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THE IMPACT OF TRAINING OF TYPICAL STUDENTS: KNOWLEDGE AND ATTITUDE TOWARDS STUDENTS WITH BLINDNESS AND VISUAL IMPAIRMENTS

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Abstract.*The purpose of this study was to evaluate the knowledge and attitudes of typical students towards students with blindness and visual impairment (BVI)and if the 4-day training for blindness and visual impairment will result in more positive attitudes about students with BVI.Attitudes of 30 participants (18 females, 12 males) were assessed by questionnaire. Effects of 4-day course were tested by comparing pre-training and post-training answer of typical students. After the course, students showed a significant increase in their knowledge about students with BVI ($t = -5.794$; $p < .05$). Median response at initial questionnaire was 15.5 (± 8.46) and at finally questionnaire were 2 5.8 (± 3.26). This finding is consistent with the increase in correct answers on the pre-post testing.We can conclude that many of the problems of inclusion of children with BVI can be avoided or reduced if the typical development children have prior information about visual impairment and blindness.*

Key words:*students with blindness and visual impairments, typical development students, knowing, attitudes*

Introduction

In view of the trend towards increased inclusion, the placement of children with blindness and visual impairments (BVI) into inclusive educational settings is likely to increase in Republic of Macedonia. Inclusive education provides opportunities for the development of appropriate knowledge and attitudes towards students with BVI. Blindness and visual impairment should not limit the child's ability to compete with her/his peers. Full inclusion

occurs when a child with BVI is accepted by her/his peers as a member of the regular class. To this end, regular classrooms should be provided with adequate support to effectively enhance inclusion (Dakwa, 2009; Stainback & Stainback, 2004). Dakwa (2009) discusses factors necessary for successful inclusion of the children with BVI: An acceptable and flexible general education classroom teacher; Peer acceptance and interaction; Available personal support; and Adequate supplies of equipment for the child who is blind and for the one with low vision.

Research has long established that changing attitudes towards students with disabilities requires, both, information about these disabilities and experience with people with disabilities (Bandy & Boyer 1994; Carroll et al., 2003; Cook et al., 2000; Lombard et al., 1998; Trump & Hange 1996; Westwood & Graham 2003; Wishart & Manning 1996). Inclusion facilitates both of these requirements.

Positive attitudes of typically developing students may lead to accepting students with BVI. As stated by Nowicki and Sandieson (2002), negative attitudes of peers are a barrier to making inclusive education happen. According to Gall, Borg and Gall (1996, p. 273): "an attitude is an individual's viewpoint or disposition toward a particular 'object' (a person, a thing, an idea, etc.)". Attitudes are furthermore considered to consist of three components: 1) cognitive, 2) affective and 3) behavioral (Eagly & Chaiken, 1993; Triandis, 1971). The cognitive component consists of an individual's beliefs or knowledge about the 'object'. Feelings about the 'object' refer to the affective component. With regard to the behavioral component, this reflects someone's predisposition to act towards the 'object' in a particular way (De Boer, 2012, p.). Beliefs, whether good or bad, appropriate or not, reflect the cognitive component of attitudes.

Previous research on typically developing students' attitudes did examine variables like gender, age, and experience with inclusive education (Nowicki & Sandieson, 2002). We can note that are not enough research about influence of training of typical students on positive attitudes towards students with BVI. Considering this, we defined two research questions: what are typical students' general knowledge and attitudes towards students with BVI, and can we change it with implementation of informative general course about students with BVI.

Methodology

Participants

The sample consisted of thirty (n = 30) typically developing students (randomly selected) who participated in the study of which 60% were females and 40% male, aged eleven to twelve years. Regarding the level of parents 'education, 17 (56.7%) students had parents with a High School

Diploma, and 13 (43.3%) had a Bachelor's degree. When asked if they had previous contact with a student with a BVI, 22 participants responded yes, while 8 participants answered no.

Settings

The sessions of the 6-hour course were held in the one regular classroom (V grade) at the Primary school "Kiril Pejcinovic" in Skopje, Republic of Macedonia. The participants had attended a 1.5-hour lecture every day (4 days a week). Each session consisted of a power point presentation and videos. In order to complete the research without disturbing the ethical issues, the school principal provides confirmation from the parents of their pupils for the participation in the study. Data were collected during the first (pre) and last (post) sessions of the 4-day course, with time allocated during these sessions to complete the questionnaire.

