

# Determination of Nursing Undergraduate Students' Attitudes Towards Persons with Disabilities

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## ABSTRACT

**Objective:** To determine the attitudes of nursing students toward persons with disabilities.

**Materials and Methods:** This descriptive and correlational study's population comprised nursing faculty students (N=786). The sample size was calculated using the formula "when the universe is certain," resulting in a sample of 259 students. Data were collected between March and June 2023 using the Information Form and the Multidimensional Attitudes Scale toward Persons with Disabilities (MAS). Data analysis was performed using the SPSS 22.0 program, employing descriptive statistics and parametric or non-parametric tests for comparative data.

**Findings:** Most students stated no persons with disabilities among their family members or friends. It was found that more than half of the students did not care for disabled people in clinical practice. The mean score for the cognitive sub-dimension of the MAS was higher for students aged 20 and younger than for students aged 20 and older (MW-U=7072.5/ p=0.041). Also, the mean score for the emotional sub-dimension of the MAS scale was higher among students with disabled friends (t=1.392 p=0.036). The mean score for the behavioural sub-dimension differed between students' enrolled classes. The post hoc analysis showed that students in the second class had higher mean scores for behaviours than students in the fourth class, which was statistically significant. (F=2.752/p=0.043). Also, it was determined that the source of information about disability and the experience of caring for a person(s) with disabilities affected the MAS scale score of the students in terms of total score or sub-dimension scores (p<0.05).

**Conclusion:** Nursing students' attitudes toward persons with disabilities were affected by age, status of having a person with disabilities among their friends, enrolled class, source of information about disability, and experience of caring for a person(s) with disabilities. While students' attitudes are generally favourable, further studies utilizing alternative designs are advised to ascertain both explicit and implicit attitudes.

**Keywords:** Attitude, Disability, Nursing Student, Persons with disabilities.

## INTRODUCTION

It is the most fundamental right of every human being to live without being subjected to adverse experiences such as discrimination, exclusion, and labelling.

This can be achieved by prioritizing the values of equality, justice, and equity, as espoused in national and international documents [1-5]. Despite their significant presence in society, persons with disabilities

are often perceived as a minority group facing inequalities in meeting their needs, including participation, access to services, and the utilization of their rights [3, 6-9]. One of the most fundamental issues confronting individuals with disabilities is the inequality in health services they experience [7, 8, 10].

Barriers to access to health services (such as sociocultural, physical, financial, attitudinal, etc.) cause inequality in health [10-12]. In this context, negative attitudes towards persons with disabilities, whether personal, institutional, or governmental, represent a significant barrier to equality for persons with disabilities. By the traditional approach, the concept of attitude is comprised of three components: the cognitive component, which encompasses knowledge and beliefs; the affective component, which pertains to emotional and motivational factors; and the behavioural component, which concerns motivation or action, and can be understood as behavioural intentions. While attitudes and behaviours are related, they are not always aligned. An individual may hold a particular belief or have a specific emotional response to a problem yet exhibit a behavioural approach contrary to this initial stance. Various factors can influence attitudes, including experience, values, and mutual contact with other individuals. Individual social and governmental attitudes interact; education is an important factor in forming attitudes [13, 14].

Undergraduate education is essential in shaping the professional roles, responsibilities, and attitudes of nursing persons with disabilities. In the historical development of undergraduate nursing education, theoretical and practical education models that move away from the medical model, reshaped with professional knowledge and theoretical approaches specific to nursing, sensitive to social and social needs and developments, theoretical and practical education models appear. In this context, it is essential to add important subjects such as disability, nursing approaches toward persons with disabilities,

communication with persons with disabilities and their families, etc., to the nursing curriculum. However, no quality, standardized, and universal education model currently includes these features in nursing education [5, 15-18].

