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The positive impact of including students with intellectual disabilities in schools: Children's attitudes towards peers with disabilities in Saudi Arabia



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ABSTRACT

Background: The purpose of this study is to examine the attitudes of Saudi students towards peers with disabilities. It examines how these attitudes are related to age, attending a school that includes students with intellectual disabilities, and having a relative with a disability.

Methods and procedure: Participants included 357 elementary school male students (grades 3–6) who completed the Arabic version of the CATCH scale.

Outcomes and results: The students presented positive attitudes towards peers with disabilities. Students in schools that included students with intellectual disabilities had more positive attitudes than other students. Older students were more likely to hold positive attitudes than younger students. Having a relative with a disability had no effect.

Conclusion and implications: The findings suggest that students generally hold positive attitudes towards children with disabilities. Moreover, including students with intellectual disabilities in schools associated with other students' awareness about students with differing levels of abilities. Expanding schools to include children with disabilities in society in general will probably help increase the likelihood that they will be accepted and diminish the stereotypes that follow them.

What this paper adds?

This study adds to the literature in several aspects. First, it contributes to increasing the number of studies in English from Arab countries in issues related to education and addresses poorly represented cultural samples. Therefore, it provides readers and researchers with a broader perspective, which helps in making comparisons based on different samples. Second, it addresses a vital and renewable topic related to the factors affecting children's acceptance of and attitudes towards their peers with disabilities. Third, it adds to the general understanding of factors that may influence the successful inclusion of students with disabilities, especially given that the integration of students with disabilities is no longer a required practice only in developed societies but has become a popular trend among educational institutions in many other countries.

1. Introduction

One of the main changes related to childhood disabilities in the past three decades is the increased integration of children with disabilities in regular schools (Rosenbaum, 2010). However, successful integration is not a straightforward process. It requires that

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students with disabilities have positive experiences at school, where they are liked and befriended by other students (Thomson & Lillie, 1995). Such behaviours require that other students have positive attitudes towards peers with disabilities.

Attitude, which is defined as “the affect for or against a psychological object” (Thurstone, 1931), is important to understand for many reasons. Its level of importance varies depending on its perceived relationships with other variables. Some researchers ascribe great importance to attitude in predicting behaviours (Ajzen & Fishbein, 1977; Linton, 1945; Petty & Cacioppo, 1996), while others merely confirm the existence of a relationship between attitude and behaviour (Mueller, 1986). Nonetheless, despite the varying perspectives regarding the relationship between attitude and behaviour, researchers generally agree that this relationship exists.

Measuring and understanding people’s attitude towards the integration of children with different abilities helps overcome the difficulties facing the success of inclusive education. One of the main obstacles to successful inclusion is negative attitudes towards people with disabilities (McDougall, DeWit, King, Miller, & Killip, 2004).

Researchers use different scales to examine students’ attitude towards peers with disabilities. One of the recommended scales is the Chedoke–McMaster Attitudes towards Children with Handicaps (CATCH) scale (Rosenbaum, Armstrong, & King, 1986), which is one of the few scales that covers three dimensions of attitude (Vignes et al., 2009). It has been used in various countries, such as Canada (Rosenbaum et al., 1986), the USA (Holtz & Tessman, 2007), Belgium (Bossaert, Colpin, Pijl, & Petry, 2011), France (Vignes et al., 2009), and Nigeria (Olaleye et al., 2012). This provides a context for comparisons with different samples from various cultures.

The literature on students’ attitudes towards people with disabilities is growing (Rosenbaum et al., 2010), but it still lacks studies from non-Western societies. Hence, this study attempts to elucidate this issue in some of these areas of the world. Saudi Arabia is witnessing rapid strides in the integration of children with disabilities in schools, especially children with intellectual disabilities. Numerous studies have examined attitudes towards people with disabilities in Saudi Arabia. However, the samples were mostly teachers. There is a clear shortage of studies that examine students’ attitudes towards peers with disabilities in Saudi Arabia and also in the Arabic region.

Studies have identified certain variables that may influence students’ attitudes towards peers with disabilities. For instance, Vignes et al. (2009) found that gender (female), better quality of life, having a relative or close friend with a disability, and having knowledge of disability are associated with positive attitudes towards peers with disabilities. MacMillan, Tarrant, Abraham, and Morris, (2014) conducted a systematic review of 35 studies, and they concluded that children with more contact with people with disabilities were more likely to hold positive attitudes in comparison with others.