Instrument

Students were asked to complete a modified version of the Questionnaire from Hineck (1981) and 4 demographic items pertaining to personal details (age, gender, level of education of parents, contact with persons with BVI). The modified version of the Questionnaire was used as it was designed to measure level of students' knowledge about educations of BVI students and possible negative attitudes associated with discomfort that some students experience when interacting with a person with a BVI. The modified questionnaire was consisted of 16 items with *close* ended *questions*, requiring respondents to questions about: some characteristics, way of educations of students with blindness and interaction with those students (1-11 items); and way of educations of students with visual impairments (12-16 items).

Procedures

The 4-day training involved a one-hour lecture. The training content of the 4-day general course was divided into four themes: a) Overview of Eye Conditions, b) Literacy, c) Orientation and Mobility (O&M), and d) Methods and Tools. In the first theme, the major topics covered the different types of visual impairment, way of seeing of students with visual impairments (e.g. glaucoma, cataract, etc.), reasons of BVI, and the way how the students with BVI are getting information from their environment (tactile, auditive, olfactory, etc.). The second lecture was focused on the Braille alphabet, and a reading and writing with this letters. In the third lecture, a few O&M techniques and devices were provided (e.g. white cane, human guide, etc.). Last one was focused on specific characteristics in education of students with visual impairment (large print, optical device, additional light, etc.).

Data Analysis

Gained data were presented in table and figures. Descriptive analysis, chi-square test, frequencies and percentages were used. A paired samples t-test

compares the mean difference was used to identify any significant differences between the pre- and post- testing by determining the 95% confidence intervals for the differences in the means.

RESULTS AND DISCUSSION

The pre- and post- test results on thirteen items from questioner are presented in Table 1. On those questions, student could choose "yes-no" responses.

Table 1. Correct answer Pre- and Post-Training

Items	Pre-testing		Post-testing	
	N	%	N	%
1. Students with blindness do not hear better	1	3.3	22	73.3
2. Students with blindness can read and write	24	80	30	100
3. Students with blindness use letter with dots	17	56.7	30	100
4. Louis Braille invited letter for blind	2	6.7	26	86.7
5. Person with blindness can move independently by using a different devices	14	46.7	25	83.3
8. Students with blindness can achieve same school results as their sighted peers	7	23.3	21	70
9. I will fill comfortable when I meet students with BVI	19	63.3	25	83.3
10. I want to have a friend with BVI	26	86.7	28	93.3
12 Students with VI can achieve same school results as their sighted peers	15	50	24	80
13 Most of students with VI use books with large print	24	80	28	93.3
14 Most of students with VI read better with additional light	25	83.3	30	100
15 The picture in books for most of students with VI must be enlarged with more contrast	17	56.7	26	86.7
16 Most of students with VI use optical device	10	33.3	21	70

After the training of the study, students showed a significant increase in their knowledge and positive attitudes about students with BVI ($t = -5.794$; $df = 11$; $p < .05$). Median response at initial questionnaire was 15.5 ($\pm$8.46) and at finally questionnaire were 25.8 ($\pm$3.26). This finding is consistent with the increase in correct answers that was indicated in the pre-post testing.

