

## ORIGINAL ARTICLE

# Attitudes towards persons with disabilities among Occupational Therapy Students in UiTM Selangor

Nur Suria Mohamad, Ahmad Kamal Mohd Natar

Centre of Occupational Therapy Studies, Faculty of Health Sciences, Universiti Teknologi MARA (UiTM), Kampus Puncak Alam, 42300 Bandar Puncak Alam, Selangor, Malaysia

## Abstract:

**Background:** Attitudes was a crucial factor and inner power that give character and purpose to what professionals do. Person with a disability was defined the person who has long-term physical, mental, sensory or intellectual impairments, which in interplay with diverse barriers that may prevent their full and efficient participation in society. The attitudes of health professional could be affect the person's beliefs about herself or himself as well as the process of rehabilitation. **Aim:** This study was conducted to compare attitudes towards person with disabilities among occupational therapy students within the demographic profile. **Method:** A cross-sectional study conducted involving 62 participants in first-year and final-year occupational therapy students in UiTM Selangor. All the participants need to answer an online questionnaire which consist of two part. Part 1 consists of demographics items, and Part 2 consists of Attitude toward Disabled Person-original form (ATPD-O) instrument was used to determine the attitudes towards person with disabilities. **Result:** From 62 participants, 54.8% of final-year students have higher attitudes towards person with disability (n=34) and 45.2% of first-year students have lower attitudes towards person with disability (n=28). An Independent-t test had determined that there are significant differences between the ATPD-O score and the demographic factors. **Conclusion:** There are significant different between the attitudes towards person with disabilities with level of education and gender while there are no significant difference between the attitudes towards person with disabilities with experience with disability, disabled relative and experience with clinical training.

**Keywords:** ATPD-O score, person with disability,

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### \*Corresponding Author

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Ahmad Kamal Natar  
akamal600@uitm.edu.my

## 1. INTRODUCTION

Attitudes consisted of three components including cognitive, affective, and behavioural. The cognitive part refers to beliefs, ideas, and opinions, whereas the effective components represent the emotional part of an attitude. The behavioural components define a person's willingness to interact with something at hand and the person's behaviour in which they do so. It is necessary to comprehend the components of attitudes since comprehending attitudes may help predict behaviour toward persons with disabilities [7]. Based on International Classification of Functioning, Disability, and Health (ICF), disability as an umbrella term, including impairment of body structures and functions, activity limitation, and participation restriction [1]. Relationships with clients greatly influenced by attitudes of health care professionals. The attitudes of health professional could affect the person's beliefs about herself or himself as well as the process of rehabilitation [11]. Negative attitudes toward the person with disabilities

describe a real barrier to him or her ability to fill appropriate roles in society. Thus, attitudes of healthcare professionals must be positive to encourage worth, dignity, and a sense of value in their patients [11]. Study revealed that among the many rehabilitation professionals, the occupational therapist was particularly valuable in their attitudes toward persons with disabilities [8]. Students registered in professional education programs such as occupational therapy probable present with certain attitudes to their future clients when they work with post-graduation. A study highlight that first-year students have markedly different attitudes, perceptions and belief when compared with final year students [3]. Thus, this study to determine the level of attitudes towards a person with disabilities among first-year and final-year occupational therapy students in UiTM Selangor and to compare the mean difference of attitudes toward the person with disabilities within demographic factors among first-year and final-year occupational therapy students.

In cross-sectional study of investigated attitudes towards person with disabilities among health professional students by using Attitude Toward Person Disabled (ATDP), Scale of Attitudes Toward Disabled Person (SADP) and Rehabilitation Situations Inventory (RSI) involving 338 students in University of South Dakota (USD). Age, educational level, background in disability, gender and experience with disability influences the attitudes of health professional students towards the person with disabilities [10]. These studies believed that early exposure in curricula about the rights of person with disabilities may prevent unnecessary negative attitudes especially after they were graduated and working within the community.

