

# UNIVERSITY STUDENTS' ATTITUDES TOWARDS PEOPLE WITH DISABILITIES: DOES TYPE, EXPOSURE AND THE NEED FOR SOCIAL APPROVAL MATTER?<sup>1</sup>

## *ATTITUDES DOS ESTUDANTES UNIVERSITÁRIOS EM RELAÇÃO ÀS PESSOAS COM DEFICIÊNCIA: O TIPO, A EXPOSIÇÃO E A NECESSIDADE DE APROVAÇÃO SOCIAL IMPORTAM?*

Ewa DOMAGAŁA-ZYŚK<sup>2</sup>  
Stanisława BYRA<sup>3</sup>

**ABSTRACT:** This study aimed to explore the multidimensional attitudes of university students towards people with motor, intellectual, and sensory (vision and hearing) disabilities. Three variables were discussed: type of disability, exposure to people with disabilities, and the need for social approval. This study included 712 university students. The results confirmed that the most negative attitudes were held towards people with intellectual disability and the most positive attitudes towards persons with motor disability in all dimensions: cognitive, emotional, and social. The type of exposure to people with disabilities was significant, and the most positive attitudes were observed when respondents had a friend with a disability. The hypothesis on the correlation between the need for social approval and students' attitudes towards people with disabilities was only partially confirmed.

**KEYWORDS:** Disability. Attitudes. Social approval. Multidimensional. University students.

**RESUMO:** Este estudo teve como objetivo explorar as atitudes multidimensionais de estudantes universitários em relação a pessoas com deficiência motora, intelectual e sensorial (visão e audição). Foram discutidas três variáveis: tipo de deficiência, exposição a pessoas com deficiência e necessidade de aprovação social. Este estudo incluiu 712 estudantes universitários. Os resultados confirmaram que as atitudes mais negativas foram as em relação às pessoas com deficiência intelectual e as atitudes mais positivas em relação às pessoas com deficiência motora em todas as dimensões: cognitiva, emocional e social. O tipo de exposição às pessoas com deficiência foi significativo, e as atitudes mais positivas foram observadas quando os entrevistados tinham um amigo com deficiência. A hipótese sobre a correlação entre a necessidade de aprovação social e as atitudes dos estudantes em relação às pessoas com deficiência foi apenas parcialmente confirmada.

**PALAVRAS-CHAVE:** Deficiência. Atitudes. Aprovação social. Multidimensional. Surdo. Cego. Deficiência motora. Deficiência intelectual. Estudantes universitários.

## 1 INTRODUCTION

Although the attitudes of non-disabled persons towards people with disabilities have been studied for several years, most of these studies have focused on medical professionals, em-

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<sup>2</sup> Associate Professor. John Paul II Catholic University of Lublin, Lublin/Poland. E-mail: ewadom@kul.pl.  
ORCID: <https://orcid.org/0000-0002-2227-7102>

<sup>3</sup> Associate Professor. Marie Curie-Skłodowska University, Lublin/Poland. E-mail: stanislawabyra@mail.umcs.pl.  
ORCID: <https://orcid.org/0000-0001-6095-279X>

ployers, parents, or peers of disabled children. Limited research has examined the attitudes of non-disabled young people towards their peers with different disabilities. Moreover, relatively little is known about the differences in attitudes among people with different disabilities in the same research groups.

Attitudes are positive or negative evaluations that represent a predisposition to behave in a predictable manner (McCaughney & Strohmer, 2005). They are based on knowledge, affect, and behavior and can also be perceived as observable consequences of customs, practices, ideologies, values, norms, factual, and religious beliefs. Attitudes might negatively or positively influence the quality of life of people with disabilities. They might lead to greater/smaller acceptance and encourage/discourage the inclusion of individuals with disabilities in society as a whole (Antonak & Livneh, 2000; Byra, 2009; Novo-Corti, 2010). Attitudes towards persons with disabilities are part of the model of disability prevailing in the studied environment. The traditional vision of disability serves as a basis for attitudes toward pity and charity-like behavior. The medial model focuses on the disabled person's lack of abilities, viewing deaf, blind, or intellectually challenged persons as disabled, impaired, or handicapped, who have to be "repaired" to make them more like non-disabled persons. This may evoke attitudes of exclusion and superiority, and a social and human rights-based model calls for more accepting and empowering attitudes (Rieser, 2008), such as equality, equity, or subsidiarity.

The aim of this study is to explore the multidimensional attitudes of university students towards people with motor, intellectual, and sensory (vision and hearing) disabilities. Three variables will be used in our study: type of disability, type of respondents' contact with people with different disabilities, and the need for social approval. It is assumed that recognizing the attitudes of the same cohort of young adults towards persons with different disabilities will allow for a better understanding of social attitudes towards disability and planning educational intervention to change them.

## 2 ATTITUDES TOWARDS PEOPLE WITH DIFFERENT DISABILITIES

Although a significant amount of research has explored attitudes towards people with disabilities in general, less attention has been paid to the correlates or predictors of these attitudes. Quite a large body of research explores generally attitudes towards disability, which does not give a clear picture of the social plateau of persons with a certain disability. The analysis provided below is based on research on attitudes towards specific groups of disabilities.

Intellectual disability is characterized by significant limitations in both adaptive behavior and intellectual functioning, and Down Syndrome (DS) is most often associated with intellectual disability. Individuals with DS comprise a specific group of people with intellectual disabilities. Despite their typical outgoing personality, they experience a constellation of symptomatology, including developmental, motor, and language delays, specific deficits in verbal memory, and broad cognitive deficits. Despite their functional deficits, people with DS possess relative strengths, which can be the focus of future interventions. DS can now be diagnosed prenatally, which leads to decreased births of children with DS (Skotko, 2009), but also to a decrease in social acceptance of people with DS, with a corresponding decrease in social support and services for those with DS and their families (Skotko, 2009). In the study conducted

by Kellogg et al. (2014) of 73 mothers of children with DS, 57% of them felt that prenatal diagnosis of DS might lead to increased social stigma in case of the decision to continue the DS pregnancy and 64% were afraid this may lead to decreased availability of services for individuals with DS. The attitudes seem to be different in time and place; for example, the research conducted by Long et al. (2018) of Australian women (N=30) demonstrated broad general knowledge of issues connected with prenatal screening and DS and presented mainly positive attitudes towards people with DS. However, as Long et al. (2018) noted, overwhelmingly positive attitudes towards people with DS might be potentially harmful. They are often perceived a “happy people”, and this may prevent seeing individuals with DS as people who experience a complex range of emotional states and specific range of medical and social needs.