In a study examining the status of education and curricula in nursing schools regarding the approach to the persons with disabilities, it was reported that nursing curricula were largely deficient in the approach to the persons with disabilities. The same study determined that more than half of the nursing curricula did not have content related to intellectual disability, and only 16% included preventive health and human rights issues [19]. However, while nursing students acquire the essential professional roles and responsibilities related to the approach to the persons with disabilities in undergraduate education, current scientific information in crucial areas such as ethical principles, professional codes, laws, human rights, individualized care, etc. should be included in the content of education [20-22]. In this context, it is essential to determine the current situation related to the care of persons with disabilities in nursing education, and research for nursing students should be planned and implemented. This study aimed to determine the views and attitudes of undergraduate nursing students toward persons with disabilities.

## **MATERIALS & METHODS**

### ***Study Design, Sample and Setting***

A cross-sectional descriptive study was conducted among nursing students of one Faculty of Nursing between March and June 2023. The study population comprised 786 students, of whom 259 were selected using the sample calculation formula with a known population. Data were collected from each class by stratifying the students according to the classes they enrolled (students enrolled 1<sup>st</sup> class=64; students enrolled 2<sup>nd</sup> class=70; students enrolled 3<sup>rd</sup> class=54; students enrolled 4<sup>th</sup> class=71).

### ***Data Collection***

Information Form and the Multidimensional Attitudes Scale toward Persons with Disabilities (MAS). were used to collect quantitative data.

**Information Form:** The form was prepared by the researchers for this study according to the relevant literature [23-25] and comprised 23 questions. Before the form was applied to the students, it was submitted for review by ten experts in the field of nursing. Expert opinions were received using the Polit-Beck Method. The form was finalized after the experts' recommendations. The ten experts' grades were analysed using content validity analysis; the content validity index (S-CVI) was 0.90.

**MAS:** The scale was developed to assess the multidimensional (affective, cognitive, behavioural) attitudes toward persons with disabilities [26]. The scale is a 5-point Likert scale with three sub-dimensions and 31 items (affective=14 items, cognitive=9 items, behavioural=8 items). On the scale, 11 items in the affective dimension (1, 2, 3, 4, 5, 9, 10, 11, 12, 14, 15) and six items in the behavioural dimension (1, 2, 3, 4, 5, 6) are negative. After these items are reverse coded when calculating the scale score, scores can be calculated separately for each dimension and total scale. The score that can be obtained from the scale varies between 31 and 155 points. A high score indicates a positive attitude. The Cronbach's alpha values calculated by Yelpeze and Türküm (2018) for the reliability of the scale were found to be 0.90 for the total scale, 0.88 for the affective sub-dimension, 0.89 for the cognitive sub-dimension and 0.84 for the behavioural sub-dimensions [27].

#### **Ethics approval and consent to participate**

Ethical approval was obtained from the University's Non-Interventional Clinical Research Ethical Committee of Nursing Faculty (Meeting Date: 30<sup>th</sup> November, 2022; Number of Decision: 2022/63). Written institutional permission was provided. The researchers informed nursing students about the study's aim and method and obtained written consent forms from them.

## **STATISTICAL ANALYSIS**

Statistical analysis was performed using IBM SPSS Statistics 22 software. Descriptive statistics, t-tests, Mann Whitney U tests, ANOVAs, and Kruskal Wallis H tests were performed. A Gabriel analysis was conducted in the post hoc analysis of the ANOVA, and p-values of <0.05 were considered significant.

## **RESULT**

The mean age of the study participants was 20.83±1.54 years, and most were female. The Multidimensional Attitudes Scale toward Persons with Disabilities (MAS) was 109.31±12.90 (minimum=49; maximum=139), and the mean scores of the sub-dimensions of the scale, including affective [38.02±8.74 (minimum=18; maximum=62)], cognitive [36.35±6.34 (minimum=9; maximum=45)], and behavioural [35.94±4.96 (minimum=17; maximum=45)], were also determined. It was found that more than half of the students did not care for persons with disabilities in clinical practice. Nursing students' attitudes toward persons with disabilities were affected by age, status of having a person with disabilities among their friends, enrolled class, source of information about disability, and experience of caring for a persons with disabilities (Table 1).

A consideration of the opinions of the students about disability and person with disabilities revealed that most of the students agreed with the views that "disability is a social problem" and "person(s) with disabilities has little contribution to society." It was established that over half of the students expressed feelings of inadequacy in some areas related to disability and disabled individuals. However, there was no significant difference between student nurses' views on disability and person with disabilities and perceptions of their competence related to disability and caring for person with disabilities with scores on the MAS (p>0.05) (Table 2).