Otherwise, in a cross-sectional study of the influence of occupational therapy curriculum on attitudes of students toward the person with disabilities by using the Attitudes Toward Disabled Persons Scale (ATDP) that involved 26 female students in the first and final semester of occupational therapy and 26 female students in the first and final semester of medical technology. Study reported that fourth-semester occupational therapy students shown significantly more positive attitude toward the person with disabilities when compared with first-semester occupational therapist students, first and fourth-semester medical technology students [6]. These positive attitudes were attributed in the occupational therapy curriculum, especially the information about the disabled person through educational coursework and contact with a disabled person. Even though at the beginning of the student who entered the occupational therapy not significant higher positive attitudes however after completing these curricula their attitudes showed significantly higher positive attitudes.

In retrospective pre-test and post-test study undertaken, examined attitudes of 144 occupational therapist student' changes after they went through professional education [8]. They found that post-test scores of the second, third and fourth-year occupational therapist students shown significantly higher when compared with retrospective pre-test scores of the second, third and fourth-year occupational therapy students. These result indicated that students' attitude more positively after went through formal academic education and a period of practical clinical training in hospital or institution.

In a study of comparing the attitudes of a different cohort of 73 occupational therapy students with 107 business students in Hong Kong [5]. Chan and colleagues (2002) found that both first-year occupational therapy and business students begun with alike attitudes but display different flows of attitudinal change. Occupational therapy students had shown much more positive attitudes by the end of the first-year when compared with business students which more likely tend to negative attitudes. These study concluded that a clinical curriculum in academic studies of occupational therapy students seems to have to increase positive attitudinal change. These curricula that consist of clinical attachment and university teaching showed an effect in maintaining and raising more positive attitudes toward the person with disabilities as an essential element of their future professional practice [5]

Occupational therapy students achieved the highest score on ATDP when comparing with social workers, physiotherapists, and nurses. Meanwhile, health care professional showed a more positive attitude toward people with disabilities than the students in health care [2]. These finding showed that demographic factors such as age, level of education, year of study, knowledge, and contact with person disabled contribute significant positive attitudes towards the person with disabilities. However, they revealed that the quality of contact was the dominant factor that affecting the score on attitudes.

## 2. METHODOLOGY

### *Research Design*

The quantitative approach used in this study and employs a cross-sectional design.

### *Subject and recruitment procedures*

The study was conducted in the Department of Occupational Therapy, University Teknologi MARA (UiTM) Selangor. Participants consisted of 62 Occupational Therapy students from 73 Occupational Therapy students between first-years and final-years occupational therapy students in UiTM Selangor, Puncak Alam campus. Before the online questionnaire distributes to participants by using google docs, approval from the ethic committee of Universiti Teknologi MARA (UiTM) was obtained. Data were collected on first-year and final-year occupational therapy students in UiTM Selangor, Puncak Alam campus. The respondents had given consent form that informed about the purpose of the study and all information provided by respondents will be kept confidential. Purposive sampling was used to recruit the participants which all recruited participants were selected based in inclusion criteria.

Inclusion criteria included full-time students, first-years and final-years degree student occupational therapy and students who can read and comprehend English.

### *Research Tool*

There are two parts of the questionnaire used in these study. Part A includes demographic data such as gender, educational level, experience with disability, disabled relative and experience in clinical training.

Part B item by used Attitudes toward Disabled person scale (ATPD-Form O). This standardized form that contained 20 items to determine the attitudes toward the person with disabilities. ATDP-O applies a 6 point Likert-type scale with responses ranging from +3 (I agree very much") to -3 ("I disagree very much") and overall score ranges are from 0 to 120 with a high score indicates positives attitudes. The scale is internally consistent with 0.84 and test-retest reliability values of 0.66 to 0.89 [10].

### *Data Analysis*

The data were analyzed using the Statistical Package for Social Science (SPSS) version 21 and results were presented in narratives and tables. Descriptive (frequency and percentage) and inferential statistics (independent t-test) were used to interpret the data. Statistical significance was assumed at  $p < 0.05$ .