In addition, attending a school that integrates students with disabilities (Thomson & Lillie, 1995) positively impact students’ attitudes. Findings as regard age effect on attitudes towards peers with disability were inconsistent (Bossaert et al., 2011). Some studies reported no differences in attitudes based on age (Bossaert et al., 2011; Rosenbaum, Armstrong, & King, 1988; Vignes et al., 2009). In addition, Bossaert et al. (2011) reported that there were studies found that participants with older age hold more positive attitudes, and others found participants with younger age hold more positive attitudes (Scior, Addai-Davis, Kenyon, & Sheridan, 2013). Therefore, these variables are examined in this study. In short, this study aims to examine Saudi students’ attitudes towards their peers with disabilities and to understand the factors that influence these attitudes.

2. Material and method

2.1. Procedures & sample

Participants included 357 elementary school male students (grades 3–6) from six schools. The six schools were in the Riyadh region and were selected based on the presence of a teacher with prior knowledge of the researcher’s assistant to distribute the questionnaires and collect completed ones, and return them back to the researcher’s assistant. The schools were spread over different areas of Riyadh city. The sample in this study was from boys’ schools only, due to the limited number of research assistants and the time allotted for this study. Schools in Saudi Arabia are completely separated by gender. Male teachers teach in boys’ schools and female teachers teach in girls’ schools.

Schools with programmes for students with intellectual disabilities are no different from other schools. Thirty elementary schools in Riyadh that have special education programmes for students with intellectual disabilities are geographically distributed to cover all areas of the city. In integrated schools, students with disabilities have the opportunity to meet and interact with other students in the schools during the morning queue for approximately 20 minutes as well as during the 30-minute midday break that is the breakfast time for students in the schoolyard.

Opportunities for students with disabilities to participate and communicate with other students occur mainly during the previously mentioned periods. Additional participation may be initiated by individual special education teachers and other classroom teachers to incorporate students into certain activities. For instance, if two classes have PE at the same time, one class for students with intellectual disabilities and the other with other students, the latter class might include some of the students with intellectual disabilities in their football game. However, the occurrence of such participation is limited.

After obtaining approval by an institutional review committee in the deanship of scientific research to conduct this study, we coordinated with the managers of the included schools to obtain their approval to administer the scale. Then, the scale was distributed to the classes. Three of the schools had special education programmes for students with intellectual disabilities in self-contained (separate) classrooms.

The research assistant first explained and read the questionnaire to the teachers. Then, the teachers took it to their classes and read the instructions to the students before distributing the questionnaire. Participants completed the questionnaire under the supervision of classroom teachers. The only explanation and clarification teachers provided was to help students understand the

phrasing when necessary. Students were told to interpret handicapped as they understood it, as recommended and implemented by Rosenbaum et al. (1986).

2.2. Instrument

The CATCH scale (Rosenbaum et al., 1986) was translated into Arabic and then back-translated following the back-translation technique (Brislin, 1970). Two bilingual (Arabic and English) specialists in special education work translated the CATCH from English to Arabic. First, the author translated the English version into Arabic. Second, the second translator, who had not seen or been aware of the English version, translated the Arabic into English. Then, the two English versions were compared to ensure that the items retained the same meaning. Slight modifications were made to the Arabic version after comparing the two English versions. Finally, before conducting the research, feedback regarding the clarity of the items and how well they could be understood by students was collected from five teachers who later helped to collect the study questionnaires.

The scale contains 36 items, with 12 items in three components. All four mean scores (overall score and each component score) were calculated and then multiplied by 10, as done by Rosenbaum et al. (1986); Bossaert et al. (2011), and Olaleye et al. (2012). The highest possible mean score on the overall scale or in any component is 40. “A high score represents a more positive attitude” (Rosenbaum et al., 1986, p.521).

Conceptually, the CATCH scale is based on the three-components attitudes model proposed by Triandis in 1971 (Rosenbaum et al., 1986). Therefore, it is divided into three subscales. First, the affective subscale contains 12 items that focus on feelings towards people with disabilities (e.g., ‘I would be pleased if a handicapped child invited to me to his house’). Second, the cognitive subscale contains 12 items that focus on beliefs towards people with disabilities (e.g., ‘Handicapped children don’t have much fun’). Third, the behavioural intention subscale contains 12 items that focus on behavioural intentions towards people with disabilities (e.g., ‘I would tell my secret to a handicapped child’).

