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Attitudes of undergraduate students towards persons with disabilities; the role of the need for social approval¹

Abstract The purpose of this study was a diagnosis of the attitudes of students of Warsaw universities towards people with disabilities and the variables which impacted on these attitudes. Additionally, we examined the relationship between the need for social approval and explicit attitudes towards people with disabilities. The study focused on two components of attitudes: behavioural (measured by preferable social distance – SDSB) and cognitive (tested with a semantic differential scale – SDSO). 318 students completed a survey including a demographic sheet, a social desirability scale, the SDSB and SDSO. The results indicate that students expressed positive attitudes towards people with disabilities. The impact of such variables as gender, the type of disability and the need for social approval was registered and were differentiated in regard to components of attitudes. The results are discussed with reference to earlier research and cues for further studies are suggested.

Key words: attitudes, disability, social distance, semantic differential, social approval

Introduction

For many years attitudes towards people with disabilities have constituted the object of interest for psychologists, sociologists and researchers of other scientific fields. Although Antonak and Livneh (1988) stated that there existed close to 500 published definitions of the term ‘attitude’, in the main this concept is used to express general positive or negative ideas about somebody or something. According to Myers (2010) and other authors (e.g. Weigl, 1999; Zanna, 1994) three components of attitudes can be distinguished: emotional (feelings associated with the object), behavioural (information about past behaviours toward the object or behavioural intention) and cognitive components (the beliefs associated with the object).

In literature it is possible to find numerous works concerning the diagnosis of social attitudes towards people with disability (e.g. Chan, Livneh, Pruett, Wang, & Zheng, 2009; Chen, Brodwin, Cardoso, & Chan, 2002; Ouellette-Kuntz, Burge, Brown, & Arsenault, 2009; Sękowski, 1999; Yazbeck, McVilly, & Parmenter, 2004), amongst which it is

possible to distinguish two trends (mainstreams). The first one is based on the assumption that attitudes towards persons with disabilities are characteristic of the individuals and result from personality features and preferences. The results of research on this group have indicated that personality is a significant factor in the development of attitudes. They have shown that attitudes are correlated with such features as ethnocentrism, authoritarianism, aggression, self-esteem, anxiety, ego-strength, body satisfaction, ambiguity tolerance, level of dependence of perceptive field, intelligence and creative abilities, as well as social and moral value preferences (e.g. Klimisiński, 1976; Noonan, Barry, & Davis, 1970; Siller, 1984; 1988; Sękowski, 1998).

A second group of studies concerning attitudes towards people with disabilities has explored the attitudes characteristic of particular social groups and tested factors which these groups can distinguish. There are many reports which consider the meaning of such factors as, for example, respondents’ gender, age, education level or contact with people with disabilities (e.g. Hunt & Hunt, 2000; Yazbeck et al., 2004; Yuker & Block, 1986; Au & Man, 2006; Her-

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¹ The results presented here were analysed as part of a research project financed from the research resources of Warsaw University, Faculty of Psychology: BST 1445/13/2009. I thank Paulina Bednarska for her help in collecting data.

genrather & Rhodes, 2007; Ouellette-Kuntz et al., 2009; Gordon, Tantillo, Feldman, & Perrone, 2004; Horner-Johnson et al., 2002; Kolodziej & Johnson, 1996; Lyons & Hayes, 1993; Shannon, Tansey, & Schoen, 2009; Tripp, French, & Sherrill, 1995). However it is hard to find an unequivocal answer of how these variables influence declared attitudes towards disabled persons. Different authors have reported contrary findings. Such a diversity of results may be due to several reasons. It could be a consequence of the fact that only a few researchers have taken into account the influence of the cultural context on attitudes (Chen et al., 2002; Crystal, Watanabe, & Chen, 1999; Graf, Blankenship, Sanchez, & Carlson, 2007; Weinfurt & Moghaddam, 2001; Yucker & Block, 1986). Such studies indicated that relationships between attitudes and the tested variables might vary among different countries (Westbrook, Legge, & Pennay, 1993). Additionally, authors have rarely reported which component of attitudes they measured. Different methods of measurement are used in accordance with the various components of attitudes tested (Maciątek & Kurcz, 1992; Nowicki, 2006). Since it is possible that certain variables influence only specific components of attitudes, applying different methods might therefore result in diverse findings and relationships suggested by the data (Nowicki, 2006).