### 3. RESULT AND DISCUSSION

#### 3.1. Demographics of the samples

Female and final-year students were the highest respondent in this study. Female students comprised of 93.5 % ( 58) and male student 6.5 % ( 4). For the highest educational level received by the respondent, most of the respondent was final-year students which comprised of 54.5 % (34) among the respondents while 45.2 % (28) of respondents was first-year students. The highest number of the respondents who have no experience with a disability which comprised of 59.7 % (37) among the respondents while 40.3 % (25) of the respondent who has experience with disability. In addition, the highest number of the respondents who have no disabled relative which comprised of 51.6 % (32) while 48.4 % (30) of the respondent who has disabled relative. Majority of the respondents have experience with clinical training which comprised 71.0 % (44) among of the respondents. 29.0 % (18) of the respondents never have any experience with clinical training (Table 3.1).

#### 3.1. Descriptive statistic of participants' demographic factors

Variables	Frequency (N=62)	Percent (%)
<b>Gender</b>		
Male	4	6.5
Female	58	93.5
<b>Educational Level</b>		
First -year	28	45.2
Final- year	34	54.8
<b>Do you have any experience with disability?</b>		
Yes	25	40.3
No	37	59.7
<b>Do you have a disabled relative?</b>		
Yes	30	48.4
No	32	51.6
<b>Do you have any experience with clinical training?</b>		
Yes	44	71.0
No	18	29.0

#### 3.2. Result of mean difference between demographic factors and ATPD-O score

Independent samples t-test showed that the mean difference between attitudes towards persons with disabilities obtained on ATPD-O score of first-year (M=54.96, SD=11.79) and final-year (M=63.79, SD= 12.49) students are statistically significant,  $t(60) = -2.52, p= 0.01$ . Thus, the final-year students were statistically significantly higher mean attitudes towards the disabled person while first-year students were statistically significantly lower mean attitudes towards the disabled person. Specifically, the result indicate that when a higher level of education, the attitudes towards a disabled person more positively (Table 3.2). This finding has demonstrated a similar result in another study that found that fourth-semester occupational therapy students' attitudes were significantly more positive attitude than the first semester of occupational therapy student [6]. Study also found that through professional education progress, occupational therapy students displayed the change in attitudinal toward the person with a disability [5].

**Table 3.2. Mean difference between educational level and ATPD-O score**

Variable	First-year (n= 28) Mean (SD)	Final-year (n= 34) Mean (SD)	Mean diff. (95% CI)	t-stats (df)	p-value
ATPD-O	54.96 (11.79)	63.79 (12.49)	-7.83 (-14.05, -1.61)	-2.52 (60)	0.01

The independent t-test revealed that female students more positive attitudes towards the disabled person (Table 3.3). The result indicate that mean difference between attitudes towards persons with disabilities obtained on ATPD-O score of male (M=45.25, SD=6.18) and female (M=60.22, SD= 12.49) groups are statistically significant,  $t(60) = -2.37, p= 0.02$ . Thus, the female group was statistically significantly higher mean attitudes towards the disabled person while the male group was statistically significantly lower mean attitudes towards the disabled person. Corresponding to Yuker, Block, and Campbell (1960) there were significant differences between male and female attitudes toward the person with disabilities obtained on ATDP with female was significantly higher than male. In a study noted that female students were associated with positive attitudes towards person disabled [4].