The CATCH scale was designed for children aged 9–13 years (Rosenbaum et al., 1986). However, it has been used with youth up to 16 (Armstrong, Morris, Abraham, Ukoumunne, & Tarrant, 2016; Bossaert & Petry, 2013) and 20 years old (Bossaert et al., 2011).

2.3. Hypotheses

Based on the literature, we proposed three hypotheses: First, students in integrated schools hold more positive attitudes than other students. Second, students who have relatives with a disability hold more positive attitudes than other students. Third, older students hold more positive attitudes than younger students.

2.4. Statistical analysis

Means and standard deviations were computed for the overall scale and for the components. In addition, a multiple regression was used to test the predictability of the demographic variables for attitude. An analysis of variance was utilized as a post hoc analysis for the significant predictors in the multiple regression. The Statistical Package for Social Sciences (SPSS 21) was used to run all statistical analyses.

3. Results

3.1. Reliability and validity

Cronbach’s alphas were computed to examine the scale’s reliability (Table 1). The results indicated good reliability for the three subscales, affective, behavioural intent, and cognitive (.842, .817, and .773, respectively). The Cronbach's alpha reliability for the full score on the scale (36 items) was computed as .854, indicating good internal consistency (George & Mallery, 2003). Principal component analysis was conducted to test for the structure validity of the scale. The proposed model with three factors, based on the original scale, explained 31% of the variance. With reference to the factor structure, twenty of the 36 items had loadings > .30 for the individual factors. In addition, the scree plot analysis recommended the three-component solution. Furthermore, correlations between the three subscales and the overall scale were all significant at .01 level (see Table 1).

Table 1
Internal Reliability of the Subscales (Cronbach's Alpha Coefficient).

	Cronbach's Alpha	N of Items	Correlation with the scale (overall)
Affective	.842	12	.883 **
Behavioural intent	.817	12	.854 **
Cognitive	.773	12	.838 **
Overall	.854	36	–

**Significant at $p < .01$.

Table 2
Participants' Mean Scores by Components.

Component	N	Mean	Std. Deviation
Affective	355	25.1	7.31
Behavioural intent	355	24.3	6.71
Cognitive	355	23.8	6.93
Overall	355	24.5	6.14
Valid N (listwise) (missing = 2)	355		

3.2. Attitudes towards peers with disabilities

Table 2 shows the mean values of students' attitudes towards peers with disabilities. The mean for students' overall attitudes was (24.5), with a 6.14 standard deviation. The highest mean score was for the affective component (25.1), with a 7.31 standard deviation, whereas the lowest mean score was for the cognitive component (23.8), with a 6.93 standard deviation. The mean score for the behavioural component was (24.3), with a 6.71 standard deviation.

3.3. Demographic characteristics

Of the 357 participants (students aged 9–16 years), around 40% (141) had relatives with disabilities, and around 36% (128) were in schools that had special education programmes for students with intellectual disabilities.

Table 3 indicates that students in schools that had special education programmes for students with intellectual disabilities scored higher on the CATCH ($M = 25.19$) than those in other schools ($M = 24.21$). In other words, they expressed more positive attitudes towards peers with disabilities than those in schools without special education programmes. These results showed that the effect of the type of school on students' attitudes was statistically significant with significant p value = .02.

With means ranging from 28.5 to 35.4, students aged 14 or older expressed higher positive attitudes towards peers with disabilities than those aged 13 or younger. This finding indicates that age influenced students' attitudes (Table 3), with significant p value = .04.

Students who had a relative with a disability scored slightly higher on the CATCH ($M = 25.00$) than those who did not ($M = 24.89$). However, this difference was not statistically significant.

3.4. Attitude predictors

A multiple regression analysis (Table 4) was conducted to examine the contribution of the independent variables in accounting for the variances in the dependent variable. The results showed that the variable of whether the school included students with intellectual disabilities was the most significant single predictor in this analysis. In addition, we attempted to understand the results, confirm them with different analyses and examine whether a combination of two variables would be a better predictor. A multiple regression (Table 4) with a stepwise method was utilized to examine significant predictors of students' attitudes; this was a combination of forward and backward methods (Landau & Everitt, 2004). The variables with the largest influence on R^2 were added to the model, and then, backward elimination was performed to remove variables that did not add to the model.