<b>Table 1. Comparison of nursing students' sociodemographic and occupational characteristics with the scores of Multidimensional Attitudes Scale toward Persons with Disabilities (MAS) (n=259).</b>					
Variable (n/%)		MAS Scores			
		Total $\bar{x}\pm ss$	Affective $\bar{x}\pm ss$	Cognitive $\bar{x}\pm ss$	Behavioural $\bar{x}\pm ss$
Age	18-20 years old (116/44.80)	110.82±13.22	38.28±8.73	37.14±6.39	35.40±5.18
	21-26 years old (143/55.20)	108.09±12.55	37.81±8.77	35.71±6.25	34.57±4.77
	Test statistics p value	$t=1.699$ $p=0.509$	$t=3.899$ $p=0.001$	<b><math>MW-U=7072.5</math></b> <b><math>p=0.041</math></b>	$t=1.329$ $p=0.930$
Gender	Female (208/80.30)	109.19±13.03	37.10±8.51	36.86±6.18	35.23±5.07
	Male (51/19.70)	109.82±12.44	41.80±8.72	34.25±6.61	33.76±4.33
	Test statistics p value	$t=-0.315$ $p=0.934$	$t=-3.523$ $p=0.834$	$t=2.662$ $p=0.241$	$t=1.900$ $p=0.192$
Having person(s) with disabilities in the family	Yes (30/11.60)	112.20±10.97	39.30±7.94	37.10±5.75	35.80±5.31
	No (229/88.40)	108.93±13.10	37.86±8.84	36.25±6.42	34.83±4.92
	Test statistics p value	$t=1.306$ $p=0.677$	$t=0.851$ $p=0.453$	$t=0.691$ $p=0.218$	$t=1.007$ $p=0.685$
Having person(s) with disabilities in the friends	Yes (42/16.20)	111.88±12.84	39.88±10.00	36.67±6.04	35.36±4.25
	No (217/83.80)	108.82±12.88	37.67±8.45	36.29±6.41	34.86±5.10
	Test statistics p value	$t=1.412$ $p=0.772$	<b><math>t=1.392</math></b> <b><math>p=0.036</math></b>	$t=0.356$ $p=0.914$	$t=0.591$ $p=0.460$
Student's enrolled class	1 <sup>st</sup> class (64/24.70)	108.69±13.69	36.97±8.19	36.86±7.14	34.86±5.53 <sup>a</sup>
	2 <sup>nd</sup> class (70/27.00)	112.13±12.43	38.90±9.70	36.93±5.91	36.30±4.00 <sup>b</sup>
	3 <sup>rd</sup> class (54/20.80)	108.59±12.77	38.37±8.64	35.76±5.76	34.46±5.65 <sup>c</sup>
	4 <sup>th</sup> class (71/27.40)	107.65±12.54	37.84±8.38	35.76±6.44	34.04±4.53 <sup>d</sup>
	Test statistics p value	$KW-H=4.107$ $p=0.250$	$F=0.581$ $p=0.628$	$KW-H=3.027$ $p=0.387$	<b><math>F=2.752</math></b> <b><math>p=0.043</math></b> <sup>(b&gt;d)</sup>
General Academic GPA(n=195) *	3.00 and below (97/49.70)	110.94±12.60	39.75±9.33	35.73±6.31	35.45±4.68
	3.01 and above (98/50.30)	108.11±12.62	37.00±8.29	36.62±5.80	34.50±4.85
	Test statistics p value	$t=1.565$ $p=0.871$	$t=2.176$ $p=0.239$	$t=-1.026$ $p=0.156$	$t=1.412$ $p=0.318$
<b>Sources of information about disability and person(s) with disabilities</b>					
Media and social platforms	Yes (229/88.40)	109.16±12.45	37.80±8.69	36.38±6.19	34.97±5.02
	No (30/11.60)	110.15±16.15	39.70±9.06	36.07±7.16	34.73±4.61
	Test statistics p value	$MW-U=-0.926$ $p=0.355$	$t=-1.118$ $p=0.788$	$MW-U=-0.136$ $p=0.892$	$MW-U=-0.516$ $p=0.606$
Books and articles	Yes (211/81.50)	109.01±12.30	37.38±8.35	36.58±6.11	35.06±5.01
	No (48/18.50)	110.63±15.35	40.85±9.87	35.33±7.24	34.44±4.77
	Test statistics p value	$MW-U=1.057$ $p=0.290$	$t=-0.932$ $p=0.351$	$MW-U=-0.926$ $p=0.355$	$MW-U=-1.115$ $p=0.265$
Undergraduate education	Yes (208/80.30)	108.83±13.56	37.90±8.98	36.08±6.52	34.86±5.15
	No (51/19.70)	110.17±11.65	38.25±8.34	36.83±6.01	35.10±4.63
	Test statistics p value	$t=-0.802$ $p=0.396$	$t=-0.308$ $p=0.375$	$t=-0.913$ $p=0.684$	$t=-0.375$ $p=0.251$
Scientific activities	Yes (143/55.20)	109.24±12.35	37.59±8.15	36.73±6.22	34.92±5.11
	No (116/44.80)	109.40±13.60	38.56±8.43	35.87±6.47	34.97±4.81
	Test statistics p value	$MW-U=8259.5$ $p=0.954$	<b><math>t=-0.891</math></b> <b><math>p=0.030</math></b>	$t=1.091$ $p=0.800$	$t=-0.068$ $p=0.249$
Social environment	Yes (139/53.70)	110.95±13.00	38.83±9.48	36.68±6.02	35.45±4.43
	No (120/46.30)	107.42±12.56	37.09±7.74	35.97±6.69	34.36±5.49
	Test statistics p value	$MW-U=7177.0$ $p=0.053$	<b><math>t=1.622</math></b> <b><math>p=0.006</math></b>	$t=0.898$ $p=0.521$	<b><math>t=1.766</math></b> <b><math>p=0.024</math></b>
<b>Caring for a person with disabilities in a clinical setting</b>					
Have experience	Yes (107/41.30)	108.38±14.22	38.28±9.60	35.45±6.99	34.64±5.08
	No (152/58.70)	109.97±11.88	37.84±8.11	36.98±5.77	35.15±4.89
	Test statistics p value	$MW-U=7455.0$ $p=0.254$	<b><math>t=0.385</math></b> <b><math>p=0.041</math></b>	$t=-1.925$ $p=0.070$	$t=-0.808$ $p=0.515$

