using SPSS 24. First, descriptive statistics were prepared for the examined variables: attitudes towards school inclusion of children with disabilities, self-esteem, and attitudes towards people with disabilities. Next, correlation analysis was performed to determine the relationship between the analysed variables (Pearson's correlation coefficient). Finally, in order to test the hypothesis that attitudes towards people with disabilities mediate the relationship between self-esteem and attitudes towards school inclusion of children with disabilities among student teachers, the Preacher and Hayes (2004) procedure of bootstrapping was used. It was assumed that self-esteem is an independent variable, attitudes towards school inclusion of children with disabilities is a dependent variable, and attitudes towards people with disabilities is a mediator. The mediating effect is significant when the influence of an independent variable on a dependent variable decreases after the mediator is introduced to the model (partial mediation) or becomes irrelevant (total mediation). The analysis of the mediating effect was conducted using the PROCESS in SPSS by drawing 5000 bootstrap samples and using a 95% confidence interval.

Results

Table 1 presents descriptive statistics for attitudes towards school inclusion of children with disabilities, self-esteem, and attitudes towards people with disabilities. To compare levels of individual dimensions of attitudes towards people with disabilities and both dimensions of attitudes towards school inclusion of children with disabilities, the total score obtained by each respondent was divided by the number of items. The obtained results indicate a slightly higher result in *Recognizing the negative effects of inclusion and the associated costs* (SMATM-N) compared to *Recognizing the positive aspects and benefits of inclusion* (SMATM-P). The average level of respondents' self-esteem was within the range of average results in accordance with the standards developed by SES (Dzwonkowska et al., 2008).

Table 1. Descriptive statistics for attitudes towards school inclusion of children with disabilities, self-esteem, attitudes towards people with disabilities.

Measure		M(SD)	Subscale M(SD)
SMATM	Recognising the positive aspects and benefits of inclusion (SMATM-P)	43.07 (10.95)	3.31 (1.12)
	Recognising the negative effects of integration and the associated costs (SMATM-N)	25.45 (5.77)	3.64 (0.67)
SES	Self-esteem (SE)	30.99 (7.79)	
MAS-POL	Positive cognitions and behaviours initiating the contact (PC-BC)	29.30 (11.72)	2.66 (1.06)
	Behavioural avoidance (BA)	17.90 (5.34)	2.98 (0.89)
	Calm (C)	23.35 (6.36)	3.34 (0.91)
	Negative affect (NA)	13.91 (3.72)	2.32 (0.62)
	MAS-POL Total	84.50 (18.70)	

Of all the dimensions of attitudes towards people with disabilities, the surveyed students achieved the highest score in Calm and the lowest in *Negative affect*. This means that the most negative manifestations of attitudes towards people with disabilities are marked by a lower intensity of positive emotions, i.e. calmness, serenity, relaxation. Interestingly, there was also a relatively higher result in the dimension of *Behavioural avoidance* (BA), which suggests a visible tendency in the respondents for this type of behaviour towards people with disabilities.

Data in Table 2 show that statistically significant relationships between the variables were obtained. However, not all dimensions of attitudes towards people with disabilities were found to be associated with positive and negative dimensions of attitudes towards school inclusion of children with disabilities. Self-esteem positively moderately correlates with SMATM-P, while negatively with SMATM-N. In addition, self-esteem correlates negatively with all dimensions of attitudes towards people with disabilities and its overall score, with the strongest connection observed for Positive cognitions and behaviours initiating the contact (PC-BC). This dimension of attitudes, Calm, and MAS-POL Total correlate negatively with the positive dimension of attitudes towards school inclusion of children with disabilities. In turn, PC-BC, BA, and MAS-POL Total show a negative relationship with SMATM-N.

Next, the mediating role of attitudes towards people with disabilities for the relationship between self-esteem and attitudes towards school inclusion of children with disabilities was analysed. Mediation models were analysed for both dimensions of attitudes towards school inclusion of children with disabilities. Table 3 presents the obtained results.

The conducted analysis shows that attitudes towards people with disabilities (including their individual dimensions) are a significant mediator only of the relationships between self-esteem and one dimension of student teachers' attitudes towards school inclusion of children with disabilities: Recognising the negative effects of inclusion and the associated costs. Total mediation was found in SMATM-N. Thus, the relationship between self-esteem and this dimension of attitudes towards school inclusion of children with disabilities can be better explained with the help of the mediator: attitudes towards people with disabilities. The model with attitudes towards people with disabilities (BA) as

Table 2. Correlations (Pearson's r) between the analysed variables.