Table 4 shows that the first model with only one predictor – whether the school included students with intellectual disabilities – was significant; R^2 was (.041). Second, when the age variable was added to the model, there was significant change ($p = .049$), and R^2 increased to .053. Having relative with a disability was excluded because it did not add to the predictability of the model. This

Table 3
Participants' Overall Mean Scores and Statistics by the Independent Variables.

Independent Variable		N (%)	Mean	SD	Tests of between-subject effects
School includes students with intellectual disabilities	Yes	128 (35.9)	25.19	7.54	$F_{1,355} = 10.26, P = .002^*$
	No	227 (63.5)	24.21	5.20	
	Total	355 (99.4)	24.55	6.14	
	Missing	2 (.6)			
You have a relative with a disability	Yes	141 (39.5)	25.00	6.12	$F_{1,321} = .023, P = .088$
	No	180 (50.4)	24.89	6.21	
	Total	321 (89.9)			
	Missing	36 (10.1)			
Age	8-10	86 (24.1)	24.06	5.80	$F_{1,348} = 2.92, P = .004^*$
	11-13	239 (67.0)	24.39	6.17	
	14-16	23 (6.44)	28.92	5.61	
	Total	348 (97.5)	24.55	6.14	
	Missing	9 (2.5)			

Table 4
Multiple Regression Statistics.

Model	R	R-Squared	Adjusted R-Squared	Std. Error of the Estimate	Change Statistics				
					R-Squared Change	F Change	df1	df2	Sig. F Change
1	.202 ^a	.041	.038	.60934	.041	13.241	1	312	.000
2	.229 ^b	.053	.047	.60651	.012	3.916	1	311	.049

^aPredictors (constant): Your school include students with ID.

^bPredictors (constant): Your school include students with ID, Age.

^cDependent Variable: C.

means that students' attitude was not affected by whether they had a relative with a disability. The results indicated that the combination of whether the school included students with intellectual disabilities and age was the best predictor of participants' attitudes

Additionally, we examined whether the mean differences based on whether the school included students with intellectual disabilities were significant only for the overall mean score or also for the component scores. An analysis of the variance at the component level (Table 5) revealed statistically significant differences in the overall mean score and the score of all components of the scale ($p < .05$) based on the variable of whether the school included students with intellectual disabilities.

Table 5 shows that participants from schools that included students with intellectual disabilities had more positive attitudes towards peers with disabilities than those in schools that did not include such students. The results show similar mean differences on all three components of the scale – affective, behavioural intent, and cognitive – in favour of participants students from schools that included students with intellectual disabilities.

4. Discussion

The main objective of this study was to examine students' attitudes towards peers with disabilities and to examine the effect of three independent variables on such attitudes. In general, students expressed accepting attitudes, with an overall mean of 24.5. This can also be described as “fairly tolerant attitudes towards peers with disabilities”, as expressed by Bossaert et al. (2011) regarding a Belgian sample with mean of 25.37. The Belgian sample was older than this study's sample; more than 50% of that sample was 16–20 years old. The mean score in this study ($M = 24.5$) was higher than that obtained with a Nigerian sample (Olaleye et al., 2012), which had a mean of 22.55. In sum, the mean score of this study sample (24.5) on the CATCH is within the range of scores observed in Nigeria (Olaleye et al., 2012), Belgium (Bossaert et al., 2011), and Canada (Rosenbaum, et al., 1986), which were 22.55, 25.37, and 27.80, respectively.

Attending a school that had special education programmes for students with intellectual disabilities was a statistically significant predictor of the CATCH score. Students in such schools expressed more positive attitudes towards peers with disabilities than those in schools without special education programmes. This finding matches with the findings of other studies (Armstrong et al., 2016; Rosenbaum et al., 1988; Voeltz, 1982) indicating that “familiarity” with students with disabilities is associated with more positive attitudes.