When professionals' attitudes towards people with DS are studied, they are generally quite positive. Australian research within the community context and of teachers demonstrated reasonably accurate knowledge about DS, although not surprisingly, teachers have more accurate knowledge than the community in general, and this shows their role as models and leaders in creating more positive attitudes towards persons with DS (Campbell et al., 2003). In the same research, the teachers' developmental expectations for DS persons tended to be quite positive, particularly regarding the level of adult attainment that is likely for a person with DS. Studies among the regular citizens are not so much optimistic: large American study of the citizens' attitudes towards persons with DS (Pace et al., 2010) revealed that many adults and young people (more than 30%) continue to show negative attitudes toward people with DS.

Blind and visually impaired persons are relatively often described in the vocational context: it is important as employers' attitudes might be associated with hiring behavior and discrimination or lack of it in the processes like hiring, promotion, placement, training, salary, harassment and relationship. Some variables predict employers' attitudes more often than others: having hired an earlier someone who was blind or visually impaired, knowledge about the disability, and having contact with local Vocational Rehabilitation (VR) agencies (McDonnall et al., 2015). A large majority of VR specialists still perceive employers as having negative attitudes towards employing persons who are blind or visually impaired (McDonnall et al., 2013).

Attitudes towards deaf and hard-of-hearing persons are generally studied in the context of their communication mode – oral or sign – and their inclusion in the mainstream classroom. Special education programs for D/deaf students have had a long tradition in many countries, and mainstream schoolteachers tend to express negative attitudes towards deaf or hard-of-hearing students as their potential or actual pupils. These attitudes might change (Sari, 2007) or might have not changed (Yuknis, 2015) after the teachers had completed a pre-service course on special education. Moreover, even if teachers of the deaf have more positive general attitudes towards people with disabilities, their attitudes towards inclusion of deaf and hard-of-hearing students into regular classrooms have been the most negative (Lampropoulou, 1997).

The adult deaf and hard-of-hearing people are usually active players in the labor market. However, their capacities seem to be underestimated by employers and co-workers (Beha & Hasanbegovic, 2019; Domagała-Zyśk, 2015). A critical factor is knowledge about deafness and exposure to Deaf Culture: Lee and Pott's (2018) research concludes that university

students who were enrolled in Deaf Culture courses reported a greater understanding of D/deaf people and more positive attitudes towards them, in comparison with students who have chosen an American Sign language course to satisfy their modern language credit.

Attitudes towards people with physical disabilities – though less positive than attitudes towards non-disabled persons – are generally positive, especially when searched in the workplace context (Amissah, 2016; Miller et al., 2009). Adolescents tend to have more positive attitudes than adults do, especially in their cognitive and emotional dimensions (Nowak, 2015). Greater social distance has been observed when respondents were asked about dating or marriage relationships (Amissah, 2016; Vilchinsky et al., 2010). A representative Swiss sample of 950 respondents in Keller and Siegrist (2010) was investigated to examine the influence of psychological resources on attitudes towards people with physical disabilities. The results revealed that two dimensions have a significant impact: liking people and belief in a just world. Interestingly, the other checked variables such as self-esteem, life satisfaction, and hope were not significant. Even though the attitudes might be more positive and change them, a combined cognitive-behavioral model was found to be the most effective, while cognitive intervention alone showed the potential of changing the respondents' attitudes (Krahe & Altwasser, 2006).

In conclusion, it was observed that the type of disability might play a significant role in our attitudes towards persons with disabilities. Generally, people have more favorable attitudes towards persons with physical disabilities than toward people with other disabilities, particularly psychiatric and intellectual disabilities (Unger, 2002). Studies on attitudes in the general population suggest that younger age, higher educational attainment, and being a woman are usually correlated with more positive attitudes toward persons with different disabilities.

### **3 TYPE OF EXPOSURE**

There are consistent findings regarding the association between exposure to persons with disabilities and more positive attitudes (Amissah, 2016; Ju et al., 2013; LaBelle et al., 2013; Scior, 2011). Continuous contact and meaningful interactions with persons with disabilities seem to promote an increase in positive attitudes among non-disabled persons, and previous experience with specific disability results in a more positive attitude towards others with the same disability (Unger, 2002). This was observed in the study conducted by Ju et al. (2013) among employers – their attitudes were more positive both in cases of their personal experience with persons with disabilities and with employed persons with disabilities. Frequent contact with children with ID and experience of teaching such a child in the past also predicted more positive teachers' attitudes towards pupils with intellectual disability and their inclusion in regular classrooms (Dessemontet et al., 2014).

However, in Enns et al. (2009), among the genetic counselors' attitudes towards deaf and hard-of-hearing people, it was found that contact alone does not predict positive attitudes. The counselors' attitudes were related to having a deaf friend but not to the number of deaf clients. The authors concluded that more positive attitudes are associated not only with passive contact with a deaf or hard-of-hearing patient or client, but also with establishing personal relationships with a deaf person. In addition, Beha and Hasanbegović (2019) showed that even co-workers of the deaf and hard-of-hearing workers who have had a chance to work with them

and observe their work involvement tend to cherish negative attitudes toward the capabilities and work attitudes of DHH workers (N=247). It has been described that mental health professionals' more positive attitudes towards deaf and hard-of-hearing patients correlate with the amount of contact that professionals had with deaf people, but not with any deaf people – only with those of equal or higher status. Surprisingly, no correlations were found between attitudes and knowledge about deafness (Cooper et al., 2003).

Although Levis et al. (2012) researched the participating women (N=111) who reported having good knowledge of DS, many of them had misconceptions, such as about the life expectancy of people with DS, maternal and paternal risk factors, and the everyday reality of raising a child with DS. Participants requested stories about the life of families with a child with DS and other tailored materials that contain both the clinical information about DS and information about everyday life with a child with DS. Close contact with people with disabilities usually means a better understanding of all the difficulties connected with everyday decisions and chores, which may also evoke negative attitudes. More than half of the sisters of DS persons in Bryant et al. (2005) admitted that they will be ready to terminate a pregnancy if prenatal diagnosis suggests that their child might have this condition, and the predictive factor for their decision was perceived difficulty in caring for a child with DS.

#### **4 THE NEED FOR SOCIAL APPROVAL**

The need for social approval (or social desirability) is a vital factor in understanding people's attitudes, including attitudes towards people with disabilities. It was first understood as a tendency to lie and present an impeccable image of oneself; later, it started to be considered a specific personality trait (Furnham, 1986), described in two dimensions: Self-Deception (with two factors, Self-Deceptive-Enhancement and Self-Deceptive Denial) and Impression Management (with two additional factors: Agency Management and Communion Management) (Paulhus, 1984, 2002). People with high levels of social desirability give untrue answers while answering the questionnaires so as to present themselves as possessing more socially approved characteristics (such as sensitivity to the needs and support for the poor or the disabled) and minimizing their sins or negatively assessed behavior (such as despising people because of their intelligence level, appearance, or social status).

It is not only important to understand the phenomenon of the need for social approval, but also to use such research methods and tools to minimize its effect and obtain reliable answers. Therefore, in studying attitudes it is essential to use not only direct – but also indirect measures which might create the impression that the respondents are not assessing their own attitudes – but the attitudes of “other people” or some general situations. Research suggests (Findler et al., 2007) that such measures are reliable in assessing attitudes towards disability in a more precise way than traditional direct questionnaires.