	1	2	3	4	5	6	7	8
1.SMATM-P	-							
2.SMATM-N	−0.09	-						
3.SE	0.34**	−0.39**	-					
4.PC-BC	−0.48****	0.43***	−0.56***	-				
5.BA	0.07	0.34***	−0.25**	0.28**	-			
6.C	−0.34***	0.15	−0.30***	0.26**	0.26**	-		
7.NA	−0.12	0.11	−0.26**	0.20*	0.30**	0.41***	-	
8.MAS-POL Total	−0.34***	0.37***	−0.57***	0.81***	0.75***	0.76***	0.75***	-

SMATM-P: Recognising the positive aspects and benefits of inclusion; SMATM-N: Recognising the negative effects of inclusion and the associated costs; SE: self-esteem; PC-BC: Positive cognitions and behaviours initiating the contact; BA: Behavioural avoidance; C: Calm; NA: Negative affect; MAS-POL Total: Total score on the attitude scale.
*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

Table 3. Regression model for attitudes towards school inclusion of children with disabilities (both dimensions) and the mediating effect of attitudes towards people with disabilities.

Variable	Direct effect				Indirect effect		
	Coefficient	t	CI lower	CI upper	Coefficient	CI lower	CI upper
SMATM-P: Recognising the positive aspects and benefits of inclusion							
Self-esteem	3.577	9.70***	2.853	4.301			
PC-BC					0.056	−0.592	0.108
$R = 0.346$; $R^2 = 0.120$; $F = 8.23$; $p < 0.001$							
Self-esteem	3.791	8.68***	2.567	3.889			
Calm					0.342	−0.298	0.105
$R = 0.354$; $R^2 = 0.129$; $F = 7.35$; $p < 0.001$							
Self-esteem	3.601	8.11**	2.850	4.309			
MAS-POL Total					0.311	−0.781	0.127
$R = 0.369$; $R^2 = 0.134$; $F = 8.01$; $p < 0.001$							
SMATM-N: Recognising the negative effects of inclusion and the associated costs							
Self-esteem	−0.477	−2.31ns.	−0.882	−0.073			
PC-BC					−0.450	−0.631	−0.293
$R = 0.363$; $R^2 = 0.147$; $F = 7.50$; $p < 0.001$							
Self-esteem	−0.373	−1.80ns.	−0.780	0.003			
BA					−0.104	−0.193	−0.031
$R = 0.456$; $R^2 = 0.201$; $F = 9.11$; $p < 0.001$							
Self-esteem	−0.405	−0.91ns.	−0.469	0.388			
MAS-POL Total					−0.434	−0.622	−0.259
$R = 0.394$; $R^2 = 0.199$; $F = 7.91$; $p < 0.001$							

PC-BC, Positive cognitions and behaviours initiating the contact; BA: Behavioural avoidance; MAS-POL Total: Total score on the attitude scale.
*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$; ns. – not statistically significant.

a mediator explains almost 20% of the variance of SMATM-N. Slightly less, about 15% of the variance of SMATM-N, can be explained using the model with mediator – PC-BC.

In the case of the relationship between self-esteem and positive dimensions of attitudes towards school inclusion of children with disabilities, only direct effects were obtained. Both the MAS-POL Total score and two dimensions of attitudes towards people with disabilities, PC-BC and Calm, explain a similar (but also low) percentage of the variance of Recognising positive aspects and benefits of inclusion (12–13.4%).

Discussion

The aim of the presented research was to investigate the importance of student teachers' self-esteem in explaining their attitudes towards school inclusion of children with disabilities in the presence of a mediator: attitudes towards people with disabilities. The obtained results are slightly higher in the negative dimension of attitudes towards school inclusion of children with disabilities in the studied group, pointing to the negative aspects and various costs (e.g. emotional and financial) – apart from the benefits – of the inclusion of non-disabled children and children with disabilities. Nevertheless, these results indicate that the difficulties perceived by student teachers in achieving effective and multilevel school inclusion of children with disabilities do not shape a negative attitude towards inclusion itself. Results obtained here are consistent with other research findings, indicating the difficulties and barriers related to inclusive education of children with disabilities reported by various stakeholders involved in the process of their education (e.g. Lambe & Bones, 2006; Papuda-Dolińska, 2017). They also coincide with results demonstrating positive attitudes of student teachers towards school inclusion of children with disabilities (e.g. Beacham & Rouse, 2011; Navarro-Mateu, Franco-Ochoa, & Prado-Gascó, 2020; Scholz, Gebhardt, & Tretter, 2010).

