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Attitudes towards Persons with Disabilities by Educational Science Students: Importance of Contact, Its Frequency and the Type of Disability

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ABSTRACT

According to Contact Theory, direct experience between people with and without disabilities seems to be the basis for building and changing beliefs and, therefore, behaviours. The present study enquires into Educational Science university students' attitudes towards people with disabilities analysing the differences that occur on the basis of the frequency of contact (almost permanent, habitual, frequent or sporadic), and the type of disability (motor, hearing, visual, intellectual or multiple) of the person with whom the contact is maintained. The participants were 900 students of the Faculty of Education of the University of Granada who completed the Scale of Attitudes towards people with disabilities. The analysis carried out shows significant differences depending on the contact with people with disabilities in different factors of the scale. In addition, there are more favourable attitudes in students who maintain sporadic contact, and also those in those with contact with people with sensory disabilities.

KEYWORDS

Attitudes; contact; disability; inclusive education; students; university

Introduction

The equalisation of opportunities and the incorporation of people with disabilities into the labour market implicitly mean that they can receive a university education to compete with the rest of society on equal terms (Valcarce, 2005). However, it is a fact that the percentage of university students with disabilities is lower than the rest of the student population. In the report prepared by the State Observatory of Disability (2010), (Observatorio Estatal de la Discapacidad 2010) it is recorded that 5.4% of people with disabilities (aged 25 or more) had university or equivalent studies, while that percentage was 18.7% for those without disabilities.

People with disabilities suffer from exclusion in the educational field and reach lower levels of education than the rest of the population; they have fewer opportunities to access the labour market; they face extraordinary restrictions to participate actively in society and to develop a normal affective and social life (Huete, 2013). In this sense, there are selection processes, filters, which do not take into account the physical or sensory possibilities of the

student. Among these obstacles are the architectural, transport and access barriers to educational centres. Other intangibles can be found (Lissi, Onetto, Zuzulich, Salinas, & González, 2014), referring to the attitudes generated towards this population or the perception of the disability. These are psychological barriers that can be found in the attitudes of colleagues, teachers, family and society (Polo & López-Justicia, 2006).

Most of the definitions in relation to attitudes coincide in that they are a non-observable psychological evaluative process, which mediates between an object and the people's responses to it (Palacios, 2011). Positive or negative attitudes have a direct influence on the behaviour of society; thus, for example, the development of positive attitudes in the community has an impact on the creation of an inclusive school (González, Vicent, & Sanmartin, 2016). This fact has given rise to an active line of research, which has adopted different perspectives depending on the analysis group (Verdugo, Jenaro, & Arias, 2002).

In the field of education, recent studies have focused on the analysis of attitudes towards the inclusion of people with disabilities (Martins, Borges, & Gonçalves, 2018; Polo, Fernández, & Díaz, 2011; Polo, Fernández, & Fernández, 2017; Rodríguez-Martín & Álvarez, 2015; Suriá-Martínez, 2011) noting that the information and/or training on disability received during university education may well be one of the determinants of attitudes (Diego, 2017; Reina, 2003).

Some researchers have highlighted the influence of the type of university studies carried out on attitudes displayed towards the disabled (Gómez & Infante, 2004; López-Ramos, 2004; Polo et al., 2011; Polo & López-Justicia, 2006), which may be due to the presence of colleagues with disabilities. These results would confirm that the attitudes would be determined by the beliefs themselves and these, in turn, would be the product of experiences, knowledge, as well as the information available (Kowalsky & Rizzo, 1996; Reina, 2003). Some studies have shown that maintaining contact with people with disabilities has an important influence on both negative and positive attitudes of teachers and students. This indicated that those people who had not interacted directly with this group presented greater rejection attitudes than those who had previously done so (Abellán, Sáez-Gallego, & Reina, 2017; Armstrong, Morris, Abraham, Ukoumunne, & Tarrant, 2015; Consiglio, Guarnera, & Magnano, 2015; Merccado, Di Giusto, Rubio & De la Fuente, 2017; Wilson, 2014). Even with these data, there is no conclusive literature about whether attitudes towards disability differ depending on the type of person with whom the contact is maintained (Muratori, Guntín, & Delfino, 2010; Polo et al., 2011; Rao, 2002; Suriá-Martínez, 2011); although, some studies suggest that attitudes are more favourable towards people with hearing disabilities (Moreno, Rodríguez, Saldaña, & Aguilera, 2006), physical disabilities (García & Hernández, 2011); or with behavioural disorders (Barr & Bracchitta, 2015). However, there does seem to be a consensus that contact with disabled people will increase positive attitudes towards them (Au & Man, 2006; García & Hernández, 2011; López-Ramos, 2004; Moreno et al., 2006; Muratori et al., 2010; Parasuram, 2006; Paul, 2006; Polo et al., 2011; Rodríguez-Martín & Álvarez, 2015; Seo & Chen, 2009; Suriá-Martínez, 2011; Yazbeck, McVilly & Parmerter, 2004).