### **5 METHOD**

#### **5.1 PARTICIPANTS**

The average age of the 711 respondents was 21.14 years old (SD=3.16). Most of them lived in the city (63.67%) and most were women (89.01%). They were university stu-

dents studying the Humanities: Pedagogy (39.9%), Special Education (22.4%), Pre-School and Early Childhood Education (13.5%), Culture Animation (6.3%), Childcare and Educational Pedagogy (6.2%), Rehabilitation Pedagogy with Sociotherapy (3.9%), Social Work (2.7%), Sociology (2.6%), and Psychology (2.5%). Of the respondents, 64.45% stated that they had contact with a person with a disability. The respondents rated their economic status on an average scale of 1 to 5 ( $M=3.19$ ;  $SD=0.64$ ). All participants voluntarily agreed to participate in the study. Informed consent was obtained from all participants before beginning the study.

## 5.2 MEASURE

Data were collected using Polish versions of the *Multidimensional Attitudes Scale Toward People with Disabilities* (MAS) by Findler et al. (2007); *Questionnaire of Social Approval* (QSA) by Drwal and Wilczyńska (1980); and a questionnaire to collect sociodemographic data and information about the contact with persons with a disability (Q-SD).

This study utilized the Polish version of the MAS (Findler et al., 2007). After obtaining consent from the authors of the original scale, the tool was translated from English to Polish by three experienced linguists, specialists in Higher Education (HE), one of whom was a native speaker. The Polish version was then analyzed and back-translated into English. The tool was discussed in a group of 30 HE students of special education (two sessions for 1,5 hours each) to evaluate the content understanding, rationality, and suitability of the items. The participants were people aged 19-23 years old and added many valuable comments to the tool itself and to the 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 with different disabilities; therefore, four versions of the questionnaires were proposed, in which a person with disability might experience motor disability, intellectual disability (DS), and hearing loss of vision impairment. 2. The situation description was revised by a Polish linguist to ensure the use of natural-sound Polish. Original names "Joseph" and "Michelle" were changed into more typical Polish names "Joanna" and "Maciek".

Finally, the MAS is a self-reported instrument consisting of 34 items in the original version. Polish version of the MAS-POL, tested on university students, includes 29 items and has a four-factor structure: 1) *Positive cognition and Behaviors initiating contact* (Cronbach's  $\alpha=0.76$ ), 2) *Behavioral avoidance* (Cronbach's  $\alpha=0.84$ ), 3) *Calm* (Cronbach's  $\alpha=0.91$ ), and 4) *Negative affect* (Cronbach's  $\alpha=0.72$ ). Cronbach's  $\alpha$  for the total MAS score was 0.87. Higher scores indicate more negative attitudes towards people with disabilities.

The *Questionnaire of Social Approval* (QSA) consists of 29 items that describe socially desirable or undesirable behaviors or characteristics. The respondent indicates "true" or "false," answering if the given statement refers to him/her. The possible range of the results was 0-29 points. The higher the score, the greater the tendency to choose socially desirable answers, which suggests a greater need for social approval. The tool has satisfactory psychometric properties (Drwal, 1985). Cronbach's  $\alpha$  for this sample was 0.84.

The questionnaire for collecting sociodemographic data and data on contact with a person with a disability (Q-SD), in addition to information about age, sex, place of residence, field of study, and year of study, contained two questions: a) Has the respondent had contact



with a person with a disability?; b) If so, who was the person with the disability (family member, friend, colleague, acquaintance, or passer-by)?

## 6 RESULTS AND DISCUSSION

### 6.1 STATISTICAL DATA ANALYSIS - FRAMEWORK

Data analysis was performed using SPSS version 24. First, a one-way ANOVA was used to test whether the type of disability differentiates university students' attitudes towards people with disabilities. To determine which dimension of attitudes dominated, the subscale scores were divided by the number of items. Pearson's correlation coefficients were calculated to examine the relationship between the need for social approval and attitudes towards people with disabilities. Correlation analysis was conducted separately for each type of disability. Regression analysis was also carried out to test the contribution of the need for social approval to explain attitudes and their individual dimensions. Thirdly, the t-Student test was used to make intergroup comparisons for students who had contact with a person with a disability and those who did not have such a contact. Lastly, a one-way ANOVA was used to test whether the type of contact with a person with a disability differentiated students' attitudes towards such a person.

### 6.2 RESULTS

Table 1 shows the results of the one-way ANOVA for attitudes towards people with disabilities. The results showed statistically significant differences in students' scores, both in the total score for attitudes and for their individual dimensions. Students were found to have the most negative attitudes towards people with DS. On the other hand, the most positive attitudes were found towards people in a wheelchair; in this respect, they differed significantly from attitudes towards people with sensory and intellectual disabilities (DS). Statistically significant differences were also observed between students' attitudes towards people with DS and those with vision loss. Significant differences were also found in the individual dimensions of the attitudes. For *Positive cognition* and *Behavior initiating contact*, the highest scores were obtained in relation to people with DS, which was significantly higher than in relation to people with other types of disabilities that were analyzed. This means that students reveal the least positive thoughts and behaviors that initiate contact with people with DS. In the case of *Behavioral avoidance*, the lowest scores were obtained for people on wheelchairs, which were significantly lower than the scores obtained for people with DS and deaf/hard of hearing people. The lowest *Calm* and, at the same time, the highest *Negative affect* is revealed by students declaring their attitudes towards people with DS, significantly different in this respect from other groups.

**Table 1***Attitudes of university students towards people with disabilities – intergroup comparison*

MAS-POL	People in a wheelchair (1)		People with Down Syndrome (2)		Deaf/hard of hearing people (3)		Blind people (4)		F	Post hoc test
	M	SD	M	SD	M	SD	M	SD		
PC-BC	26.04	7.12	35.07	7.29	28.41	6.86	29.21	7.70	28.98***	2>1,3,4*** 4>1*
BA	16.02	4.76	19.97	4.75	19.64	5.18	18.44	5.49	31.84***	1<2,3*** 2>4*
C	22.35	5.34	25.13	4.82	23.43	8.22	22.84	5.35	8.63***	2>1*,3***,4*
NA	13.06	3.57	15.22	3.85	14.06	3.38	13.92	4.09	15.49***	2>1**,3*,4* 1<3*
<b>Mas-Pol Total</b>	<b>77.47</b>	<b>14.80</b>	<b>95.67</b>	<b>22.39</b>	<b>85.55</b>	<b>14.21</b>	<b>84.40</b>	<b>13.78</b>	<b>18.94***</b>	<b>1&lt;2**,3**,4** 2&gt;4***</b>

Note. 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. M = Mean/SD = Standard deviation.

\*p<0.05; \*\*p<0.01; \*\*\*p<0.001.