<b>Table 2. Comparison of nursing students' views on disability and person(s) with disabilities and perceptions of their competence topic related to disability and caring for person(s) with disabilities with scores on the Multidimensional Attitudes Scale towards Persons with Disabilities (MAS) (n=259).</b>					
Variables (n/%)		MAS Scores			
		Total $\bar{x}\pm ss$	Affective $\bar{x}\pm ss$	Cognitive $\bar{x}\pm ss$	Behavioural $\bar{x}\pm ss$
Views on disability and person(s) with disabilities					
Disability is a social problem that affects many areas.	Yes (216/83.64)	108.55±12.70	37.89±8.52	35.84±6.43	34.81±4.76
	No (43/16.60)	113.14±13.37	38.67±9.87	38.88±5.22	35.58±5.90
	Test statistics p value	t=-2.143 p=0.513	t=-0.534 p=0.169	t=-2.914 p=0.091	t=-0.924 p=0.105
Person(s) with disabilities contributes little to society.	Yes (220/84.90)	110.24±14.41	38.71±9.07	36.53±6.16	35.00±4.59
	No (39/15.10)	109.15±12.65	37.91±8.70	36.31±6.38	34.93±5.04
	Test statistics p value	t=-0.477 p=0.279	t=0.524 p=0.646	t=0.188 p=0.775	t=0.078 p=0.862
The person(s) with disabilities has to adapt to the society.	Yes (92/35.50)	110.47±12.38	38.88±8.02	37.03±6.04	34.55±5.38
	No (167/64.50)	108.68±13.17	37.55±9.10	35.97±6.48	35.16±4.72
	Test statistics p value	t=1.070 p=0.988	t=1.173 p=0.228	t=1.293 p=0.660	t=-0.933 p=0.133
Perceptions of their competence topic related to disability and caring for person(s) with disabilities					
I feel competent in issues relating to disability rights/laws.	Yes (66/25.50)	111.67±12.81	38.44±9.53	37.40±6.90	35.83±4.56
	No (193/74.50)	108.51±12.86	37.88±8.48	35.99±6.11	34.64±5.07
	Test statistics p value	t=1.724 p=0.875	t=0.448 p=0.422	t=1.558 p=0.089	t=1.696 p=0.505
I feel competent in ethical issues related to the person(s) with disabilities.	Yes (138/53.30)	101.16±12.96	38.03±8.72	37.05±6.08	35.08±4.86
	No (121/46.70)	108.35±12.82	38.02±8.79	35.55±6.55	34.79±5.10
	Test statistics p value	MW-U=7759.0 p=0.326	t=0.011 p=0.566	t=1.917 p=0.873	t=0.476 p=0.812
I feel competent in caring for the persons with disabilities and their families in relation to professional roles and responsibilities.	Yes (122/47.10)	109.86±12.40	37.85±9.03	36,80±6,13	35,21±4,87
	No (137/52.90)	108.82±13.36	38.18±8.50	35,95±6,52	34,70±5,05
	Test statistics p value	MW-U=7759.0 p=0.326	t=-0.292 p=0.752	t=1.073 p=0.599	t=0.829 p=0.999
I feel competent in caring for the persons with disabilities and their families in different age groups.	Yes (75/29.00)	110.96±12.92	38.51±9.48	37.32±6.18	35.13±4.93
	No (184/71.00)	108.64±12.86	37.83±8.44	35.95±6.37	34.86±4.99
	Test statistics p value	t=1.314 p=0.884	t=-0.568 p=0.242	t=1.581 p=0.849	t=0.395 p=0.952
I feel competent to provide nursing care in diagnosis, treatment and rehabilitation processes.	Yes (68/26.30)	108.85±12.54	36.91±8.90	37.31±6.70	34.63±5.20
	No (191/73.70)	109.48±13.05	38.42±8,67	36.01±6.19	35.05±4.89
	Test statistics p value	t=-0.342 p=0.698	t=-1.222 p=0.917	t=1.459 p=0.357	t=-0.598 p=0.259