According to Contact Theory (Allport, 1954), direct experience between people with and without disabilities seems to be the basis for building and changing beliefs and, therefore, behaviours (Hodge, Davis, Woodard, & Sherrill, 2002). In this sense, the strategies that have proven most effective in promoting change in attitudes are direct contact and information

(Diego, 2017; Flórez, Aguado, & Alcedo, 2009; Pérez, Ocete, Ortega, & Coterón, 2012; Rello & Garoz, 2014; Slininger, Sherrill, & Jankowski, 2000). But it has also been suggested that in order to improve student attitudes, direct contact with others with disabilities is not enough, but attitudes must be strengthened and worked through programmes (Aguado, Flóres & Alcedo, 2004; Borrás, Herrero, Navarro, & Sebastián, 2005; Flórez et al., 2009) influencing direct contact (Allport, 1954). However, there is some controversy regarding the influence exerted by the frequency of contact on attitudes. Different authors (Gómez & Infante, 2004; Moreno et al., 2006; Parasuram, 2006; Yazbeck et al., 2004) point out that this variable does not seem to have any weight in the development of positive attitudes towards people with disabilities. Others suggest that sporadic contact exerts a positive influence (Aguilera, 2016; García & Hernández, 2011; López-Ramos, 2004; Macias, 2016), rather than more frequent, habitual or permanent contact which would lead to more unfavourable attitudes (Muratori et al., 2010; Paul, 2006).

Previous studies (Polo et al., 2011; Polo & López-Justicia, 2006;) have indicated that the student body of Education Sciences shows favourable attitudes towards people with disabilities, but it is not known if these attitudes are more or less favourable according to the frequency of the contact maintained and the type of disability; hence, the objectives of the present investigation are: 1. Determining if attitudes are more favourable depending on whether contact is maintained with people with disabilities. 2. Knowing if there are differences in attitudes depending on the frequency of the contact (whether almost permanent, habitual, frequent or sporadic). 3. Discovering if these attitudes vary according to the type of disability (sensory, motor, intellectual or multiple disabilities) with which there is contact.

Material and Methods

Participants

For the selection of the sample and in order to make comparisons between the different degrees being studied, it was decided to carry out a stratified random sampling by non-proportional affixation, since each stratum corresponded to the same number of sample elements (Sarrià, Guàrdia, & Freixia, 1999). The sample consisted of 900 students (from first to fourth year) who participated voluntarily (151 men and 728 women), with ages between 20 and 60 years, and mostly between 21 and 30 years (522 subjects, 58%). The distribution was equitable in the four degrees studied (Teacher's Degree in Early Childhood Education, Primary, Pedagogy and Social Education of the Faculty of Educational Sciences, University of Granada, Spain): there were 225 students per degree, which represents 25% of the total in each case. Table 1 shows the socio-demographic characteristics of the sample.

Research Tools

For the collection of data, the Attitude Scale towards people with multidimensional disabilities (Verdugo et al., 2002) (composed of 37 items), developed in Spain, was used. It has reliability studies (Cronbach's alpha .92) and validity (one general and the other specific for physical, sensory and mental deficiencies), with sufficient psychometric

Table 1. Socio-demographic characteristics of participating students.

	Frequency	Percentage
Age		
<20	357	39.70
21–30	522	58.00
31–40	9	1.00
41–50	7	.80
51–60	1	.10
No reply	4	.40
Total	900	100
Gender		
Male	151	16.80
Female	728	80.90
No reply	21	2.30
Total	900	100
Academic year		
First	303	33.70
Second	247	27.40
Third	229	25.40
Fourth	121	13.40
Total	900	100

guarantees (Verdugo et al., 2002). The task to be performed by the participating student is to decide whether or not to agree with each of the phrases that are presented, formulated positively or negatively, the meanings and scores being the following:

I strongly agree (MA) (1), I quite agree (BA) (2), I partially agree (3), I partially disagree (PD) (4), I strongly disagree (BD) (5), I totally disagree (TD) (6). The answers nearest to 1 are those that indicate the most favourable attitudes. The factorial analysis of the Scale revealed the existence of five factors. Factor I, called Assessment of capacities and limitations that includes items numbered 1, 2, 4, 7, 8, 13, 16, 21, 29, and 36 of the Scale), and refers to the conception that the respondent has of people with disabilities. Factor II, called Recognition/Denial of rights (brings together items 6, 9, 12, 14, 15, 17, 22, 23, 27, 35 and 37) referring to the recognition of fundamental rights of the person with disability. Factor III, Personal involvement, is made up of judgements referring to specific interactive behaviour that the person would carry out in relation to people with disabilities (group items 3, 5, 10, 11, 25, 26 and 31). Factor IV (items 18, 20, 24, 28 and 34) is a generic rating that includes the global attributions and general qualifications that are carried out about presumably defining characteristics of the personality or behaviour of people with disabilities. Factor V, Assumption of roles, consists of assumptions that the respondent makes about the conception that people with disabilities have of themselves (it includes items 19, 30, 32 and 33).

