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# Changes in Occupational Therapy Students' Attitudes towards People with Disabilities: The Importance of Firsthand Experience

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## Abstract

**Background.** A therapist's attitude towards people with disabilities contributes significantly to the therapeutic relationship. Therefore, occupational therapy programs should structure curricula that encourage the development of positive attitudes towards people with disabilities among their students.

**Purpose.** To examine changes in attitudes among occupational therapy students towards people with disabilities throughout their course of study.

**Methods.** Two hundred and eighteen occupational therapy students from five consecutive cohorts filled out the Attitudes towards Disabled Persons (ATDP) questionnaire at the beginning of each academic year. **Results.** Positive attitudes increased as students progressed through the educational program.

Significant improvements were found in students' attitudes from the first to the second year ( $p < .000$ ) and from the second to the third year of their studies ( $p < .003$ ). No significant differences in students' attitudes were found between

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the third and fourth years of their programs. **Conclusions.** The results suggest that students in the occupational therapy program developed a progressively more positive attitude towards people with disabilities. It is recommended that occupational therapy study curricula should include in-depth interactions between their students and people with disabilities during the first and second years of their study program to support the students' development of positive attitudes.

## Introduction

Occupational therapists are primary healthcare professionals whose role is to assist their clients develop adaptive and compensatory strategies to achieve maximum independence in their daily lives. Researchers that examined occupational therapists' attitudes towards people with disabilities (Au & Man, 2006; Fitzsimmons & Barr, 1997) indicated that therapists' personal perceptions regarding people with disabilities may play a significant role in the therapeutic relationship and greatly influence rehabilitation outcomes. The attitudes of healthcare professionals towards people with disabilities have been found to be among the most significant factors contributing to the achievement of intervention goals, including successful rehabilitation and re-integration into the community (Fitzsimmons & Barr, 1997; Stachura & Garven, 2003). Moreover, a positive attitude towards people with disabilities is essential for the implementation of a true client-centered rehabilitation process (Packer, Iwasiw, Theben, Sheveleva, & Metrofanova, 2000).

Therefore, healthcare professionals' attitudes towards people with disabilities should be addressed throughout occupational therapy educational curricula and practicums (Trevø & Palmer, 2004). Educators in the health professions need to understand and address both the factors that influence students' perceptions towards clients with disabilities, as well as the influence of the educational curriculum on the formation of students' attitudes towards these clients (Lam et al., 2010). Indeed, the attitudes of occupational therapy students towards people with disabilities has become an important topic in occupational therapy research (Beltran, Scanlan, Hancock, & Luckett, 2007; Brown et al., 2009; Stachura & Garven, 2007; Tsang, Chan, & Chan, 2004).

Attitudes refer to a psychological tendency expressed by evaluating a particular entity with some degree of favor or disfavor (Eagly & Chaiken, 2007). Most scholars hold that attitudes are comprised of emotional, cognitive and behavioral elements (Findler, Vilchinsky, & Werner, 2007). Daruwalla and Darcy (2005) comment that at the most basic level, personal attitudes can

be described as positive or negative opinions that a person holds about a specific thing, which spur him/her to behave in a certain way (Yuker, 1988).

Disability study scholars define disability as a consequence of environmental barriers rather than stemming from an individual's personal, intrinsic impairments. That is, disability per se does not reside within the individual him/herself, so much as it is a consequence of societal attitudes and discriminatory behaviors (Kielhofner, 2005). Negative social attitudes towards people with disabilities are often based on stigmas in which they are viewed as a burden on society and incapable of making decisions. These attitudes are often based on lack of understanding, fear of the unknown, and stereotyping (Thompson, Emrich, & Moore, 2003). Positive attitudes towards people with disabilities reflect the belief that a person with a disability is a potentially active and contributing member of society, capable of making decisions about his or her own areas of interest, and who strives to maintain a normative life (Trevino & Palmer, 2004).

McKenna, Scholtes, Fleming, and Gilbert (2001) found that students' attitudes at the end of a bachelor of occupational therapy (BOT) program in Australia were more positive than they were at the beginning of the course. They explain that the clinical experiences they offered provided opportunities for students to interact with people with disabilities. Those

opportunities enabled the replacement of previous attitudes, which may have reflected the stereotypical images held by much of society, with more accurate appraisals of people based on their unique qualities. Research conducted with occupational therapy students from Hong Kong also suggests that it is not just the exposure, but also the quality of the familiarity or connection with people with disabilities that significantly influences attitudes towards this population (Au & Man, 2006).