It is worth emphasizing that both of the tendencies in examinations described above should be treated as complementary rather than competitive. Attitudes towards disabled persons are multidimensional, and therefore may result from the influence of diverse factors.

Independently of whether such examinations concern individual variables or social factors, the majority of studies concerning attitudes toward people with disabilities are conducted with questionnaire methods which refer to declared, explicit attitudes. This manner of measurement has different restrictions: among others, it assumes that the subjects under examination are conscious of their attitudes, and that they want to reveal them (Antonak & Livneh, 1988; 2000). A lot of researchers agree that the verbal declarations of subjects can be modified by social impact and the tendency to present oneself in a positive light. Respondents might indicate certain attitudes toward disabled people that they feel they are expected to give, rather than responses that represent their true beliefs (Sigelman, 1991). Therefore, the responses given in self-reported questionnaire forms may be more socially desirable than true.

The link between social desirability and expressed attitudes toward others has been studied for fifty years and it seems to be well established in literature (Milington & Leierer, 1996). However, relatively few works have focussed on attitudes towards people with disabilities. Their results indicate that a dissonance exists between declared positive attitudes and the behaviour of examined persons (Singer, 2001; Wiórka & Wciórka, 2000). Moreover, respondents attribute more positive features to persons with disabilities in situations where they are asked to express

their own opinion, compared with situations in which they are asked to answer questions concerning what others think about such people (e.g. Śliwak, 2008). The first type of situation appeals to explicit and directly expressed attitudes towards persons with disabilities but the results connected with the second situation can be linked with the activation of implicit attitudes which are unconscious or hidden from the world. The differences found in the above studies may suggest that attitudes towards people with disabilities, when expressed openly, might be burdened with norms and social conventions (Sigelman, 1991; Woźniak, 2007).

According to Siller (1998), social disability treated as a personality variable is related to attitudes toward disabilities, and the need for social approval is positively associated with acceptance of people with disabilities. Nevertheless, it is possible to find research which contradicts this relationship. Horner-Johnson and co-workers (2002) studied attitudes of Japanese students towards people with intellectual disabilities and they observed non-significant correlations between the results of different attitude scales and the Marlowe-Crowne Social Desirability Scale (M-CSDS), which measured the tendency to choose socially acceptable responses. These authors concluded that their results had not reflected social desirability or political correctness. A similar conclusion was arrived at by Yazbeck et al. (2004) in an investigation conducted amongst students, disability services professionals and the general population in Australia. In fact, these authors observed a relationship between the results of M-CSDS and attitude scales but this relationship differed from earlier reports. Subjects with a lower social desirability consistently reported more positive attitudes towards disabled people than subjects with higher M-CSDS results (Yazbeck et al., 2004). It is worth paying attention to the fact that both of the above studies concerned attitudes towards people with intellectual disabilities, thus it is possible that the type of disability could be a significant factor influencing the described relationship.

The purpose of the present investigation was to diagnose the attitudes of students of Warsaw universities towards people with different kinds of disabilities. The study was designed to determine the influence of such variables as the type of disability, the respondents' gender, the frequency of contact the subjects had with persons with disabilities, and the presence of a person with disabilities in the respondents' vicinity (i.e., among the acquaintances, friends and family of the respondents) on these attitudes. The examination concerned two components of attitudes: behavioural and cognitive. The first one was measured by preferable social distance towards disabled people. In turn, the cognitive component of attitudes was examined using a semantic differential scale, one of the most frequently applied methods for examining the descriptive side of stereotypes. Using two methods of measuring attitudes enabled an assessment of whether the influence of the abovementioned variables was

similar or different with reference to the behavioural and cognitive components of attitudes.

An additional aim of the present study was to examine the relationship between the need for social approval and explicit attitudes towards persons with disabilities. We wanted to evaluate whether a desire for acceptance from other people influenced the subjects' social distance towards persons with disabilities or attributed specific features to these persons. Moreover, based on the literature cited above we hypothesized that disability type might be a significant variable influencing the presence or direction of a relationship between the need for social approval and the measured attitudes.

Method

Participants

Three hundred and eighteen students from various Warsaw universities volunteered to participate in the present study. A total of 108 men and 210 women were tested. The age of subjects ranged from 19 to 27 years (mean=21.8; SD=1.7). Participants studied various disciplines (e.g. biology, biotechnology, transport, Romance languages, Russian languages, international economic relations, finance and banking). Students which studied rehabilitation disciplines were excluded from the study. The character of the various contacts between participants and people with disabilities is presented in Table 1.