Table 2 summarizes the results obtained by the surveyed students in the individual dimensions of attitudes towards people with disabilities. In all groups, students had the highest scores on the *Calm* subscale, which means that compared to other dimensions of attitudes, students were the least calm. The lowest scores were obtained on the *Negative affect* subscale. Interestingly, regardless of the type of disability, two dimensions of attitude obtained the highest scores: *Calm* and *Behavioral avoidance*.

**Table 2***Results of individual subscales in the studied group*

MAS-POL	People in a wheelchair		People with Down Syndrome		Deaf/hard-of-hearing people		Blind people	
	M	SD	M	SD	M	SD	M	SD
PC-BC	2.37	0.65	3.19	1.57	2.58	0.63	2.65	0.70
BA	2.67	0.76	3.33	0.79	3.27	0.86	3.01	0.91
C	3.19	0.69	3.59	1.17	3.35	0.76	3.31	0.75
NA	2.18	0.59	2.54	0.64	2.34	0.58	2.32	0.68

Note. PC-BC: Positive cognitions and behaviours initiating the contact; BA: Behavioural avoidance; C: Calm; NA: Negative affect. M = Mean/SD = Standard deviation.

The established Pearson's correlation coefficients are listed in Table 3. Few connections (mainly weak) between the need for social approval and students' attitudes towards people with disabilities were found. The need for social approval was negatively correlated with *Positive cognition* and *Behaviour initiating contact* with people with DS ( $R=0.31$ ;  $R^2=0.07$ ;  $F(8.73)=4.12$ ;  $p<0.003$ ;  $\beta=0.28$ ,  $p<0.003$ ) and vision loss ( $R=0.38$ ;  $R^2=0.08$ ;  $F(3.26)=5.01$ ;  $p<0.049$ ;  $\beta=-0.36$ ,  $p<0.049$ ). This means that higher scores in the area of social approval are as-



sociated with more positive results on this subscale in relation to the above-mentioned groups of people with disabilities. It was also found that a higher intensity of social approval was associated with a lower intensity of *Behavioural avoidance* ( $\beta=-0.42$ ,  $p<0.002$ ) and *Negative affect* subscales ( $\beta=-0.17$ ,  $p<0.045$ ) towards people in a wheelchair ( $R=0.35$ ;  $R^2=0.07$ ;  $F(4,01)=3.27$ ;  $p<0.044$ ). Regression analysis revealed a relatively small contribution to explaining students' attitudes and dimensions.

**Table 3**

*Need for social approval and attitudes towards people with disabilities – correlation coefficients (Pearson's r)*

MAS-POL	People in a wheelchair	People with Down Syndrome	Deaf/hard-of-hearing people	Blind people
PC-BC	0.04	-0.28**	-0.04	-0.36*
BA	-0.42**	0.02	0.03	0.17
C	-0.17*	-0.06	-0.02	-0.14
NA	0.11	-0.05	-0.09	-0.20
<b>Mas-Pol Total</b>	<b>0.11</b>	<b>-0.11</b>	<b>-0.02</b>	<b>-0.18</b>

Note. 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. \* $p<0.05$ ; \*\* $p<0.01$

Data on how contact with a person with a disability (or lack thereof) differentiates the intensity of university students' attitudes towards people with a given disability are presented in Table 4.

**Table 4**

*Contact with a person with a disability (or lack thereof) and the results of MAS-POL*

MAS-POL	Contact		No contact		Significance test	
	M	SD	M	SD	t	p
<b>People in a wheelchair</b>						
PC-BC	25.99	6.77	26.16	7.12	-0.20	0.838
BA	16.33	5.28	18.24	4.85	-1.74	0.024*
C	22.46	5.80	22.06	3.97	0.61	0.541
NA	13.06	3.44	13.07	3.23	-0.03	0.975
<b>Mas-Pol Total</b>	<b>77.83</b>	<b>15.40</b>	<b>76.54</b>	<b>10.54</b>	<b>0.76</b>	<b>0.451</b>
<b>People with Down Syndrome</b>						
PC-BC	35.56	16.44	32.35	21.37	0.95	0.345
BA	19.97	4.82	20.00	4.41	-0.34	0.970
C	24.92	8.86	26.24	4.08	-0.85	0.398
NA	15.19	4.03	15.39	2.76	-0.27	0.784
<b>Mas-Pol Total</b>	<b>95.97</b>	<b>22.23</b>	<b>94.09</b>	<b>23.45</b>	<b>0.44</b>	<b>0.660</b>
<b>Deaf/hard-of-hearing people</b>						
PC-BC	27.99	7.26	31.23	5.51	-1.54	0.126
BA	19.38	4.89	21.31	3.40	-1.36	0.175
C	23.08	4.96	25.77	2.92	-1.90	0.040*

NA	14.07	3.64	14.00	3.27	0.06	0.948
Mas-Pol Total	84.52	15.32	92.31	8.35	-1.79	0.077
Blind people						
PC-BC	33.84	6.77	26.00	7.12	4.44	0.001**
BA	18.20	5.28	18.81	4.85	-0.42	0.673
C	22.60	5.80	22.81	3.97	-0.15	0.881
NA	13.80	3.44	13.92	3.23	-0.11	0.914
<b>Mas-Pol Total</b>	<b>88.44</b>	<b>15.40</b>	<b>81.53</b>	<b>10.54</b>	<b>1.96</b>	<b>0.055</b>

*Note.* 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. M = Mean/SD = Standard deviation. \* $p < 0.05$ ; \*\* $p < 0.01$

Several statistically significant differences were observed. Significantly more *Calm* was found in students' attitudes towards deaf/hard-of-hearing people who already had contact with people with this type of disability compared to those who did not have such contact before. Higher levels of avoidance behaviors towards people in a wheelchair characterize students who do not have contact with such people. In turn, less intensity in positive thinking and behaviors initiating contact was revealed by students towards people with vision loss who already had contact with a person with this type of disability, compared to those who declared no contact. It was also analyzed whether the type of relation to the person with a disability with whom the students had contact is a factor differentiating the intensity of their attitudes towards people with disabilities. The results of the analysis (one-way ANOVA) are presented in Table 5.

**Table 5**

*Type of contact with a person with a disability and the results of MAS-POL*

MAS-POL	Family member (1)		Friend (2)		Colleague (3)		Acquaintance (4)		Passer-by (5)		F	Post hoc test
	M	SD	M	SD	M	SD	M	SD	M	SD		
PC-BC	28.63	9.31	25.16	6.25	30.04	3.97	27.96	7.58	31.98	13.40	3.10*	5>2**,4*
BA	18.57	4.74	15.61	6.62	12.13	4.65	17.13	4.55	19.12	5.18	13.89***	1>2**,3***,4* 3<2**,4**,5** 2<5*** 3<4**,5**
C	23.97	5.22	21.23	7.32	20.16	4.61	23.30	6.30	23.79	4.90	3.25*	1>2*,3** 3<4*,5** 2<5*
NA	13.23	2.40	13.16	3.98	12.08	5.80	14.75	3.55	13.97	3.79	4.43**	4>1**,2*,3***
<b>Mas-Pol Total</b>	<b>84.40</b>	<b>17.25</b>	<b>75.16</b>	<b>21.00</b>	<b>76.71</b>	<b>11.14</b>	<b>83.14</b>	<b>17.61</b>	<b>88.86</b>	<b>23.08</b>	<b>4.90***</b>	<b>2&lt;1**,4**,5***</b> <b>5&gt;3**</b>

*Note.* 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. M = Mean/SD = Standard deviation.