The above mentioned issues raise the following question: is the existence of the relationship itself sufficient to bring about a change in attitudes towards people with disabilities, or is the quality of the relationship and its characteristics the more influential elements in the change process. Indeed, research with occupational therapy students from Australia found that the existence of a relationship or an encounter with people with disabilities in and of itself did not necessarily lead to a change in attitude (Lyons, 1991; Lyons & Hayes, 1993). In order to affect change so that the relationship that is established throughout the encounter will be meaningful, it has to be structured and organized (Rees, Spreen, & Harnadek, 1991 as cited in Yazbeck, McVilly, & Parmenter, 2004), and should exist in the context of valuable social functioning (Lyons, 1991). Therefore, in the context of an occupational therapy educational program it might be beneficial to

incorporate structured opportunities for meaningful interactions with people with disabilities.

Such structured opportunities were incorporated throughout the BOT program at Ono Academic College in Israel. The program includes year-long individual leisure-based interactions between a student and a person with a disability, reoccurring meetings with self-advocates from various disability groups, the recruitment of faculty members with and without disabilities, as well as instruction on the theoretical basis of disability studies.

Most of the research regarding occupational therapy students' attitudes towards people with disabilities was conducted within the context of specific courses rather than through an exploration of the effect of the curriculum at large. In addition, the inconsistent findings with regards to the influence of the occupational therapy curriculum on students' attitudes towards people with disabilities necessitate further research on the subject (Brown et al., 2009).

The objective of this study was to evaluate changes in occupational therapy students' attitude towards people with disabilities as they progress through their occupational therapy study programs.

## Methods

### Participants

Participants included 221 occupational therapy (BOT) students studying at

Ono Academic College in Israel. Most students were female (96%), average age 25.2 years ( $SD=2.64$ ). Ninety nine (45%) students were familiar with people with disabilities prior to entering the program, whereas 96 (43%) were not, and 26 students did not report on this (12%). Our initial analysis showed no significant difference between the two subgroups regarding their attitudes at the beginning of the first year of their studies ( $t=0.187, p=.852$ ). Therefore this variable was not entered into the later analyses.

All students within five cohorts who had enrolled in the college between 2008 and 2012 participated in the study. Each cohort was approached at the beginning of their first academic year and asked to take part in the study. Three students who dropped out during their occupational therapy studies were excluded from the analyses. A total of 431 questionnaires were collected over 4 years. Of these, six questionnaires had more than 3 missing items and were excluded from the analyses. The final sample analyzed comprised 425 questionnaires from 221 students; of which 198 questionnaires (46%) were completed at the beginning of the first academic year, 126 questionnaires (30%) at the beginning of the second academic year, 75 questionnaires (18%) at the beginning of the third academic year, and 26 questionnaires (6%) at the beginning of the fourth academic year.

## Instrument

*Attitudes towards Disabled Persons Scale (ATDP)* (Yuker, Block, & Young, 1966). The ATDP is a self-report questionnaire used to assess attitudes towards people with disabilities. The questionnaire has three validated versions that differ from one another in the number of statements used to gather data. For the purpose of this study, the first version, translated into Hebrew and adapted and validated by Beit Halachmi in 1978 (see Dothan, 2009), was utilized. The Hebrew translated version was found to be a reliable and valid measure of adolescent attitudes towards people with disabilities (Zinger, 1992). In another study in which the attitudes of students towards people with disabilities were examined (Dothan, 2009), the post- intervention internal consistency reliability of the ATDP was found to be high (Cronbach's  $\alpha=0.81$ ).