Table 1. Characteristic of contacts between the participants and people with disabilities

	n	%
Frequency of contacts with people with disabilities		
never	95	29,9
several times during a year	141	44,3
one time during a month	25	7,9
several times during a month	29	9,1
one time during the week	9	2,8
several times during the week	8	2,5
every day	9	2,8
no data	2	0,6
Presence of person with disability		
amongst respondent's acquaintances		
Yes	97	20,5
No	221	69,5
amongst respondent's friends		
Yes	20	6,3
No	297	93,4
No data	1	0,3
in the respondent's family		
Yes	66	20,8
No	252	79,2

Instrumentation/Measures

The survey was divided into three parts. The first one comprised a demographic sheet and questions concerning the frequency of contact between the respondents and dis-

abled persons. The second part included questionnaires on attitudes toward people with disabilities, and the third part featured a questionnaire on the respondents' need for social approval.

Demographic Sheet. Respondents answered questions regarding their gender, age, domicile status, education level and discipline(s) studied. Additionally, they were asked about the frequency of contact they had with people with disabilities and about the presence of such persons in their social vicinity (i.e. among their acquaintances, friends and family).

Questionnaires on attitudes toward people with disability. Attitudes towards people with disabilities were measured by two classic methods from social psychology: the Social Distance Scale based on Bogardus' idea (SDSB) and the Semantic Differential Scale of Osgood, Suci, and Tannenbaum (1957) (SDSO). Each participant completed both the SDSB and the SDSO one time, but each of the scales referred to people with different types of disabilities. Four terms associated with disability were used. The first one was the most general ("disabled person"), the next two referred to people with sensory disabilities ("deaf person" and "blind person") and the last one pertained to people with a specific disorder connected with intellectual disability ("person with Down syndrome").

The SDSB was used to measure subjects' preferred distance towards people with disabilities, defined as the relative willingness of the respondent to participate with a representative of this social group in relationships of diverse degrees of intimacy. Originally, Emory Bogardus (1933) elaborated this scale to test ethnical prejudices, but it has since been applied in the study of attitudes towards disabled people (Kowalska, 2011; Śliwak, 2008; Tringo, 1970). In the present study a modified version was used with 10 questions about consenting to entering a relationship with a person with a disability in the ten following interpersonal situations: (1) studying; (2) working at the same location; (3) forming a close partnership at work; (4) becoming a direct subordinate of a disabled person; (5) living in the same vicinity (e.g. in a block of flats); (6) becoming neighbours; (7) becoming acquaintances; (8) becoming friends; (9) becoming a member of the family of a disabled person; and (10) becoming a close family member (e.g. the spouse of a disabled person). Based on an adaptation of Maciątek and Kurcz (1992), the subjects were asked to answer to each question either 'YES' to declare their consent or 'NO' to withhold it. The rate of preferred distance was a sum of the NO answers given by respective subjects (with a minimum score of 0 and a maximum score of 10). A higher score indicated a greater declared social distance and therefore that the respondent held more negative attitudes towards people with disabilities.

The next questionnaire used to measure attitudes toward people with disabilities was the SDSO. It was composed of a set of 42 subscales. Each subscale consisted of a pair of

directly opposite adjectives. The respondents were asked to express their opinions about people with some kind of disability by marking one of seven points placed between the adjectives (example in Fig.1).

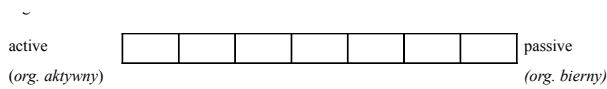


Figure 1. Example of one subscales used in SDSO

Numerical values ranging from -3 to 3 were assigned to points between the pairs of adjectives. If respondents marked the end point near an adjective with negative connotations (e.g. passive, false, greedy, cruel), they received a score of -3. In turn, a score of +3 was registered when they marked the end point near a positive feature (e.g. active, truthful, generous, gentle). Marking the central position between the adjectives was scored as 0. This method of counting results was repeated for 42 pairs of adjectives. It allowed us to measure general trends of connotation (negative – positive) as well as their intensity. The reliability ratio was satisfactory (Cronbach's alpha was 0.883).