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

It was found that the most positive attitudes towards people with disabilities were revealed by university students who indicated that the person with a disability they had contact with was their friend, which differentiated them significantly from other respondents who indicated a family member, peer, or passer-by. The most negative attitudes were presented by students who

had contact with a passer-by with a disability. However, relatively high results were obtained by students who indicated contact with a disabled family member. Interestingly, these students had more negative attitudes towards people with disabilities than those who indicated contact with a friend with a disability. Statistically significant differences were also noted for all the dimensions of attitudes. In the case of *Positive cognition* and *Behaviour initiating contact*, students indicating contact with a passer-by with a disability obtained significantly higher scores than those indicating contact with a friend or acquaintance. The greatest intensity of avoidance behaviour was presented by students who indicated contact with a family member with a disability, which was significantly higher than in the case of contact with a friend, colleague, or acquaintance. Similar results were obtained for *Calm*, which was significantly lower in students who had contact with a family member with a disability. In turn, *Negative affect* is most strongly manifested by students indicating contact with an acquaintance, to a significantly greater extent than in the case of students indicating contact with a family member, friend, or colleague.

## 7 DISCUSSION

The aim of the present study was to analyze university students' attitudes towards people with disabilities using a multidimensional approach. Attitudes were tested using three factors: a) related to disability: type of disability, b) personality: need for social approval, c) social contact with a person with a specific type of disability. Since the specific properties of particular disabilities may have different impacts on how others perceive people with disabilities, the role of disability type was explored. Bearing in mind the unique functions of the need for social approval among students in early adulthood, which are reflected in perception, assessment, and social attitudes (for example, Karasar & Baytemir, 2018), the significance of this variable for attitudes towards people with particular types of disability was analysed. With reference to Allport's (1954) intergroup contact theory and the results of previous studies verifying its assumptions (for example Barr, 2013; Barr & Bracchitta, 2008, 2015; Huskin et al., 2018; McManus et al., 2010; Polo Sanchez et al., 2020), contact with a person with a disability and its type were expected to be significant for students' attitudes towards such a person. The results obtained were only partly in line with our expectations.

In line with previous findings (Granello & Wheaton, 2001; Huskin et al., 2018; Morin et al., 2013), the most negative attitudes were observed towards people with intellectual disability (DS), and the most positive attitudes towards people with physical disabilities (represented by people on a wheelchair). These results indicate a clear preference for the order of certain types of disabilities in the respondents, revealing different attitudes towards specific groups of people with disabilities (Barr & Bracchitta, 2015). The distinct and conspicuous features of physical disability were not stigmatizing factors in the present study. On the contrary, students declared the most positive attitudes towards this group of people with disabilities, expressed in more positive thinking and behaviour initiating contact, greater calmness, fewer avoidance behaviours, and a lower intensity of negative affect, compared to other groups. The strongest negative attitudes towards people with DS, significantly higher not only compared to attitudes towards people with physical, but also sensory disabilities, suggest that students attach special significance to the reduced intellectual level that is characteristic of this syndrome. This is consistent with other studies indicating that the level of intelligence and cognitive

functioning are such specific properties of persons with disabilities that they shape the attitudes of non-disabled people towards people with disabilities (Patel & Rose, 2014; Quелlette-Kunz et al., 2010). The obtained results confirmed the hypothesis that the type of disability would differentiate students' attitudes towards people with disabilities.

Considering the analyzed multidimensional structure of attitudes towards people with disabilities, respondents, regardless of the type of disability, obtained the highest scores for *Calm*, indicating relatively low calmness and composure, but at the same time the lowest scores for *Negative affect*. The established structure of student attitudes is complex and ambiguous, regardless of the type of disability. What stands out, is the special intensity of two dimensions: *Calm* and *Behavioural avoidance*; this enables consistent interpretation since lower *Calm* may correspond to students' more intense *Behavioural avoidance* towards people with disabilities.

The results obtained on the relationship between the need for social approval and students' attitudes towards people with disabilities only partially confirmed the formulated hypothesis. In the case of attitudes towards deaf/hard-of-hearing people, no significant connections were found with the need for social approval, and the established correlation coefficients in relation to other disability groups were relatively weak. The conclusion is that higher social approval is associated with a more positive perception of people with Down syndrome and vision loss, attributing more positive characteristics to them and with behaviors conducive to establishing contact. It also shows a connection with a weaker tendency for avoidance behaviors and negative emotionality towards people with physical disabilities. The results obtained here are in line with other researchers' findings, showing that the respondents who provided socially desirable answers reported more positive attitudes towards people with disabilities, including physical disabilities (Keller & Siegrist, 2010). Interestingly, in the present study, the most significant connections were revealed between the need for social approval and attitudes towards people in a wheelchair. This may mean that, for students who are particularly interested in the opinions of others, it is important to emphasize that in their assessment they are able to see beyond certain expressive features of physical disability and focus on other positive characteristics of a person (Keller & Siegrist, 2010; Kowalska & Winnicka, 2013). The results of the regression analysis show, as in the studies of Kowalska and Winnicka (2013), that the need for social approval has little predictive power in explaining the students' attitudes (and their individual dimensions) towards people with disabilities.

According to previous studies (for example: Barr & Bracchitta, 2015; Huskin et al., 2018; Pettigrew & Tropp, 2008; Seo & Chen, 2009; Wickline et al., 2016), the results found here indicate the importance of the contact with a person with a disability for students' attitudes towards such a person, nevertheless, lower than expected. Most importantly, there was no significant difference in attitudes towards people with DS between students who had contact with such people and those who did not. Therefore, for this group of people with disabilities, prior contact is not relevant to students' attitudes. These results correspond with other findings proving a lack of connection between the amount of contact and attitudes towards people with intellectual disabilities (for example: McManus et al., 2010). However, these results are not consistent with most research results to date showing the important role of contact for attitudes towards people with intellectual disabilities (Morin et al., 2013; Scior, 2011), or directly towards people with Down syndrome (Pace et al., 2010). Therefore, the present results

suggest that the attitudes of university students towards this group of people with disabilities are shaped by some other factors that are more significant than just contact with such people. In future research, it would be worth analyzing a wider range of factors that make up the social context of university students – the influence of media should be one of them.