Students' age did show a statistically significant influence on their attitudes towards peers with disabilities. This finding supported our hypothesis that older students would hold more positive attitudes than younger students. This finding indicated that age was a significant predictor to participants' attitudes unlike results from other studies (Bossaert et al., 2011; Rosenbaum et al., 1988; Vignes et al., 2009), which did not find that age influence attitudes. However, there is no general consistency in age and attitudes relationship results in previous studies (Bossaert et al., 2011).

In this study, having a relative with a disability did not have a significant influence on attitudes towards peers with disabilities. Vignes et al. (2009) produced similar findings, unless the person with a disability was a parent or sibling. The frequency of contact or the actual amount of time spent with a person with a disability is a factor shaping in people's attitudes (Voeltz, 1982). We assume that some participants in this study had relatives with disabilities but were not close to them and did not have frequent contact with them. In this case, they lacked familiarity, which is reported as a predictor of positive attitudes (Armstrong et al., 2016; Rosenbaum et al.,

Table 5
Means/Standard Deviations & ANOVA Statistics by Schools that Included Students with ID and Those that Did Not.

School included students with ID	Yes	NO	tests of between-subject effects
	N (128) M (SD)	N (227) M (SD)	
Affective	26 (8.38)	24.7 (6.63)	$F_{1,355} = 10.23, P = .002^*$
Behavioural intent	25 (8.07)	24.3 (6.71)	$F_{1,355} = 6.177, P = .014^*$
Cognitive	24.5 (8.58)	23.5 (5.79)	$F_{1,355} = 6.809, P = .010^*$
Overall	25.1 (7.54)	24.2 (5.20)	$F_{1,355} = 10.26, P = .002^*$

*Significant at $p < .05$.

1988). Therefore, collecting data regarding participants' relationship with their relatives with disabilities will be informative in any replication of this study.

5. Implications

A few implications can be drawn from the results of this study. First, it is important to increase opportunities for people with disabilities to interact with other members of society in an organized and continuous manner. It is also possible for officials to coordinate a range of activities in schools that do not have programmes for people with disabilities to give all students a chance to meet and interact with their peers with disabilities. Organizing such activities on a continuous basis will help the community to accept and absorb the notion of inclusion of individuals with disabilities in all social activities.

Second, repeating similar studies with other independent variables will help us understand how to improve attitudes towards people with disabilities beginning at an early age. Third, the results of this study regarding students' attitudes in Saudi Arabia strongly indicated, similar to the findings of studies conducted among students in other countries, the importance of having an environment with potential for success in the inclusion of students with intellectual disabilities. This finding should encourage Saudi officials to consider expanding the inclusion of students with intellectual disabilities with their peers at the classroom level, which is not yet available in Saudi Arabia.

Fourth, the findings of this study show that familiarity with students with disabilities helps to increase the chance of acceptance. The media should represent people with disabilities as part of the society by including them as much as possible, which will help to increase familiarity with and knowledge of people with disabilities.

6. Conclusion

Students' level of positive attitude towards peers with disabilities was somewhat similar to the results of studies in other countries. Familiarity with students with intellectual disabilities and students with disabilities in general has a positive influence on students' attitudes and acceptance.

Schools integrating students with intellectual disabilities should work to push for more contact among students with disabilities and their peers, especially in fun and enjoyable contexts. Creating activities that integrate students with and without disabilities might help increase familiarity and decrease stereotyping of people with disabilities, which too often characterizes what people think they know about minority groups (Rosenbaum, 2010).

6.1. Future research

The researchers in this study managed to include more than 300 participants. However, a larger sample is important to confirm the study results, especially to compare them based on certain independent variables. Further studies with a gender comparison would be informative, especially in Saudi Arabia, which has separate schools for boys and girls. Studying the effect of the type and degree of disability on students' attitudes would add to the research in this area. Moreover, it is recommended that more detailed information be collected regarding the frequency of contact or the actual amount of time participants spend with relatives with disabilities.

7. Limitations

There are a few limitations of this study. First, although the researcher made every effort to have a large number of participants, the sample was chosen in such a way as to ensure the cooperation of the teachers to implement the questionnaire. A convenience sampling approach were adopted to include schools in which research assistants can access and collect the data. Second, school for boys students only were included in this study. Therefore, the results of this study might not represents the total population of students in Saudi Arabia. However, it is important to emphasize the importance of building on its results in future studies with different samples within the Saudi population.

Declaration of interest

None.