Questionnaire on the need for social approval. The third part of the survey included a Questionnaire of Social Approval (QSA). This tool was based on the Marlowe-Crowne Social Desirability Scale (M-CSDS) and was elaborated by Drwal and Wilczyńska (1980). The QSA measures a subject's tendency to answer in a socially desirable way in self-report inventories and in the present study it was used to predict the level of the subjects' need for social approval. This questionnaire included 29 items describing behaviours and characteristics recognised as socially desirable or undesirable. Subjects indicated 'True' or 'False' when answering whether a given statement referred to them. They received 1 point each time they marked a response interpreted as socially desirable (in 16 items the socially desirable answer was 'True' and for 13 it was 'False'). The possible score range was 0 to 29 points, with higher scores indicating a greater tendency to select socially desirable responses, which could suggest a greater need for social approval. According to Drwal (1995), the reliability and accuracy ratios of this test are satisfactory.

Procedure

The present study was conducted in January and October 2010. The survey was completed during classes at three universities after permission was received from the class teachers. Participation in the examination was voluntary and anonymous. The time of filling in a questionnaire was unlimited, but it mostly took respondents about 15 - 20 minutes to complete. The research procedure was accepted by the Ethics Committee of Research working at the Department of Psychology at the University of Warsaw.

Data Analysis

Analyses were conducted using SPSS for Windows (version 18PL). The SDSB, SDSO and QSA scores were calculated for each subject.

Because a preliminary analysis suggested a left-oblique distribution of SDSB scores (Fig.2), these were elaborated using nonparametric tests. The Mann-Whitney U-test (Z) was used to determine differences between two independent groups and the Kruskal-Wallis one-way analysis of variance by ranks (χ^2) was employed to compare more than two groups. Comparisons for dependent samples were conducted with Wilcoxon's test (for two samples) and with W-Kendall's test (for more than two samples).

The SDSO results were analysed using a three-way ANOVA with 'gender' (men vs. women) and 'type of disability' ('disabled person'; 'blind person'; 'deaf person' and 'person with Down syndrome'), as independent factors, and 'subscale - pairs of adjectives' (42 levels) as a repeated measure. Next, a post-hoc Tuckey test was applied. Because there was no equal distribution of samples in groups which featured a person with disability in the respondents' surroundings and their frequency of contact with disabled persons (i.e. the assumptions of a parametric test were not fulfilled), non-parametric tests were therefore used to analyse the impact of these variables on the SDSO scores (Mann-Whitney U-test and the Kruskal-Wallis one-way analysis of variance by ranks).

The relationship between the need for social approval and attitudes towards people with disabilities were computed using a Spearman rank correlation (ρ) for SDSB scores and Pearson's product moment correlation coefficients (r) for SDSO scores.

Significant differences were fixed at the alpha level of 0.05 for all statistical analysis.

Results

Behavioural aspect of attitudes (results of the SDSB)

The average SDSB result was 1.25 pts (SD = 1.8). Half of the students (50.9%) achieved a score of 0 (Fig. 2), there-

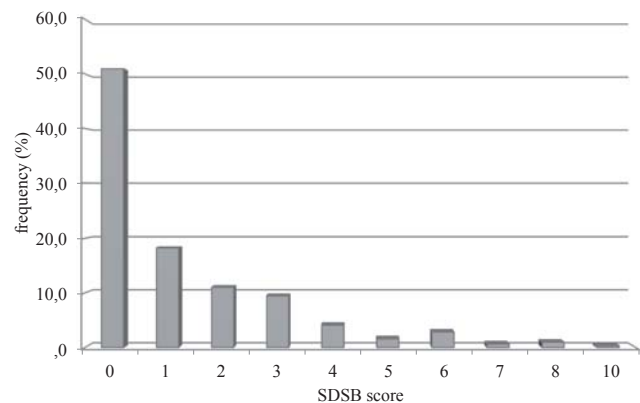


Figure 2. Distribution of SDSB scores

by they expressed full approval of the idea of participating with disabled persons in different social situations.

The statistical analysis of the results enabled us to indicate some factors associated with the declared social distance toward people with disabilities. One of these factors was the type of interpersonal situation which the subjects were asked in the test. W-Kendall's test for dependent samples showed a significant diversification of respondents' replies between questions of the scale ($\chi^2 = 528.45$; $df = 9$; $p < 0.0001$). The largest percentage of 'no' answers was received in questions concerning giving consent to becoming a close family member (38.9%) and being the subordinate of a disabled person (30.7%). The fewest negative answers were registered in questions concerning living in the vicinity (1.3%), studying (2.8%), being a next door neighbour (2.8%), working in the same place (4.1%) and being an acquaintance of a disabled person (4.7%).