**Table 3.3. Mean difference between gender and ATPD-O score.**

| Health Scope |
|--------------|--------------|--------------|--------------|--------------|--------------|
|              |              |              |              |              |              |

ATPD-O	45.25 (6.18)	60.22 (12.49)	-14.97 (-27.64, -2.31)	-2.37 (60)	0.02
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Besides, mean difference between attitudes towards persons with disabilities obtained on ATPD-O score of respondents in the "yes" experience with disability ( $M=57.32$ ,  $SD=13.68$ ) and those in "no" experience with disability ( $M=60.57$ ,  $SD= 12.01$ ) are not statistically significantly,  $t(60) = -0.99$ ,  $p= 0.33$  (Table 3.4). This finding demonstrated similar result with a study whereby there was no significant difference among experience with disability obtained by ATPD score [10]. Furthermore, independent samples t-test indicated that the mean difference between attitudes towards persons with disabilities obtained on ATPD-O score of respondents in the "yes" disabled relative ( $M=57.13$ ,  $SD=12.05$ ) and those in "no" disabled relative ( $M=61.25$ ,  $SD= 13.15$ ) are not statistically significant,  $t(60) = -4.11$ ,  $p= 0.21$  (Table 3.5). However, in contrast, Stachura and Garven (2003) found that having a disabled family member was significantly influence on students' attitudes towards the person with disability obtained on ATDP-O when compared with attitudes of occupational therapy students and physiotherapy students. Lastly, mean difference between attitudes towards persons with disabilities obtained on ATPD-O score of respondents in the "yes" experience with clinical training ( $M=59.84$ ,  $SD=13.30$ ) and those in "no" experience with clinical training ( $M=57.83$ ,  $SD= 11.34$ ) are not statistically significant,  $t(60) = 0.56$ ,  $p= 0.58$  (Table 3.6). This finding has demonstrated a similar result in other studies found that have contact with the disabled person was not a significant effect on the positively attitudinal change [5].

**Table 3.4. Mean difference between experience with disability and ATPD-O score**

Variable	First-year (n= 28) Mean (SD)	Final-year (n= 34) Mean (SD)	Mean diff. (95% CI)	t-stats (df)	p-value
ATPD-O	57.32 (13.68)	60.57 (12.01)	-3.24 (- 9.83, 3.33)	-0.99 (60)	0.33

**Table 3.5. Mean difference between disabled relative and ATPD-O score**

Variable	First-year (n= 28) Mean (SD)	Final-year (n= 34) Mean (SD)	Mean diff. (95% CI)	t-stats (df)	p-value
ATPD-O	57.13 (12.05)	61.25 (13.15)	-4.11 (- 10.54, 2.31)	-1.28 (60)	0.21

**Table 3.6. Mean difference between experience with clinical training and ATPD-O score**

Variable	First-year (n= 28) Mean (SD)	Final-year (n= 34) Mean (SD)	Mean diff. (95% CI)	t-stats (df)	p-value
ATPD-O	59.84 (13.30)	57.83 (11.34)	2.01 (- 5.14, 9.16)	0.56 (60)	0.58

#### 4. CONCLUSION

This study revealed that the score obtained on ATPD-O indicates that final-year student's more likely to have a positive attitude toward person disabled compared with first-year students. Besides, attitudes towards the person with disabilities of males and female students were statistically significant. These finding could be concluded that female students had an effect on attitudes toward disabled people. Meanwhile, the experience with disability, disabled relative and experience with clinical training does not show any significant difference from the attitudes toward the disabled person.

However, there were some limitations to this study. The sample is limited compared to studies done by previous researcher. Besides, the instrument used in this study was administrated by self-administered personality scales that could be distributed to bias among the respondents. Respondents tend to overestimate and underestimate the person with disabilities. This study only focuses on the attitude toward the person with a disability within demographic profile but does not focus on other factors that have a potential link to person with a disability such as nationality, work of experience, socioeconomic status, years of clinical experience and place of residence (rural versus urban). Then, the number of male respondents in this study was too small to yield valid and reliable estimates of the gender's demographics and attitudes towards persons with disabilities.

Future research could include the study by increasing the sample size and include other factors that may have to impinge on attitudes towards the person with a disability such as a nationality, work of experience, socioeconomic status, years of clinical experience and place of residence (rural versus urban). The study could be compared by using a pre and post-test methodology and comparing with another program under health sciences is needed to identify if rehabilitation students have attitudes difference from those of students studying in other areas. In otherwise, future studies could be achieved by comparing attitudes towards the person with disabilities among other health professional students in Malaysia such as speech and language pathology, physiotherapy, dieticians, pharmacists, social worker, nurses and audiologists with occupational therapy students.