The results presented here reveal that contact with a person with a disability may have a negative impact on students' attitudes towards certain disability groups; there was a greater tendency for avoidance behavior towards people in a wheelchair and a less favorable assessment of people with vision loss among students who declared earlier contact with such people. Only in the case of contact with deaf/hard-of-hearing people were higher levels of calmness found compared to the declared lack of contact. Therefore, the results obtained here do not strongly support the assumptions of Allport's (1954) theory or previous empirical findings confirming the thesis that contact with people with disabilities correlates with more positive attitudes towards disability and people experiencing it. The contact respondents in the present study had people in a wheelchair, and visual loss was reflected in an unfavorable attitude in the cognitive and behavioral dimensions. It can be assumed that this contact reported by students was associated with some unpleasant, uncomfortable experiences with people in a wheelchair or visually impaired people, which, as a result, may be significant for less favorable thinking and behavioral avoidance (Vilchinsky et al., 2010).

The relatively small range of differences found in the present study may at the same time suggest that contact with a person with a disability is insufficient to explain university students' attitudes towards them. This aligns with the findings of other researchers who suggest that contact itself is an important factor, but ultimately, it does not determine the formation of attitudes towards people with disabilities (for example: Barr & Bacchitta, 2012; McManus, et al., 2010; Shannon et al., 2009). The presence or absence of contact may be much less important than the type of contact, indicating the nature of the relationship between a person with disability and a neurotypical person. To investigate this thesis, we analyzed whether students' contact with various people with disabilities (family members, friends, colleagues, acquaintances, and passers-by) affected their attitudes. The data confirmed the posited hypothesis suggesting the significance of the type of contact for students' attitudes towards people with disabilities in general, which coincides with other researchers' findings, for example: Barr and Bacchitt (2012, 2015) and Shannon et al. (2009).

The present study revealed that the most positive attitudes towards people with disabilities were reported by students who indicated previous contact with a person with a disability who was their friend. Therefore, being a friend and having a personal relationship with a person with a disability can provide experiences that are conducive to developing favorable attitudes towards people with disabilities in general. Perhaps in this personal, close relationship, non-disabled students perceive disability and its consequences in a broader context. By getting to know their friend with disability in various situations, they see both their weaknesses and fears as well as their skills, capabilities, and positive qualities. Friendship with a person with a disability can, therefore, help shape a more realistic view of people with disabilities, weakening the impact of stereotypical social thinking (Barr & Bacchitta, 2012). In line with other research (for example: Barr & Bacchitta, 2012; Wickline et al., 2016), contact with a person with a disability who is a friend was found to be more significant for students' positive attitudes

towards people with disabilities than e.g. contact with a colleague. Contact with a colleague with a disability, especially from the same group/class, is not voluntary and may not have the character of a close personal relationship, which narrows the scope of mutual experiences when both people know each other.

## 8 CONCLUSIONS

The present research also showed that the most negative attitudes were revealed by students who indicated previous contact with a passer-by with a disability. These results are not surprising and confirm the thesis already established in the literature on the importance of direct relations for developing more favorable attitudes towards people with disabilities. As stated by McManus et al. (2010), extensive knowledge about people with disabilities without high-quality contact with them will not provide a basis for developing a positive attitude towards them. Still, an important result of the present study is the finding about the significant intensity of negative attitudes of those students who indicated earlier contact with a family member. It is possible that these close relationships related to having extensive knowledge about the consequences of permanent disability for everyday functioning, the burden of support, or other family factors lead to withdrawal reactions or feelings of increased powerlessness. These results correspond with the findings of Hunt and Hunt (2000).

The results obtained in the present study lead to the following conclusions: First, university students reveal different attitudes towards people with different types of disabilities. Thus, they reveal the so-called preference for the order of certain types of disabilities before others by showing the most favorable attitudes towards people in a wheelchair. Second, the structure of the reported attitudes towards people with different disabilities is not uniform, with marked emotional and behavioral elements. The attitude of university students towards people with disabilities (physical: wheelchair, sensory: hearing and vision loss, and intellectual: Down Syndrome) is dependent on the intensity of their need for social approval. Third, contact itself (or lack thereof) is a variable that differentiates students' attitudes towards people with particular types of disabilities but to a small extent. Fourth, the quality of contact with a person with a disability, expressed by contact with a family member, friend, colleague, acquaintance, or passer-by, significantly differentiates students' attitudes towards people with disabilities in general. The insights gained from this study on university students' attitudes towards people with disabilities complement existing findings in this area, helping to better understand disability-related prejudices. It may also help people with disabilities (cf. Park et al., 2003) – awareness of the processes should help them understand the mechanisms of interaction styles and be more efficient self-advocates for their rights.

Although the present study provides valuable results for a group of university students, it is not free from limitations. First, the study group is homogeneous in terms of studying the humanities but includes students from various fields of study, and pedagogy students dominate. Second, the research focused on attitudes towards three main types of disability: physical, sensory, and intellectual, considering specific examples thereof (for example, Down Syndrome or vision loss). Therefore, the results cannot be generalized to all physical, sensory, or intellectual disabilities, including other types of impairments and dysfunctions. Third, the



research focuses on a selected element of the social context: contact (or lack thereof and type of contact), a personality characteristic related to social perception (the need for social approval), and the type of disability in determining the attitude of university students towards people with disabilities. Therefore, the significance of the selected factors is investigated. Future research could extend these analyses to include other psychosocial variables. Fourth, according to these assumptions, the study focused on testing the type of contact with a person with a disability and its importance for the attitude towards people with disabilities in general, regardless of the type of disability. It is important to analyze the importance of contact with a person with a particular type of disability for the attitude towards such a person among students.

## COMPLIANCE WITH ETHICAL STANDARDS

**Conflict of Interest:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as potential conflicts of interest.

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## REFERENCES

- Allport, G. W. (1954). *The nature of prejudice*. Reading MA, Addison-Wesley.
- Amissah, C. M., Gadosey, C. K., Nyarko, K., & Agyemang, C. B. (2016). Contextual analyses of attitudes toward persons with physical disabilities. *Current Research in Psychology*, 7(2), 27-35. <https://doi.org/10.3844/crpsp.2016.27.35>
- Antonak, R. F., & Livneh, H. (2000). Measurements of attitudes towards persons with disabilities. *Disability and Rehabilitation*, 22, 211-224. <https://doi.org/10.1080/096382800296782>
- Barr, J. J. (2013). Student-teacher's attitudes toward students with disabilities: associations with contact and empathy. *International Journal of Education and Practice*, 1(8), 87-100. <https://doi.org/10.18488/journal.61/2013.1.8/61.8.87.100>
- Barr, J. J., & Bracchitta, K. (2008). Effects of contact with individuals with disabilities: positive attitudes and majoring in education. *Journal of Psychology*, 142(3), 225-243. <https://doi.org/10.3200/JRPL.142.3.225-244>
- Barr, J. J., & Bracchitta, K. (2012). Attitudes toward individuals with disabilities: the effects of ages, gender, and relationship. *Journal of Relationship Research*, 3, 10-17.
- Barr, J. J., & Bracchitta, K. (2015). Attitudes toward individuals with disabilities: the effects of contact with different disability types. *Current Psychology*, 34(2), 223-238. <https://doi.org/10.1007/s12144-014-9253-2>
- Beha, A., & Hasanbegovic, H. (2019). Labor capacity of deaf workers in the workplace: qualitative analysis of the attitudes of deaf workers and their co-workers without hearing impairment. *Human Research in Rehabilitation*, 9(2), 40-47. <https://doi.org/10.21554/hrr.091906>