The category of disability was another factor which influenced the SDSB results (Kruskal-Wallis test, $\chi^2=42.33$; $df=3$; $p<0.0001$). Comparisons with pairs using Mann-Whitney's test indicated that respondents declared a higher level of social distance towards people with Down syndrome than towards persons with three other kinds of disability (general category of disabled persons: $U = 1791$; $p < 0.0001$; deaf persons: $U = 1694$; $p < 0.0001$ and blind persons: $U = 1792$; $p < 0.0001$). The results showed that there were no statistically significant differences between the levels of distance declared towards persons from these three categories (Mann-Whitney test, NS).

Additionally, a series of Kruskal-Wallis tests indicated that relationships between the type of disability and the declared distance towards people with disabilities occurred in six situations described in the test: study ($\chi^2=14.78$; $df=3$; $p<0.005$); close partnership at work ($\chi^2=21.88$; $df=3$; $p<0.0001$); becoming a direct subordinate of a disabled person ($\chi^2=51.37$; $df=3$; $p<0.0001$); friendship ($\chi^2=18.71$; $df=3$; $p<0.0001$); membership of extended family ($\chi^2=15.82$; $df=3$; $p<0.001$) and membership of close family ($\chi^2=20.73$; $df=3$; $p<0.0001$). In each of these situations, respondents displayed the greatest distance towards persons with Down syndrome. In the remaining situations (studying; living in the same vicinity; being next door neighbours; working in the same place and being acquaintances) there were no observable statistically significant differences between the results of the SDSB for various categories of disability (Kruskal-Wallis test, NS).

Some additional analysis indicated that other measured factors (like the respondents' gender, the presence of disabled persons in their family, friends or acquaintances, and frequency of contacts with disabled persons) did not

have an impact on the results of the SDSB (Mann-Whitney U-tests, Kruskal-Wallis test; NS).

When analysing the link between the need for social approval and distance towards disabled people, the level of significance in the correlation analysis reached the value $p < 0.005$, which indicated a significant relation between results of the SDSB and the QSA. However, the minimum value of the Spearman's rank correlation coefficient ($\rho=-0.161$) revealed a very weak, negative relationship between the examined variables. It might be stated that the higher the need for social approval, the lower the declared distance towards people with different kinds of disability. Additionally, four correlation analyses were conducted in particular groups of 'types of disability' and their results did not show a significant relation between the SDSB and QSA scores.

Cognitive aspect of attitudes (results of SDSO)

Students participating in the present study received a mean SDSO score of 0.53 (SD=0.52). The results of a three-way ANOVA indicated that significant main effects were obtained for three factors: 'gender' ($F(1,310)=10.4$; $p<0.001$; $\eta_p^2=0.032$); 'type of disability group' ($F(3,310)=6.347$; $p<0.0001$; $\eta_p^2=0.058$) and 'subscale - pair of adjectives' ($F(17.7,310)^2=75.856$; $p<0.0001$; $\eta_p^2=0.197$). Moreover, the interaction between the 'type of disability' by 'subscale - pair of adjectives' ($F(53,310)^2=8.912$; $p<0.0001$; $\eta_p^2=0.079$) proved significant. Other interactions were not significant.

The significant differentiation of the results in regard to the respondents' gender ensued from the fact that women described disabled persons more positively (mean=0.58; SD=0.54) than men (mean=0.39; SD = 0.5).

Despite the differences between men and women, evaluations of disabled people significantly depended on the subscale in which they were described. In the main, the examined students judged persons with different kinds of disabilities positively, describing them as honest (mean = 1.30; SD = 1.17), sincere (mean = 1.28; SD = 1.08), and friendly (mean = 1.25; SD = 1.15). In turn, negative features assigned to disabled persons were e.g. reserved (mean = -0.69; SD = 1.39) and dependent (mean = -0.67; SD = 1.7).