I feel competent to communicate with the persons with disabilities and their families.	Yes (135/52.10)	110.26±12.61	37.53±9.08	37.38±6.29	35.35±4.89
	No (124/47.90)	108.28±13.18	38.56±8.36	35.23±6.22	34.50±5.03
	Test statistics p value	t=1.233 p=0.926	t=-0.941 p=0.621	t=2.764 p=0.721	t=1.376 p=0.827
I feel competent to provide counselling to the persons with disabilities and their families.	Yes (71/28.20)	110.52±11.72	37.73±8.22	37.79±5.99	35.00±4.86
	No (186/71.80)	108.84±13.33	38.14±8.96	35.78±6.40	34.92±5.02
	Test statistics p value	t=0.944 p=0.219	t=-0.342 p=0.170	t=2.321 p=0.823	t=0.117 p=0.869

## DISCUSSION

It is widely accepted that ensuring fair and equitable access to healthcare services for all members of society is a fundamental prerequisite of equality in health [10]. Persons with disabilities are groups with significant health service needs, encompassing general health, specialized health, and disability-related needs. However, they are a vulnerable and at-risk group in terms of experiencing inequality in health outcomes [8, 11, 12, 15]. In 2022, the World Health Organisation (WHO) once again highlighted the inequalities experienced by individuals with disabilities in the context of the United Nations Convention on the Rights of Persons with Disabilities (CRPD). The report states that health equality for people with disabilities is a global health priority and that one of the recommended actions to reduce preventable health inequalities is the education of health professionals [8]. It is, therefore, vital to increase the awareness of health professionals towards individuals with disabilities, beginning at the undergraduate level [10, 12]. In this context, nurses and other health professionals require training programs encompassing theoretical and practical areas, assessing their competencies regularly, and are developed by a multidisciplinary and expert team in the field [17, 18, 28].