- Bryant, L., Hewison, J. D., & Green, J. M. (2005). Attitudes towards prenatal diagnosis and termination in women who have a sibling with Down Syndrome. *Journal of Reproductive and Infant Psychology*, 23(2), 181-198. <https://doi.org/10.1080/02646830500129214>
- Byra, S. (2009). Prototypowa kategoryzacja osób z niepełnosprawnością. *Człowiek – Niepełnosprawność – Społeczeństwo*, 1, 61-76.
- Campbell, J., Gilmore, L., & Cuskelly, M. (2003). Changing student teachers' attitudes towards disability and inclusion. *Journal of Intellectual and Developmental Disability*, 28(4), 369-379. <https://doi.org/10.1080/13668250310001616407>
- Cooper, A. E., Rose, J., & Mason, O. (2003). Mental Health Professionals towards people who are deaf. *Journal of Community and Applied Social Psychology*, 13, 314-319. <https://doi.org/10.1002/casp.725>
- Dessemontet, R. S., Morin, D., & Crocker, A. G. (2014). Exploring the relations between in-service training, prior contacts and teachers' attitudes towards persons with intellectual disability. *International Journal of Disability, Development and Education*, 61(1), 16-26. <https://doi.org/10.1080/1034912X.2014.878535>
- Domagała-Zyśk, E. (2015). *Postrzeganie pracy przez osoby niesłyszące i słabosłyszące. Annales Universitatis Mariae Curie-Skłodowska, Sectio J - Pedagogika*, XXVIII(1), 163-177. <https://doi.org/10.17951/j.2015.28.1.163>
- Drwal, R. Ł. (1985). *Adaptacja kwestionariuszy osobowości*. PWN.
- Drwal, R. Ł., & Wilczyńska, J. T. (1980). Opracowanie kwestionariusza aprobaty społecznej. *Przegląd Psychologiczny*, 23(3), 569-583.
- Enns, E. E., Boudreault, P., & Palmer, C. G. S. (2009). Examining the relationship between genetic counselors' attitudes toward deaf people and the Genetic Counseling session. *Journal of Genetics Counselling*, 19(2), 161-173. <https://doi.org/10.1007%2Fs10897-009-9272-6>
- Findler, E., Vilchinsky, N., & Werner, S. (2007). The Multidimensional Attitudes Scale towards persons with disabilities (MAS): Construction and validation. *Rehabilitation Counseling Bulletin*, 50(3), 166-176. <https://doi.org/10.1177/00343552070500030401>
- Furnham, A. (1986). Response bias, social desirability and dissimulation. *Personality and Individual Differences*, 7, 385-400. [https://doi.org/10.1016/0191-8869\(86\)90014-0](https://doi.org/10.1016/0191-8869(86)90014-0)
- Granello, D., & Wheaton, J. (2001). Attitudes of undergraduate students toward persons with physical disabilities and mental illness. *Journal of Applied Rehabilitation Counseling*, 32(3), 9-16. <https://doi.org/10.1891/0047-2220.32.3.9>
- Hunt, B., & Hunt, C. (2000). Attitudes toward people with disabilities: a comparison of undergraduate rehabilitation and business majors. *Rehabilitation Education*, 14(3), 269-283.
- Huskin, P. R., Reiser-Robbins, C., & Kwon, S. (2018). Attitudes of undergraduate students toward persons with disabilities: exploring effects of contact experience on social distance across ten disability types. *Rehabilitation Counseling Bulletin*, 62(1), 53-63. <https://doi.org/10.1177/0034355217727600>
- Ju, S., Roberts E., & Zhang, D. (2013). Employer attitudes towards workers with disabilities: A review of research in the past decades. *Journal of Vocational Rehabilitation*, 38, 113-132. <https://doi.org/10.3233/JVR-130625>

- Karasar, B., & Baytemir, K. (2018). Need for social approval and happiness in college students: the mediation role of social anxiety. *Universal Journal of Educational Research*, 6(5), 919-927. <https://doi.org/10.13189/ujer.2018.060513>
- Keller, C., & Siegrist, M. (2010). Psychological resources and attitudes toward people with physical disabilities. *Journal of Applied Social Psychology*, 40(2), 389-401. <https://doi.org/10.1111/j.1559-1816.2009.00579.x>
- Kellogg, G., Slattery, L., Hudgins, L., & Ormond, K. (2014). Attitudes of mothers of children with Down syndrome towards noninvasive prenatal testing. *Journal of Genetic Counseling*, 23, 805-813. <https://doi.org/10.1007%2Fs10897-014-9694-7>
- Kowalska, J., & Winnicka, J. (2013). Attitudes of undergraduate students towards persons with disabilities: the role of the need for social approval. *Polish Psychological Bulletin*, 44(1), 40-49. <https://doi.org/10.2478/ppb-2013-0005>
- Krahe, B., & Altwasser, C. (2006). Changing negative attitudes towards persons with physical disabilities: An experimental intervention. *Journal of Community and Applied Social Psychology*, 16, 59-69. <https://doi.org/10.1002/casp.849>
- LaBelle, S., Booth-Butterfield, M., & Rittenour, C. E. (2013). Attitudes towards profoundly hearing impaired and deaf individuals: Links with intergroup anxiety, social dominance orientation and contact. *Western Journal of Communication*, 77(4), 489-506. <https://doi.org/10.1080/10570314.2013.779017>
- Lampropoulou, V. (1997). Teachers of the deaf as compared with other group of teachers. Attitudes towards people with disabilities and inclusion. *American Annals of the Deaf*, 142(1), 26-33. <https://doi.org/10.1353/aad.2012.0245>
- Lee, C., & Pott, S. A. (2018). University students attitudes towards deaf people: educational implications for the future. *Deafness and Education International*, 20(2), 80-99. <https://doi.org/10.1080/14643154.2018.1438777>
- Levis, D. M., Harris, S., Whitehead, N., Moultrie, R., Duwe, K., & Rasmussen, S. A. (2012). Women's knowledge, attitudes, and beliefs about Down syndrome: A qualitative research study. *American Journal of Medical Genetics A*, 158A, 1355-1362. <https://doi.org/10.1002%2Fajmg.a.35340>
- Long, S., O'Leary, P., Lobo, R., & Dickinson, J. E. (2018). Women's understanding and attitudes towards Down Syndrome and other genetic conditions in the context of prenatal screening. *Journal of Genetic Counseling*, 27, 647-655. <https://doi.org/10.1007/s10897-017-0167-7>
- McCaughney, T. J., & Strohmer, D. C. (2005). Prototypes as an indirect measure of attitudes toward disability groups. *Rehabilitation Counseling Bulletin*, 48(2), 89-99. <https://doi.org/10.1177/00343552050480020301>
- McDonnall, M. C., Crudden, A., & O'Mally, J. (2015). Predictor of employer attitudes toward people who are blind or visually impaired as employees. *Journal of Vocational Rehabilitation*, 42, 41-50. <https://doi.org/10.3233/JVR-140722>
- McDonnall, M. C., Zhou, L., & Crudden, A. (2013). Employer attitudes towards persons who are blind or visually impaired: perspectives and recommendations from vocational rehabilitation personnel. *Journal of Rehabilitation*, 79(3), 17-24.