Moreover, ANOVA analyses indicated that the kind of disability was the next significant factor which modified the results of the SDSO. Generally, the average assessment of people with Down syndrome was significantly lower (mean=0.38; SD=0.49) than assessments of persons with sensory disabilities (with deafness: mean=0.63; SD=0.56 or with blindness mean=0.65; SD=0.5; post-hoc Tuckey

² Mauchly's test indicated that the assumption of sphericity had been violated (chi-square = 4420.443, $p < .0001$), therefore degrees of freedom were corrected using Greenhouse-Geisser estimates of sphericity (epsilon = 0.431) and used to calculate the p-value for the observed F value.

test $p < 0.02$ and $p < 0.01$ respectively). However, the interaction the type of disability and subscales in ANOVA implied that the relationship between evaluations attributed to disabled persons and the kind of disability was dependent on the subscale on which respondents made the description. The results of a series of post-hoc Tuckey tests indicated that significant differences between assessments of persons with different kind of disabilities occurred in 31 subscales from 42 distinguished in the test. In the case of 18 subscales (e.g. 'unintelligent-intelligent'; 'helpless-resourceful' or 'without ambition-ambitious') people with Down syndrome were described more negatively in comparison to other groups. However, in 12 cases (e.g. in the subscales 'greedy-munificent'; 'untruthful -truthful'; 'hostile-friendly') the relationship was opposite and more positive features were attributed to people with this syndrome. In the case of the subscale 'polite-impolite', blind people were described as more polite (mean=1.29; SD=1.05) than people with other disabilities (mean=0.69; SD=1.12; Tuckey test $p < 0.01$). For the 11 remaining subscales there were no significant differences between assessments of persons with different types of disability.

The results of non-parametrical tests indicated that other variables (like presence of disabled persons in the family, amongst friends or acquaintances, frequency of contact with disabled persons) did not impact the SDSO scores (Mann-Whitney U-tests, Kruskal-Wallis test; NS).

Based on the analysis of the correlation between the SDSO scores and QSA scores, it could be stated that there was no relation between the need for social approval and the attribution of certain features to disabled people (Pearson's $r = 0.064$, p NS).

Discussion

The findings of this study indicate that students from Warsaw universities are largely willing to establish a relationship with disabled persons: on average they consented to participate in nine out of ten possible relationships. Furthermore, half of the examined students declared full approval in participating with disabled persons in different social situations and hence demonstrated complete acceptance of people with disability. Moreover, the results of the SDSO indicate that the majority of features attributed by respondents to disabled persons were of a positive character, albeit with a fairly weak intensity. Generally, it can be stated that the students we tested expressed positive attitudes towards people with disabilities in both behavioural and in cognitive aspects.

The results of our examination lead to point factors which could modify attitudes towards people with disabilities. The conducted analyses suggested that the meaning of the tested variables differed according to the examined components of attitudes. Other factors had an impact on the results of the SDSB and SDSO; dependences were different

in variables such as the type of disability, the respondents' gender and their need for social approval.

The type of disability was a significant factor which had an impact on both the SDSB and the SDSO results. However, the meaning of this factor was different depending on the manner of measurement or the tested component of attitudes towards people with disabilities. In the case of the behavioural component, significantly greater social distance was displayed towards people with Down syndrome than towards representatives of the three remaining categories of disability (general disability, blindness and deafness). The respondents displayed less willingness to participate in different situations with a person identified as intellectually disabled than with a person with another type of disability. These differences seem to be more significant in situations of higher intimacy, which evoked greater distance and were probably considered by participants to be more important than other types of relationships. Similar results were obtained by other researchers. In the literature on this subject, intellectual disability was consistently shown to be least socially accepted both in international studies (e.g. Gordon et al., 2004; Karnilowicz, Sparrow, & Shinkfield, 1994; Lyons & Hayes, 1993; Nowicki, 2006) as well as in Polish ones (e.g. Giryński & Przybylski, 1993; Maison & Rudzińska-Wojciechowska, 2011; Ostrowska, 1994). However, the results obtained in the present study regarding the cognitive components of attitudes towards people with disabilities were more ambiguous than above. Although in the SDSO the average assessment of the attributes of persons with Down syndrome was lower in comparison with assessments of deaf and blind persons, in the case of 12 subscales the opposite trend was evident. People with Down syndrome were assessed as, for example, more friendly, munificent, and truthful than representatives of other forms of disabilities. These findings might suggest that students have a certain knowledge about Down syndrome which lets them judge people with this disability in a positive light. This knowledge is probably a result of public campaigns launched in recent years, whose aim was to disseminate information about the causes and specificity of Down syndrome, as well as popularising the multifaceted image of people with intellectual disabilities, in order to decrease prejudices and to increase acceptance and positive attitudes towards this group (e.g. Campbell, Gilmore, & Cuskelly, 2003; Maison & Rudzińska-Wojciechowska, 2011; Rillotta & Nettelbeck, 2007). It seems that these campaigns have caused a change in social awareness, which might be confirmed by results of the SDSO presented at this article. However, despite the wide efforts to promote more positive perceptions of intellectual disability, the changes to the image of people with Down syndrome have not transferred to a change in the public's behaviour towards these people. The positive assessments of people with this kind of disability appear to have no consequences on the willingness of the students to interact with these people and pursue in-