The questionnaire includes two preliminary questions meant to assess whether the respondent has a family member or a friend with a disability. These questions require 'yes' or 'no' answers. The remaining sections of the questionnaire comprise 30 statements, each one suggesting that people with disabilities are either different or similar to people without disabilities. For example, "People with a disability usually don't contribute a lot to the society", "We should expect from people with a disability as much as we expect from people without a disability", "Most people with a

disability can take care of themselves". The respondent is asked to express their opinion about each statement on a 6-point Likert scale, ranging from 'strongly disagree' to 'strongly agree'. A lower score indicates that the respondent perceives people with disabilities as different from people without disabilities; therefore representing a negative attitude towards people with disabilities. In contrast, a higher score indicates that the respondent perceives people with disabilities as similar to people without disabilities, therefore representing a positive attitude towards people with disabilities. The ATDP questionnaire was translated into many languages and is widely used (Arooj, Malik, & Siddiqi, 2013; Miller, 2013; Tervo & Redinius, 2004; Thomas, Vaughn, Doyle, & Bubb, 2013; Uysal, Albayrak, Koçulu, Kan, & Aydın, 2013). The ATDP test-retest reliability was  $r=.94$ , and split half reliability was  $r=.73-.89$  (Antonak & Livneh, 1988). Internal consistency within a group of occupational therapy students revealed a Chronbach's alpha value of 0.90 (Lee, Peterson, & Chan, 1994), and alpha values of 0.78 and 0.86 were found respectively among a group of rehabilitation and business administration students (Chan, Lee, Yuen, & Chan, 2002).

## Procedures

After receiving ethics approval from the institutional ethics committee of Ono Academic College, all occupational therapy students from five consecutive cohorts were asked to participate in this

longitudinal study. Participants were allocated by a random ID number to maintain the participants' anonymity while enabling the questionnaires to be grouped per participant. No personal data was collected. Once informed consent was received, participants were asked to fill out the ATDP (Dothan, 2009) at the beginning of their first year of study (ATDP baseline). The ATDP was administered again to these participants at the beginning of each academic year, defined as the data collection point, for a total of four times during their entire occupational therapy program.

### Data analysis

Data analysis was performed using the Statistical Package for the Social Sciences (version 19.0, SPSS, 2010). The ATDP score was measured repeatedly at multiple data collection points at the beginning of each academic year. Pairwise t-tests were conducted to compare the participants' questionnaire scores between the corresponding academic years for every two respective collection points. However, since not all participants completed the questionnaires at all of the data collection points, only the data from the students who did were included in the analyses. In addition, 51 students who filled out the ATDP questionnaires at all of the first three data collection points were analyzed by repeated measure ANOVA, followed by a pairwise t-test to determine changes in ATDP scores.

## Results

The ATDP mean and standard deviation scores across academic years are presented in Table 1. Each row in the table refers to a pairwise set of students that were scored on the ATDP in two different academic years. The overall analysis showed that students' ATDP scores increased as they progressed through their years of study. The baseline first year ATDP scores were significantly lower than in any of the following academic years (i.e., between the first and the second year,  $t=5.516$ ; between the first and the third year,  $t=4.855$  - both at  $p=.000$ ; and between the first and the fourth year,  $t=3.430$ ,  $p=.003$ ). The second academic year ATDP score was significantly lower than the consecutive third academic year ATDP score ( $t=3.640$ ,  $p=.001$ ). The differences between the second and the fourth years and between the third and the fourth years were not significant (see Table 1).

Table 1

*Mean Differences Between ATDP Scores According to Academic Year*

<u>N*</u>	<u>First Year</u>	<u>Second Year</u>	<u>Third Year</u>	<u>Forth Year</u>	<u>t</u>	<u>p</u>
	<u>M ± SD</u>	<u>M ± SD</u>	<u>M ± SD</u>	<u>M ± SD</u>		
108	113.19 ± 17.9	121.74 ± 17.3			5.516	.000
60		124.72 ± 17.3	130.90 ± 16.9		3.640	.001
24			134.17 ± 15.4	133.83 ± 18.0	0.128	.899
65	116.74 ± 18.2		128.34 ± 16.7		4.855	.000
18		131.50 ± 15.6		130.61 ± 17.6	0.234	.818
22	117.95 ± 15.3			133.86 ± 18.3	3.430	.003