The present research was focused on testing the relationship of attitudes towards school inclusion of children with disabilities and the self-esteem of student teachers. It has been assumed that higher self-esteem will be associated with a more positive attitude towards school inclusion of children with disabilities in this group of university students. The obtained results confirm the posited hypothesis and align with other researchers' findings proving the importance of teachers' self-esteem and self-efficacy for their perception of students – their abilities in general and their ability to cope with various obstacles in the educational process (Mbuva, 2016). As demonstrated by Kossewska (2000), self-esteem is a significant predictor of teachers being able to perceive positive aspects of school inclusion of children with disabilities at special schools and mainstream primary schools. Thus, the relationship between student teachers' self-esteem and attitude towards school inclusion of children with disabilities, demonstrated in the presented research, corresponds to the results of the current research findings.

In line with other researchers' findings (e.g. Findler et al., 2007), the present research found significant correlations between student teachers' self-esteem and attitudes towards people with disabilities. Higher self-esteem was associated with more positive attitudes manifested in thinking about people with disabilities, emotions felt towards them and behaviours demonstrated towards them. These results correspond to findings pointing to the importance of self-esteem as a psychological resource, affecting the interpretation of difficulties, life situations, and other people. People with higher self-
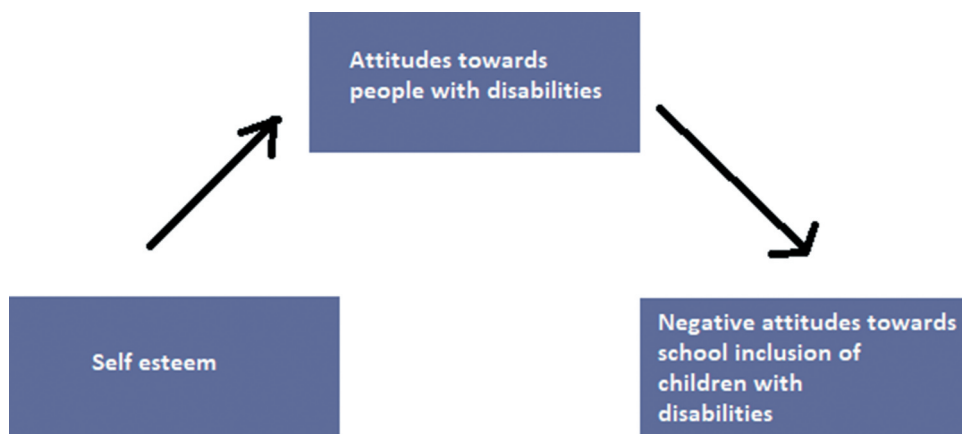
Figure 2. A model of significant variables

esteem are more likely to perceive obstacles as things that can be overcome, are more confident about the positive effects of difficult and complicated circumstances, and are more likely to solve problems and cope with stressors (Mann, Hosman, Schaalma, & de Vries, 2004). A positive correlation between self-esteem and the quality of social relations was also found. Data show that self-esteem can impact our perception of other people and our attitude towards them (Harris & Orth, 2019), and due to the relationship with emotional maturity, social adaptation, and the image of the world and others, its higher level promotes the occurrence of positive and stable attitudes towards other people, especially those who need help (Chan, Livneh, Pruett, Wang, & Zheng, 2009). These research reports provide an interpretative context for the research results presented here, coinciding with other findings indicating a positive correlation between self-esteem and attitudes towards people with disabilities (e.g. Magsamen-Conrad et al., 2016; Vilchinsky et al., 2010).

In the present research attitudes towards people with disabilities were assumed to be a significant mediator of the relationship between self-esteem of student teachers and their attitude towards school inclusion of children with disabilities. However, the posited hypothesis has only partially been confirmed.

The obtained results show that the intensity of positive attitudes towards school inclusion of children with disabilities in the studied group can be explained by its relationship with self-esteem – there was no significant mediation on the attitude towards people with disabilities.

Interestingly, an indirect path with complete mediation was established in relation to the negative dimension of attitudes towards school inclusion of children with disabilities in this group of students (see Figure 2). Cognitive and behavioural elements of attitudes towards people with disabilities play a mediating role, while no significant mediation of affective elements was found. This means that student teachers with higher self-esteem (which is significant for more positive thinking about people with disabilities and fewer avoidance behaviours) will have lower results in the negative dimension of attitudes towards school inclusion of children with disabilities. This model of correlations can be

used to better explain the intensity of recognising the negative effects of inclusion and the associated costs than through a direct relationship with self-esteem.