In addition to the items mentioned, other socio-demographic factors were added to the Scale referring to age, gender, studies and profession of the participants. Likewise, items related to contact with people with disabilities were included specifically: whether they had contact or not with people with disabilities and, if so, their frequency (almost permanent, habitual, frequent or sporadic) and the type of disability that the person contacted presented (motor, auditory, visual, intellectual or multiple).

Procedure

To carry out this study, we first contacted students who, voluntarily, wanted to participate, being previously informed about the purpose of the study. Secondly, the application of the instrument was carried out by a researcher in training. The information collection lasted six months, in the morning and afternoon (according to the preferences of the students); the students completed the Scale individually and anonymously, after reading and signing the informed consent, and the confidentiality of the results was guaranteed. The time used for the completion was 45–60 minutes. If a student with special educational needs required adaptation of the instrument, it was provided. To facilitate reading to participants with visual difficulty, an expansion of the font size was carried out to 14 points. Likewise, we counted on the help of a sign language interpreter from the University of Granada who gave instructions and resolved doubts to students affected by hearing loss. It was not necessary to adopt additional measures for people disabled with motor incapacities.

Data Analysis

In the first place, the Mann-Whitney test was carried out to detect differences among the students (of all the degrees), depending on their contact or not with people with disabilities, and the five factors included in the Scale. Once these differences were detected, attitudes were analysed, according to the frequency of contact with people with disabilities, applying the Kruskal-Wallis test. Next, the attitudes of the students in relation to the type of disability with which they were in contact were examined, again applying the Kruskal-Wallis test. The data was analysed using the statistical package SPSS version 20 for Windows.

Results

As can be seen in Table 2, significant differences were found in Factors I (Assessment of abilities and limitations), III (Personal involvement) and IV (Generic qualification), in which students with contact with people showed more favourable attitudes to people with a disability. The average scores, standard deviations and average ranges are presented in Table 2.

Table 2. Results of the Mann-Whitney U test, average scores, standard deviations and average ranges of attitudes of university students in relation to contact with people with disabilities.

	Contact	Total	Mean	SD	Average range	Mann-Whitney	
						U	Significance
Factor I ^a	Yes	447	2.03	.62	407.90	82204	.00
	No	420	2.16	.65	461.68		
Factor II ^b	Yes	447	1.53	.49	420.95	88038	.11
	No	420	1.60	.58	447.89		
Factor III ^c	Yes	447	1.25	.43	402.91	79971	.00
	No	420	1.38	.56	467.09		
Factor IV ^d	Yes	447	2.18	.71	401.12	79171	.00
	No	420	2.37	.69	469.00		
Factor V ^e	Yes	447	2.36	.90	427.67	91042	.44
	No	420	2.40	.86	440.73		

Table 3. Average scores, standard deviations and average ranges of attitudes according to frequency of contact with people with disability.

	Contact	Mean	SD	Average Range
Factor I ^a	Habitual	2.49	1.14	191.43
	Frequent	2.49	1.27	184.50
	Sporadic	2.63	1.37	193.96
Factor II ^b	Habitual	2.51	1.69	213.49
	Frequent	2.29	1.62	189.07
	Sporadic	2.21	1.63	174.86
Factor III ^c	Habitual	4.17	2.23	202.29
	Frequent	3.99	2.24	195.81
	Sporadic	3.63	2.28	176.43
Factor IV ^d	Habitual	2.89	1.34	196.81
	Frequent	2.70	1.34	178.24
	Sporadic	2.92	1.38	195.93
Factor V ^e	Habitual	3.07	1.28	181.00
	Frequent	3.42	1.56	202.42
	Sporadic	3.16	1.40	184.97

Table 4. Average scores, standard deviations and average ranges of attitudes according to type of disability of people with whom contact was maintained.