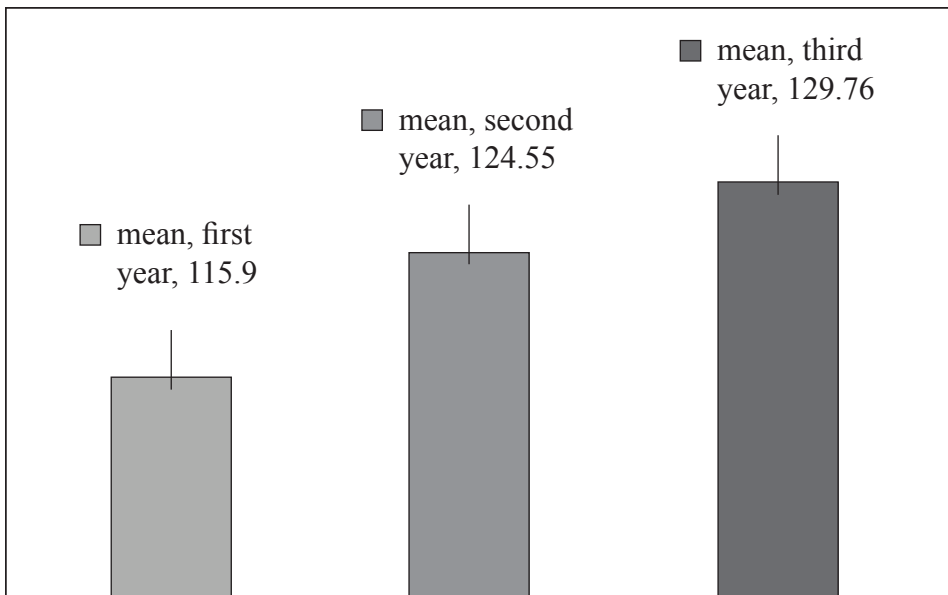
\*N represents the number of paired questionnaires for the same student over two data collection points.

Figure 1 shows the means and standard deviations of the scores of the 51 students who filled out the ATDP questionnaire, at all of the first three data collection points (at the beginning of first, second and third years). Mean ATDP scores from the first, second and third years were 115.90, 124.55 and 129.77, respectively. A repeated measure ANOVA test was calculated which resulted in a significant within-subject difference in ATDP scores ( $F_2=18.637$ ,  $p=.000$ ). A post hoc t-test analysis showed significant differences

between scores obtained in the first and the second year ( $t=2.332$ ,  $p=.002$ ), the second and the third year ( $t=1.895$ ,  $p=.025$ ) and the first and the third year ( $t=2.599$ ,  $p=.000$ ).

## Discussion

The specific objective of the study was to evaluate changes in occupational therapy students' attitudes towards people with disabilities as they progressed through their course of study. The assumption of this study is that



*Figure 1.* Mean ATDP scores between academic years (N=51)

the academic framework of integrating structured interactions with people with disabilities, as well as a theoretical emphasis on disability rights, will create a change in the attitudes of occupational therapy students throughout their years of study.

In general, our findings among occupational therapy students within the Ono College OT program indicate that throughout their studies, students' undergo positive attitudinal changes towards people with disabilities. However, a caveat applies since the percentage of responses decreased over the years. Thus this conclusion needs to be further studied.

A trajectory of positive changes was found in participants' attitudes towards people with disabilities,

which occurred from the beginning of first year to the beginning of second year and from the beginning of second year to the beginning of the third year of their studies. No change was evident in the comparison between the beginning of third and the fourth years.

These findings corroborate evidence from previous studies in the United States, Australia, Taiwan, Britain and Russia, regarding the contribution of occupational therapy academic curricula to the preservation and development of students' positive attitudes toward people with disabilities (Brown et al., 2009; Lee et al., 1994; McKenna et al., 2001; Packer et al., 2000).

It is important to note that there is no consensus in the literature regarding



whether the positive change in students' attitudes can be attributed to the new knowledge garnered through education or whether it can be attributed to their exposure to people with disabilities (Stachura & Garven, 2003). Some studies show that the changes in students' attitudes stem both from the knowledge they acquire throughout their formal education and from the encounters they have with people with disabilities throughout their clinical training (Au & Man, 2006; Brown et al., 2009; McKenna et al., 2001). Other studies attribute the change in attitudes to the formal education curriculum alone; giving rise to the claim that practicum experiences only serve to preserve the positive attitudes that were generated by the curriculum (Chan et al., 2002; Lee et al., 1994; Stachura & Garven, 2003). On the other hand, some studies claim that clinical training is the most effective way to change the attitudes of students towards people with disabilities (Beltran et al., 2007). Therefore, scholars recommend the integration of both direct and structured contact with people with disabilities as well as formal education, in order to foster the formation of positive attitudes towards people with disabilities (Campbell, Gilmore, & Cuskelly, 2003; Carroll, Forlin, & Jobling, 2003; Krahe & Altwasser, 2006; Thompson et al., 2003). Both direct contact and formal education can expose the student to new and more real-world information, with the goal of changing their attitudes towards people with disabilities.