The obtained results are valuable for both cognitive and practical reasons. First, they point to the importance of student teachers' self-esteem in explaining their attitudes towards both people with disabilities and school inclusion of children with disabilities. Practical implications of this finding for teacher training programmes are multidimensional: not only should they include the content knowledge about disability, diversity and inclusion, but they should also support teacher students in acquiring social and emotional competences, developing and understanding better their personality, and sometimes even correct their self-esteem before starting their job career.

At the same time, the results suggest that positive aspects of attitudes towards school inclusion of children with disabilities might be explained directly by their connection with student teachers' self-esteem. Mentors and supervisors of student teachers, while observing their mentees' high and adequate self-esteem, might rightly suppose it will shape their positive attitudes towards inclusion.

Negative dimension of attitudes towards inclusion is much harder to describe and a mediating role of attitudes towards people with disabilities helps to understand this process better. An indirect path was observed here: self-esteem – attitudes towards people with disabilities – recognising the negative effects of inclusion and the associated costs. The established significance of the mediating effect of attitudes towards people with disabilities in explaining the relationship between self-esteem and the negative dimension of attitudes towards school inclusion of children with disabilities is a significant outcome of our research. This gives a direct clue for teacher training programmes, which should include more aspects of practical learning (cf. Morina, 2020). Direct endeavours to support formation of student teachers' positive attitudes towards persons with disabilities should be an indispensable element of teacher training programmes. It might include personal contacts with persons with disabilities, participation in inclusive social events or learning more about the lives and biographies of persons with disabilities and their families. What is important, is that such meetings should be mentored by an experienced teacher/instructor and reflected upon. Leaving students (especially younger ones) on their own with the challenging behaviour of persons with disabilities or not reflecting on the families' difficult life stories might – paradoxically – shape negative attitudes towards persons with disabilities, and consequently, towards their school inclusion.

The present analysis is also valuable because of its focus on a multidimensional construct of attitudes towards people with disabilities, which was used to determine its key elements (cognitive and behavioural) in explaining the intensity of attitudes towards school inclusion of children with disabilities in the studied group of students.

Apart from cognitive values, the present research has some limitations. The most important ones include:

(1) The studied group consisted of student teachers, but at the same time was heterogeneous in terms of the field of study (pedagogy, special education, pre-school and early childhood education, etc.). Differences in the study programme in terms of the scope of knowledge about disability and education of people with disabilities may be a factor affecting the declared attitudes towards school inclusion of children with disabilities. The significance of this factor should be analysed in subsequent studies.

(2) The relatively low percentage of the explained variance of attitudes towards school inclusion of children with the participation of self-esteem and attitudes towards people with disabilities among student teachers indicates the significance of other variables not included in this study. Future analyses should focus on the importance of academic variables (e.g. knowledge of disability and education of people with disabilities) and social variables (including those responsible for stereotyping disability and its consequences) for attitudes towards school inclusion of children with disabilities in this group of students.

(3) Similarly, to most other analyses of attitudes, the presented research explores attitudes towards people with disabilities and the school inclusion of children with disabilities declared by the respondents. Therefore, the issue of manifested attitudes remains unexplored.

(4) The present study is cross-sectional and includes students from various years of study. Since attitudes change under various factors, longitudinal studies would provide a better understanding of the relationship between self-esteem, attitudes towards school inclusion of children with disabilities, and attitudes towards people with disabilities in the group of students.

Despite the above limitations, the results of the present research can be useful for practical activities – educational and supporting student teachers. Knowledge about the significance of self-esteem for shaping attitudes towards people with disabilities, and especially towards the school inclusion of children with disabilities, can be used to design workshops to strengthen this element of students' personality. It can also be a premise for creating optional classes focused on showing the role of the teacher's psychological resources for their attitudes towards students and their teaching methods, especially in relation to students with special education needs. Considering the importance of attitudes towards people with disabilities in determining attitudes towards school inclusion of children and youth with disabilities, activities aimed at eliminating or at least weakening possible stereotypes about disability and its consequences, still firmly rooted in the society, may be designed.

Note

1. Integration classes comprises no more than 20 students (there are at least 25 in regular ones), among them – up to 5 SEN students. The group has a general teacher and a supportive teacher assigned.

Disclosure statement

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