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References

- Ajzen, I., & Fishbein, M. (1977). Attitude-behavior relations: A theoretical analysis and review of empirical research. *Psychological Bulletin*, *84*, 888–918.
- Armstrong, M., Morris, C., Abraham, C., Ukoumunne, O. C., & Tarrant, M. (2016). Children's contact with people with disabilities and their attitudes towards disability: A cross-sectional study. *Disability and Rehabilitation*, *38*, 879–888.
- Bossaert, G., Colpin, H., Pijl, S. J., & Petry, K. (2011). The attitudes of Belgian adolescents towards peers with disabilities. *Research in Developmental Disabilities*, *32*, 504–509.
- Bossaert, G., & Petry, K. (2013). Factorial validity of the Chedoke-McMaster attitudes towards children with handicaps scale (CATCH). *Research in Developmental Disabilities*, *34*, 1336–1345.
- Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross-cultural Psychology*, *1*, 185–216.
- Holtz, K. D., & Tessman, G. K. (2007). Evaluation of a peer-focused intervention to increase knowledge and foster positive attitudes toward children with Tourette syndrome. *Journal of Developmental and Physical Disabilities*, *19*, 531–542.
- George, D., & Mallery, P. (2003). *SPSS for windows step by step: A simple guide and reference, 11.0 Update*. Boston, MA: Allyn and Bacon.
- Landau, S., & Everitt, B. (2004). *A handbook of statistical analyses using SPSS*. Boca Raton, FL: Chapman & Hall/CRC.
- Linton, R. (1945). *The cultural background of personality*. New York, NY: Appleton-Century.
- MacMillan, M., Tarrant, M., Abraham, C., & Morris, C. (2014). The association between children's contact with people with disabilities and their attitudes towards disability: A systematic review. *Developmental Medicine and Child Neurology*, *56*(6), 529–546.
- McDougall, J., DeWit, D. J., King, G., Miller, L. T., & Killip, S. (2004). High school-aged youths' attitudes toward their peers with disabilities: The role of school and student interpersonal factors. *International Journal of Disability, Development, and Education*, *51*, 287–313.
- Mueller, D. J. (1986). *Measuring social attitudes: A handbook for researchers and practitioners*. New York, NY: Teachers College Press.
- Olaleye, A., Ogundele, O., Deji, S., Ajayi, O., Olaleye, O., & Adeyanju, T. (2012). Attitudes of students towards peers with disability in an inclusive school in Nigeria. *Disability CBR & Inclusive Development*, *23*, 65–75.
- Petty, R. E., & Cacioppo, J. T. (1996). *Attitudes and persuasion: Classic and contemporary approaches*. Boulder, CO: Westview Press.
- Rosenbaum, P. (2010). Improving attitudes towards children with disabilities in a school context. *Developmental Medicine and Child Neurology*, *52*, 889–890.
- Rosenbaum, P. L., Armstrong, R. W., & King, S. M. (1986). Children's attitudes toward disabled peers: A self-report measure. *Journal of Pediatric Psychology*, *11*, 517–530.
- Rosenbaum, P. L., Armstrong, R. W., & King, S. M. (1988). Determinants of children's attitudes toward disability: A review of evidence. *Children's Health Care: Journal of the Association for the Care of Children's Health*, *17*, 32–39.
- Scior, K., Addai-Davis, J., Kenyon, M., & Sheridan, J. C. (2013). Stigma, public awareness about intellectual disability and attitudes to inclusion among different ethnic groups. *Journal of Intellectual Disability Research*, *57*, 1014–1026.
- Thomson, D. J., & Lillie, L. (1995). The effects of integration on the attitudes of non-disabled pupils to their disabled peers. *Physiotherapy*, *81*, 746–752.
- Thurstone, L. L. (1931). The measurement of social attitudes. *Journal of Abnormal and Social Psychology*, *26*, 249–269.
- Vignes, C., Godeau, E., Sentenac, M., Coley, N., Navarro, F., Grandjean, H., et al. (2009). Determinants of students' attitudes towards peers with disabilities. *Developmental Medicine and Child Neurology*, *51*, 473–479.
- Voeltz, L. M. (1982). Effects of structured interactions with severely handicapped peers on children's attitudes. *American Journal of Mental Deficiency*, *86*, 380–390.