	Type of disability	Mean	SD	Average range
Factor I ^a	Sensory	2.34	1.41	180.58
	Intellectual	2.62	1.11	250.52
	Multiple	2.53	1.26	225.78
Factor II ^b	Motor	2.42	1.79	213.97
	Sensory	2.55	1.93	218.87
	Intellectual	2.02	1.28	214.34
Factor III ^c	Multiple	2.44	1.74	225.70
	Motor	3.87	2.27	219.10
	Sensory	3.81	2.26	213.21
Factor IV ^d	Intellectual	3.60	2.26	206.65
	Multiple	4.21	2.24	230.64
	Motor	2.88	1.36	221.37
Factor V ^e	Sensory	2.89	1.38	229.05
	Intellectual	2.85	1.30	223.21
	Multiple	2.81	1.38	212.95

According to the frequency of the contact, significant differences were detected in Factor II ($\chi^2 = 19.014$; $p = .024$), observing more favourable attitudes in those students who maintain sporadic contact. In Table 3, the average scores, typical deviations and average ranges of the variables are presented.

In relation to the type of disability with which they were in contact, the results showed significant differences in Factor I ($\chi^2 = 19.014$; $p = .000$), confirming more favourable attitudes in those students who maintain contact with people with sensory disabilities. Table 4 shows the average scores, typical deviations and average ranges of variables.

Discussion

The first aim of the study was to determine whether maintaining contact with people with disabilities influenced the attitudes of participating students. The results, as in previous studies (Moreno et al., 2006; Polo et al., 2011; Suriá-Martínez, 2011; Walsh, Jones, Krause,

Obiozor, & Pang, 2008), point clearly in this direction, highlighting that students who have this experience show more favourable attitudes, specifically, regarding the assessment of people's abilities, the degree of personal involvement and the general qualification they make of people with disabilities. According to other works (Abellán et al., 2017; Armstrong et al., 2015; Au & Man, 2006; Consiglio, Guarnera & Magnano, 2015; Diego, 2017; García & Hernández, 2011; López-Ramos, 2004; Mercado et al., 2017; Muratori et al., 2010; Paul, 2006; Parasuram, 2006; Polo et al., 2011; Rodríguez-Martín & Álvarez, 2015; Seo & Chen, 2009; Suriá-Martínez, 2011; Yazbeck et al., 2004), facilitating direct contact and interaction with people with disabilities seems to be a way to promote positive attitudes.

The second purpose was to know whether there were differences in attitudes based on the frequency of contact. The results indicated that students who had sporadic contact have a more positive attitude towards people with disabilities, as pointed out in the studies of Aguilera (2016), García and Hernández (2011), López-Ramos (2004), and Macias (2016). This result could be attributed, as pointed out by García and Hernández (2011) (in a study outside the university context, but with adults and young people and with the same evaluation instrument that has been used), that sporadic contact, in this research with these people reinforces their favourable attitude. On the contrary, those who maintain a more permanent contact present less positive attitudes, which may also be indicative of fatigue or discomfort that comes from a closer relationship and attention. On this aspect, Abellán et al. (2017) point out that more intimate or frequent contacts such as having a friend or relative with a disability, or doing an inclusive sport, would be related to a positive attitude towards disability, as opposed to more superficial or specific contacts (sharing a classroom or classes of Physical Education).

Finally, when the relation between attitudes and the type of disability with which one has contact is investigated (third objective), it becomes clear that students show more favourable attitudes towards people with sensory disabilities. The result is consonant with that found by Moreno et al. (2006). In this sense, it seems that the predisposition tends to be more favourable to students with milder disabilities rather than severe (Rizzo & Vispoel, 1991, cited by Suriá-Martínez, 2011), having highlighted that people with intellectual disabilities suffer different forms of discrimination related to prejudices and erroneous beliefs about their condition. Apparently, the social stigma that marks this group constitutes one of the main barriers to its inclusion (McManus, Feyes, & Saucier, 2010), hence the study of the variables related to attitudes towards it (McManus et al., 2010).

On the other hand, when attitudes outside the university context are analysed, García and Hernández (2011) found that the most positive attitude is towards people with multiple or intellectual disabilities and it is lower in those with sensory disabilities. This may indicate a situation of greater consideration being shown the more evident and limiting the disability.

Based on the data obtained in this study, it is considered appropriate to emphasise the importance of prior contact with people with disabilities in order to favour attitudes in university students. It cannot be ignored that if we really want a society accessible to all, universities have a relevant role, promoting contact between people with and without disabilities and adopting measures such as the implementation of training programmes that bring the reality of disability closer to society.

Regarding the limitations of the study, it can be pointed out that the sample is not balanced by gender. This difficulty can be justified given that the studies of Educational

Sciences present a high female presence, constituting 90% of the students (Ramos, 2002). So in order to obtain a gender perspective, it would be interesting to expand the research and include students from other degrees with an educational profile, such as those who study the Degree in Physical Activity and Sports Sciences; and the University Master's Degree in Compulsory Secondary Education and Baccalaureate, Vocational Training and Language Teaching. Even so, we believe that the data are useful and guide us to knowing the attitudes of a large population of university students.

Disclosure statement

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