terpersonal relationships. This suggests that prejudices towards persons with intellectual disability are still strong.

The results of the present study also suggest that the respondents' gender was an important factor influencing attitudes towards people with disabilities, though this was evident on the cognitive component only, and not the behavioural. Men and women declared a similar distance towards people with different kinds of disability, however women attributed more positive features to these groups than men. Generally in the literature there is a lack of an explicit answer to the question about gender-based differences in attitudes towards disabled persons. A lot of data showed that women compared with men demonstrated more positive attitudes toward disabled people (e.g. Hunt & Hunt, 2000; Maison & Rudzińska-Wojciechowska, 2011; Woźniak, 2007; Tripp et al., 1995; Yaker & Block, 1986). On the other hand, the results of some studies suggested the opposite relationship, i.e. that men declared more positive attitudes than women. Yaker and Block (1986) noted such results in studies conducted in Denmark, Israel and India. Similar observations were reported from studies with children by Nabuzoka and Ronning (1997) as well as by Woodard (1995). Additionally, some authors indicated a lack of relationship between gender and attitudes toward disabled people (Gordon et al., 2004; Kowalska, 2011; Yazbeck et al., 2004). This diversity of results can be a consequence of the fact that the meaning of the measured component of attitudes was omitted in interpretations of these findings. The method that the presented study used to indicate the measurements of attitudes might play a significant role in the presence of gender differences. Because women, in comparison to men, may have a tendency to apply more positive assessments in descriptions of people (e.g. Rożnowska, 1985), measurements based on attributing features (like the SDSO) can favour the female gender resulting in the appearance of more positive attitudes toward persons with disabilities (Nowicki, 2006; Soroka-Fedorczuk, 2007). It is possible that gender differences observed in the present study in the SDSO could be an effect of the differences between women and men in the forming of judgments of other people rather than being a direct consequence of the existence of these differences in attitudes towards people with disabilities.

One of the aims of the conducted examination was to check the relationship between declared attitudes towards people with disabilities and the need for social approval. The analyses carried out indicate that there was no relationship between the results of the SDSO and the results of the QSA, and hence between attributing certain features to disabled people and the need for social approval among respondents. However, a negative correlation was registered between the results of the SDSB and the results of the QSA. Subjects with higher social desirability reported a lower distance towards people with different types of disability. This confirms previous conclusions about the positive as-

sociation between the need of social approval and acceptance of people with disabilities (Siller, 1988). However, it should be emphasised that the correlation obtained in our study was very weak ($\rho = -0.161$), and its high significance ($p < 0.005$) probably resulted from the large sample size ($n = 318$). These results might suggest a minimal impact of social desirability on the explicit attitudes towards people with disability, particularly on the behavioural component of attitudes. Although the declared social distance was influenced by adherence to socially desirable expectations to only a small extent, this variable should be included in the interpretation of the results of future research. It should be added that the type of disability wasn't a significant variable influencing the presence of a relationship between the need for social approval and the attitudes measured.