Education programs have been demonstrated to have several beneficial effects, including an enhancement of students' competencies, an increase in their confidence in caring for persons with

disabilities, an expansion of their professional skills, an improvement in their decision-making abilities, and an advancement in their understanding of the equality of persons with disabilities [11, 12, 15, 28, 29]. There is no standardized and universal nursing and medical education curriculum related to caring for persons with disabilities [10, 12, 30]. The difficulties in developing such curricula include the fact that persons with disabilities have different types of disabilities, such as cognitive, hearing, vision, etc., the individual care needs of each individual, and the unique needs of every kind of disability [12, 31].

In our study, it was determined that the age of the students, the status of having persons with disabilities among their friends, the class they attended, the source of information about caring for the persons with disabilities and their families, and the experience of caring for the persons with disabilities in clinical practice affected the mean scores of the total score and some of the sub-dimensions of the MAS scale with a statistically significant difference ( $p < 0.05$ ). The findings align with those of previous studies in the literature. A review of the literature reveals that several factors, including age, gender, sociocultural background, educational status, working hours, and being a relative of persons with disabilities, can influence the attitudes of healthcare professionals toward persons with disabilities [32-35]. The experience of caring for a person with a disability facilitates interactions that influence the attitudes of students. Nevertheless, the

literature emphasizes that merely interacting with a disabled individual is insufficient for developing a positive attitude; an approach that emphasizes respect, tolerance, and effective communication is also necessary [13]. It is, therefore, crucial to integrate practical training into the nursing undergraduate curriculum, which should encompass the fundamental principles of care for disabled individuals, including human dignity, communication, and ethical considerations.

The findings of our study indicate that while most students surveyed expressed positive views toward persons with disabilities and acknowledged that disability is a social problem, they also demonstrated varying degrees of explicit and implicit prejudice. Explicit forms of prejudice included the belief that persons with disabilities contribute little to society, while implicit forms included the assumption that persons with disabilities must adapt to society. During our study, student nurses reported feelings of inadequacy in numerous areas about the care of individuals with disabilities. In the existing literature, it has been reported that nurses' lack of professional knowledge and skills, as well as deficiencies in communication, when addressing the healthcare needs of individuals with disabilities, causes nurses to feel uneasy when working with such individuals, to experience communication problems, and to develop explicit or implicit negative attitudes about disability. Furthermore, studies have indicated that nurses may exhibit negative implicit attitudes despite their outwardly positive attitudes toward individuals with disabilities [34, 36, 37]. This is consistent with the perspective put forth by Fisher and Purcal (2016), which posits that personal attitudes and behaviours are interrelated but not necessarily identical. This perspective posits that an individual may hold a particular belief or attitude yet behave in a manner that is contrary to that belief or attitude [13]. Consequently, the explicit or implicit negative attitudes of nurses and other health

professionals towards disabled individuals may impede their ability to access health services in an equal, fair, equitable, and just manner [34, 36-38]. Negative attitudes held by nurses and other health professionals towards disabled individuals or disability will result in a reduction in the trust placed in health professionals by disabled individuals due to the inability of the former to communicate effectively [39]. In this context, it is recommended that different teaching methods that address individual awareness and self-assessment be used in nursing education within the scope of approach to the disabled individual [36].

## CONCLUSION

In this study, nursing students' attitudes toward persons with disabilities were affected by age, status of having a persons with disabilities among their friends, enrolled class, source of information about disability, and experience of caring for a person(s) with disabilities. While students' attitudes are generally favourable, further studies utilizing alternative designs are advised to ascertain both explicit and implicit attitudes. The data obtained are believed to be similar to the literature. The lack of standard, quality, universal educational curricula in our country and in the world regarding the care of disabled people and the inadequacy of theoretical and practical training in undergraduate education regarding the care of disabled people may affect the process. In light of the information obtained, we believe that students should be provided with theoretical and practical support in the field of care for the disabled.

### **Declaration by Authors**

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