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## REFERENCES

- [1] Ahmad, N. A., Mohamad Kasim, N., Mahmud, N. A., Mohd Yusof, Y., Othman, S., Chan, Y. Y., ... Aris, T. (2017). Prevalence and determinants of disability among adults in Malaysia: Results from the National Health and Morbidity Survey (NHMS) 2015. *BMC Public Health*, 17(1), 1–10. <https://doi.org/10.1186/s12889-017-4793-7>
- [2] Au, K. W., & Man, D. W. K. (2006). Attitudes toward people with disabilities: a comparison between health care professionals and students. *International Journal of Rehabilitation Research*, 29(2), 155–160. <https://doi.org/10.1097/01.mrr.0000210048.09668.ab>
- [3] Brown, T., Mu, K., Peyton, C. G., Rodger, S., Stagnitti, K., Hutton, E., ... Wu, C. Yu. (2009). Occupational therapy students' attitudes towards individuals with disabilities: A comparison between Australia, Taiwan, the United Kingdom, and the United States. *Research in Developmental Disabilities*, 30(6), 1541–1555. <https://doi.org/10.1016/j.ridd.2009.07.020>
- [4] Chadd, E., & Pangilinan, P. (2011). Disability Attitudes in Health Care. *American Journal Of Physical Medicine & Rehabilitation*, 90(1), 47–54. doi: 10.1097/phm.0b013e3182017269
- [5] Chan, C. C. H., Lee, T. M. C., Yuen, H. K., & Chan, F. (2002). Attitudes toward people with disabilities between Chinese rehabilitation and business students: An implication for practice. *Rehabilitation Psychology*, 47(3), 324–338. <https://doi.org/10.1037/0090-5550.47.3.324>
- [6] Estes, J., Deyer, C., Hansen, R., & Russell, J. (1991). Influence of Occupational Therapy Curricula on Students' Attitudes Toward Persons With Disabilities. *American Journal Of Occupational Therapy*, 45(2), 156–159. doi: 10.5014/ajot.45.2.156
- [7] Grames, M., Leverenz, C., Sponsor, F., & Oyster, C. (2010). Attitudes Toward Persons with Disabilities: A Comparison of Chinese and American Students. *UW-L Journal of Undergraduate Research XIII*, 1–6. <https://doi.org/10.1037/e566842012-669>
- [8] Lee, T., Paterson, J., & Chan, C. (1994). The Effect of Occupational Therapy Education on Students' Perceived Attitudes Toward Persons With Disabilities. *American Journal Of Occupational Therapy*, 48(7), 633–638. doi: 10.5014/ajot.48.7.633
- [9] Stachura, K., & Garven, F. (2003). Comparison of Occupational Therapy and Physiotherapy Students' Attitudes towards People with Disabilities. *Physiotherapy*, 89(11), 653–664. [https://doi.org//dx.doi.org/10.1016/S0031-9406\(05\)60098-3](https://doi.org//dx.doi.org/10.1016/S0031-9406(05)60098-3)
- [10] Tervo, R. C., Palmer, G., & Redinius, P. (2004). Health professional student attitudes towards people with disability. *Clinical Rehabilitation*, 18(8), 908–915. <https://doi.org/10.1191/0269215504cr820oa>
- [11] White, M. J., & Olson, R. S. (1998). Attitudes toward people with disabilities: a comparison of rehabilitation nurses, occupational therapists, and physical therapists. *Rehabilitation Nursing : The Official Journal of the Association of Rehabilitation Nurses*, 23(3), 126–131. <https://doi.org/10.1002/j.2048-7940.1998.tb01764.x>
- [12] Yunker, H., Block, J., & Campbell, W. (1960). A scale to measure attitudes toward disabled persons. Albertson, NY: Human Resources.