Additionally, in the case of the behavioural components of attitudes, analyses of the results confirmed that social distance towards people with disabilities was strongly dependent on the situational context. Generally, as the level of the relationship became more intimate, there was less willingness among respondents to participate with people with disabilities in such situations. This result is consistent with previous reports (Gordon et al., 2004; Hergenrather & Rhodes, 2007; Kowalska, 2011; Shannon et al., 2009). Similar to the results of other research on attitudes towards disabled persons (e.g. Maison & Rudzińska-Wojciechowska, 2011; Ostrowska, 1994; Śliwak, 2008), respondents were mostly distant to the idea of disabled people becoming members of their close family. Nevertheless the second question, which was associated with the highest level of distance, concerned consent to a disabled person becoming an immediate superior of the respondent. It is difficult to talk about intimacy with reference to this situation; however, contact between a superior and a subordinate have an asymmetrical character. The substantial number of 'no' answers in this question could indicate that the respondents didn't want to be dependent, through reporting to a person with disability. It is interesting that similar results were obtained by Maciątek and Kurcz (1992) in examinations concerning ethnic stereotypes. It is possible that both these situations arouse the greatest social distance, irrespective of whether respondents are expressing their attitude toward representatives of other nationalities or people with disabilities. It also suggests that the intimacy of the relation is only one of the significant factors in the declared social distance. The asymmetrical character of a relationship and being dependent on a disabled person are additional features of the situation which should be taken into consideration when testing social distance in different social contexts.

Surprisingly, frequent contact, presence in the respondent's surroundings or having a current friendship with a person with disabilities did not impact either social distance nor perceptions of persons with disabilities. According to the classic hypothesis of contact of Allport

from 1954 quoted by many authors (e.g. Horner-Johnson et al., 2002; Shannon et al., 2009; Weigl, 1999) we could expect that respondents who had more contact with disabled people would express more comfort in interactions with these people and that they would declare more positive attitudes toward them. However, this hypothesis was not supported by the results of the present study. It is necessary to emphasise that the respondents were asked only about the general frequency of their contact with people with disabilities, but not about the quality and character of these relations. Based on previous research alone, contact would be insufficient in improving attitudes towards others (Gordon et al., 2004; Kowalska, 2011; Sękowski, 1999). Also, the quality of the contact and such features as structured, planned, voluntary, partner characteristics and satisfaction were important (Au & Man, 2006; Kolodziej & Johnson, 1996; Lyons & Hayes, 1993; Shannon et al., 2009). Because these features were not examined in the current research, more precise examinations are needed to understand the role of the contact character in the behavioural and cognitive aspects of attitudes towards persons with disabilities.

It should be added that the results of the present study have to be interpreted within their limitations. Although a large sample size was desirable, all of the respondents were undergraduate students from Warsaw universities, hence the diversity of the tested group was limited with reference to their age, level of education and domicile status. These variables are often indicated as essential to the level of approval towards persons with different kinds of disability. Younger respondents, those with a higher education level and living in major cities often declared more positive attitudes towards people with disability than older people, those with a lower education level, or residents of rural communities (e.g. Maison & Rudzińska-Wojciechowska, 2011; Ouellette-Kuntz et al., 2009; Śliwak, 2008; Woźniak, 2007; Yazbeck et al., 2004). For these reasons the results of present study might not be reflective of the general Polish population.

The next limitation concerned the measurements of attitudes and the use of nonparametric statistical analysis. The types of measurements might have had a key impact on the obtained relationships between data. Because we applied only two types of instruments, future research is needed to confirm the role of the different variables in the behavioural and cognitive aspects of attitudes towards persons with disabilities. Such examinations should be conducted by using many different research tools. Additionally, on account of the specificity of the collected data and applying nonparametric statistical tests we didn't analyse the interaction of certain factors in the received results, which could have reduced the scope of the relationships found.

Despite these limitations, the results of the present study could attest to current social tendencies, and could also constitute the basis of future explorations of issues associated with attitudes towards people with disabilities.

Conclusions

To summarise, attitudes towards people with disabilities are multidimensional and they can be associated with variables such as the type of disability, the gender of respondents and the need for social approval. An important implication of this study is that the role of the tested variables might be different between the behavioural and cognitive components of attitudes. This suggests that in future studies researchers should take into consideration which aspect of attitudes they are testing. Such an approach could lead to a more precise interpretation of future results and to a better understanding of factors which contribute to the formation of attitudes towards other people. This knowledge might increase the effectiveness of strategies developed to improve the image of disabled persons.

Based on the conducted study, it is possible to state that there is still a lot to do in this field, particularly in regard to people with intellectual disabilities. Although students appear to have a multifaceted image of people with Down syndrome, this had no consequences in their willingness to pursue interpersonal relationships with these persons. This suggests that prejudices towards persons with mental retardation might still be strong.

The results of the present study could attest to current social trends of issues associated with attitudes towards people with disabilities. However, further research studies that include the use of more varied measurement methods and which target respondents from among the general population are recommended.

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