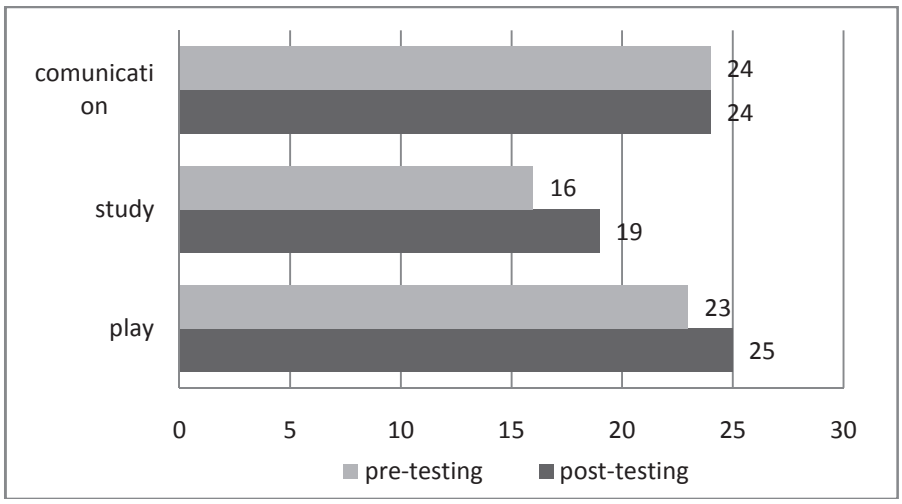

Figure 1. Interaction with students with blindness

Many students want to play together with students with blindness (pre- 76.6%; post- 83.3%), study (pre- 53.3%; post- 63.3%) and communicate (pre- and post- testing 80%). From Figure 1 we can conclude that results on item 11 at pre- and post-training are not significant changed. Namely, typical students have positive attitudes towards children with blindness.

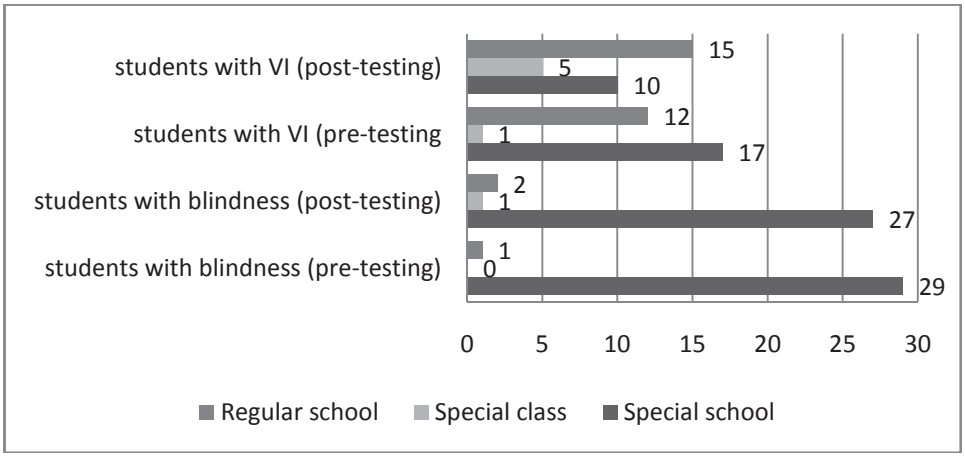

Figure 2. Pre- and Post-Training place of education of students with BVI

On the 6 and 7 items, students were asked to answer where the students with BVI should be educated: special school, special class at regular school, or regular class. The results are presented in Figure 2. There was no significant difference in regard to students' opinion about the place of education of students with blindness (χ^2=1.404; df=2; p>.05) and students with visual impairments (VI) (χ^2=4.814; df=2; p>.05) from the pre- and post- training. It was also noted that the typically students in pre- and post- testing show

greater willingness to accept the students with VI in regular classes than students with blindness.

Conclussion

In total, the data presented above show a very clear trend—typically students included in the 4-day training showed a significant improvement in knowledge about students with BVI.

Compared to typically developing peers, students with special educational needs (SEN) experience significant more difficulty in being accepted (Frederickson, Simmonds, Evans & Soulsby, 2007; Nowicki, 2003; Pijl, Frostad & Flem, 2008) and have significant fewer friendships (Koster, Pijl, Nakken & Van Houten, 2010). Pijl et al. (2008) reported that 30% of students with SEN are rejected by their peer-group in class. Similarly, BVI children have been found to have fewer friends than their sighted peers (Keff, 1997). But, results in our research show that largest number of typically students will like to have friends with blindness (pre-testing 86.7%; post-testing 93.3%).

One of the personal factors that might influence a person's attitude is whether students have any previous or ongoing contact with a student with a SEN. In our simple, 73% of students have had contact with person with BVI. Maybe this is one of the reasons of their positive attitudes.

General, we can conclude that many of the problems of social inclusion of children with BVI can be avoided or reduced if the typical development children have prior training about visual impairment and blindness. Also, exposure to students of all types of visual impairment, on a daily basis allows typical students to see that, just like themselves, students with BVI have strengths and weakness. More fundamentally, participants in such training will need to be given structured opportunities to experience inclusive education in reality. It is our opinion that inclusion and previous general informing the school staff and peers about general characteristic of students with BVI is one of the essential components in the process of eliminating barriers and building positive attitudes.

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