In order to develop an educational model designed to encourage students to learn about disability and the role of occupational therapy in the community, every first year student personally accompanies a person with a disability throughout the year in the context of a course entitled "Social Involvement with People with Disability". These weekly personal meetings are closely supervised and supported by faculty and help facilitate a direct and deep interaction between the student and the client. In another first year course, entitled "Learning with the Client", students interact with their primary lecturer, a person with a disability, and have many unmediated first-hand encounters with guest lecturers (representatives from the disability community). Finally, the first year includes a course, entitled "Introduction to Sociology and Anthropology", which is based on the social model of disabilities. The goal of this course is to supplement students' academic knowledge of disability studies. We attribute the changes in students attitudes towards people with disabilities over the first year of studies to the combination of theoretical knowledge acquired as well as the various encounters engendered with people with disabilities.

The process of knowledge development and the deepening of interactions within the world of disabilities continue into the second academic year as well. In this year students begin their first fieldwork experience. Additionally, the

second part of the course “Learning with the Client” continues, with an emphasis on self-advocacy and fostering interactions between the students and disability rights activists, most of whom are people with disabilities. We attribute the continual change in attitudes that occurred during the second year to the students’ clinical experiences in their first field work practicum, the emphasis placed on the client-centered approach as the basis of occupational therapy intervention and to the students’ exposure to self-advocacy by people with disabilities.

No significant difference in attitudes was found as the students progressed further in their studies. It seems that the increased level of personal exposure to disabilities that takes place during the students’ first two years of the OT program is more influential than the academic, theoretical exposure in fostering meaningful interactions within the world of disabilities, and hence in the development of positive attitudes towards people with disabilities. We believe that as they continue to progress in their academic and professional careers, the students will continue to develop and modify their attitudes, albeit perhaps more moderately and gradually.

As occupational therapy educators, we have the responsibility of offering learning experiences that provide future professionals with the knowledge and skills they need to understand the complexity of disability in the lives of clients and families (AOTA, 2003;

Moyers & Hinojosa, 2003, as cited in Gitlow & Flecky, 2005).

### **Conclusion**

This study provides preliminary results regarding positive changes in occupational therapy students’ attitudes towards people with disabilities as they progress through their years of study. The preliminary findings of the current study suggest that an occupational therapy curriculum can lead to positive changes in students’ attitudes towards people with disabilities, especially during the initial years. It further highlights the importance of including a multidimensional exposure to disability within the curriculum. This will promote a better understanding of people with disabilities among students, both at the personal and the social level. Furthermore, this exposure will have clinical implications as the students graduate and begin their actual practice of occupational therapy with a much more positive attitude and a stronger understanding of people with disabilities.

As the scholarship of teaching and learning in occupational therapy is gradually developing (<http://www.aotf.org/Default.aspx?tabid=203>) it is important that educational programs share their acquired knowledge and growing understanding as well as the resulting implications for occupational therapy education.

### **Limitations and future research**

This pilot study examined attitudinal

changes among occupational therapy students throughout their academic studies. The main limitation of the study is the decrease in the number of students who completed the questionnaire in each consecutive academic year. In addition, the use of only one measure limits the results and it is recommended to include additional measures in further studies. Furthermore, as the study was conducted within a single educational program, the ability to generalize the results is limited.

Future research should investigate occupational therapy curricula in more depth and identify the factors that could further contribute to students' attitudes towards people with disabilities. In addition, it might be beneficial to utilize additional evaluation instruments to provide a broader perspective and a greater level of interaction with people with disabilities. Thus, it is recommended to perform additional studies with larger student samples utilizing additional tools in order to strengthen the current study's results.

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