- McManus, J., Feyes, K. J., & Saucier, D. (2010). Contact and knowledge as predictors of attitudes toward individuals with intellectual disabilities. *Journal of Social and Personal Relationship*, 28, 579-590. <https://doi.org/10.1177/0265407510385494>
- Miller, E., Chen, R., Glover-Graf, N. M., & Kranz, P. (2009). Willingness to engage in personal relationships with persons with disabilities. Examining category and severity of disability. *Rehabilitation Counselling Bulletin*, 52, 211-224. <https://doi.org/10.1177/0034355209332719>
- Morin, D. M., Rivard, M., Crocker, A. G., Boursier, C. P., & Caron, J. (2013). Public attitudes toward intellectual disability: a multidimensional perspective. *Journal of Intellectual Disability Research*, 57, 279-292. <https://doi.org/10.1111/jir.12008>
- Novo-Corti, M. I. (2010). Attitudes towards disability and social inclusion. An exploratory analysis. *European Research Studies*, 8(3), 83-106. <https://doi.org/10.35808/ersj/288>
- Nowak, K. (2015). Postawy młodzieży wobec osób niepełnosprawnych ruchowo. *Annales Universitatis Mariae Curie-Skłodowska, XXVIII*(1), sectio J., 67081.
- Pace, J. E., Shin, M., & Rasmussen, S. A. (2010). Understanding attitudes toward people with Down Syndrome. *American Journal of Medical Genetics Part A*, 152A, 2185-2192. <https://doi.org/10.1002/ajmg.a.33595>
- Park, J. H., Faulkner, J., & Schaller, M. (2003). Evolved disease – avoidance processes and contemporary anti-social behavior: prejudicial attitudes and avoidance of people with physical disabilities. *Journal of Nonverbal Behavior*, 27(2), 65-87. <https://doi.org/10.1023/A:1023910408854>
- Patel, M., & Rose, J. (2014). Student's attitudes towards individuals with an intellectual disability. *Journal of Intellectual Disabilities*, 18(1), 90-103. <https://doi.org/10.1177/1744629513511355>
- Paulhus, D. L. (1984). Two-component models of socially desirable responding. *Journal of Personality and Social Psychology*, 46(3), 598-609. <https://doi.org/10.1037/0022-3514.46.3.598>
- Paulhus, D. L. (2002). Socially desirable responding: the evolution of a construct. In H. I. Braun, D. M. Jackson, & D. E. Wiley (Eds.), *The role of constructs in psychological and educational measurement* (1<sup>st</sup> ed., pp. 49-69). Lawrence Erlbaum.
- Pettigrew, T. F., & Tropp, L. R. (2008). How does intergroup contact reduce prejudice? Meta-analytic tests of three mediators. *European Journal of Social Psychology*, 38, 922-934. <https://doi.org/10.1002/ejsp.504>
- Polo Sánchez, M. T., Chacón-López, H., Caurcel Cara, M. J., & Zambrano, B. V. (2020). Attitudes towards persons with disabilities by educational science students: importance of contact, its frequency and the type of disability. *International Journal of Disability, Development and Education*, 68(5), 617-626. <https://doi.org/10.1080/1034912X.2020.1716960>
- Quellette-Kunz, H., Burge, P., Brown, H. K., & Arsenault, E. (2010). Public attitudes toward intellectual disabilities as measured by the concept of social distance. *Journal of Applied Research in Intellectual Disabilities*, 23, 132-142. <https://doi.org/10.1111/j.1468-3148.2009.00514.x>
- Rieser, R. (2008). *Implementing Inclusive Education: Commonwealth Guide to Implementing Article 24 of the UN Convention on the Rights of People with Disabilities*. Commonwealth Secretariat. <https://doi.org/10.14217/9781848591271-en>
- Sari, H. (2007). The influence of an In-service Teacher Training (INSET) programme on attitudes towards inclusion by regular classroom teachers who teach deaf students in Primary schools in Turkey. *Deafness and Education International*, 9(3), 131-146. <https://doi.org/10.1179/146431507790559996>

- Scior, K. (2011). Public awareness, attitudes and beliefs regarding intellectual disability: A systematic review. *Research in Developmental Disabilities, 32*, 2164-2182. <https://doi.org/10.1016/j.ridd.2011.07.005>
- Seo, W., & Chen, R. K. (2009). Attitudes of college students toward people with disabilities. *Journal of Applied Rehabilitation Counseling, 40*(4), 3-8. <https://doi.org/10.1891/0047-2220.40.4.3>
- Shannon, C. D., Schoen, B., & Tansey, T. N. (2009). The effects of contact, context, and social power on undergraduate attitudes toward persons with disabilities. *Journal of Rehabilitation, 75*(4), 11-18.
- Skotko, B. G. (2009). With new prenatal testing, will babies with Down syndrome slowly disappear? *Archives of Disease in Childhood, 94*(11), 823-826. <https://doi.org/10.1136/adc.2009.166017>
- Unger, D. (2002). Employers' attitudes toward persons with disabilities in the workforce: Myths or realities? *Focus on Autism and other Developmental Disabilities, 17*(1), 2-10. <https://doi.org/10.1177/108835760201700101>
- Vilchinsky, N., Werner, S., & Findler, L. (2010). Gender and attitudes toward people using wheelchairs: A multidimensional perspective. *Rehabilitation Counselling Bulletin, 53*(3), 163-174. <https://doi.org/10.1177/0034355209361207>
- Wickline, V. B., Neu, T., Dodge, C. P., & Shriver, E. R. (2016). Testing the contact hypothesis: improving college students' affective attitudes toward people with disabilities. *Journal on Excellence in College Teaching, 27*(2), 3-28.
- Yuknis, C. (2015). Attitudes of pre-service teachers towards inclusion for students who are deaf. *Deafness and Education International, 17*(4), 183-193. <https://doi.org/10.1179/1557069X15Y.0000000003>

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