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RESEARCH ARTICLE

The attitude of university students towards people with disability

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ABSTRACT

Background: Attitude is a declaration of feeling towards somebody. Understanding these attitudes is crucial, as they influence social inclusion, accessibility, and the overall well-being of individuals with disabilities. University students, being future professionals and societal contributors, play a pivotal role in shaping inclusive perspectives.

Objective: The primary objective of this study was to determine the attitude of university students towards people with disability. The secondary objectives include comparison of attitude towards disability between medical and non-medical students, between male and female and attitude towards disability among students of different academic years.

Methods: A descriptive cross-sectional survey (ERC Riphah/RCRS/REC/00624) was conducted on 183 students in which 107 were medical and 76 were non-medical students of Riphah International University. Sample size of 183 was calculated by epitool. Non-disabled university students aged 18-30 years were included in the study. Questionnaire including demographics and attitudes toward disabled persons (ATDP) form A was used. Data was collected using non-probability convenience sampling technique. Response rate for the study was 91.5%. Data was analyzed using SPSS version 23. Mean with SD are reported in result section.

Results: The total score of ATDP questionnaire of 183 students was calculated 98.08±16.741. The mean age of both male and female students was 21.32 years. Medical students showed more positive attitude than non-medical students. Female students held more positive attitude than male students. 1st year students had more positive attitude than other academic years. Mean score of ATDP was 98.08.

Conclusion: This study found that the attitude of university students towards people with disability is moderately positive.

Keywords: Attitude, disability, university students.

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Introduction:

Attitudes play a crucial role in shaping behaviors and significantly impact people with disabilities.(1) It is a mixture of three key components: beliefs, feelings, and actions.(2) According to the WHO, disability is an umbrella term covering impairments, activity limitations, and participation restrictions. About 15% of the universal population is living with some sort of disability in which 0.2% to 2% are identified as deaf blind. This type of disability involves the loss of vision and hearing, affecting access to communication, mobility and working.(3) Research has discussed four different models of disability which includes, pathology-related model, according to this model medical condition automatically leads to functional difficulties. Environmental model focus on how the social and physical environment contributes to the disablement process. Interaction between person and environmental model and advanced pathological model emphasize the importance of understanding how different factors, including the severity of the pathology affect an individual's functioning.(4) Their regular interactions with social and welfare systems can also bring positive energy, fostering resilience and strength.(5)

There are different type of disabilities in

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individuals which includes hearing impairments, visual impairments, motor, cognitive impairments and physical disabilities etc.(6) People suffering with these disabilities often face difficulties in getting their basic rights, and they have limited access to education, employment, marriage, and even reduce life expectancy. (7) Due to their narrow access in educational field they reach lower levels of education than the rest of the population, they have less opportunities to access the industrial market, so they face extraordinary restrictions to participate actively in society and to develop a normal social life.(8) These challenges have a significant impact on their happiness and overall life satisfaction. PWD's have a lower quality of life as compared to the over-all population, which can lead to psychological suffering, social segregation, and general life dissatisfaction.(7) This leads to feelings of unimportance and difficulty in living independently. Such negative attitudes create barriers that prevent their full inclusion in society. (9) According to the WHO, about 15% of the global population nearly one billion people were living with a disability in 2011. Adding secondary impairments contribute to boundaries in daily functioning, restricted social participation, low self-efficacy, low self-esteem, depression, and challenges related to employment. (7) Physical therapy education plays a key role in addressing these challenges by training professionals to support individuals with movement problems, promoting greater integration and well-being.(10) Gaps needed to be addressed are lack of focus on attitudinal barriers in education and rehabilitation training. A number of literature does not holistically examine the multiple challenges faced by PWD's (e.g., access to education, employment, and healthcare), shortage of evidence on how positive engagement with PWDs shapes attitudes.(7)

Several studies have examined attitudes toward individuals with disabilities across different educational and professional backgrounds. A study conducted on medical students in which fourth-year medical students had a more positive attitude towards disabled individuals than first-year students.(11) Nursing students showed greater acceptance of elderly and physically disabled individuals than those with intellectual disabilities likewise, empathy activities aimed at understanding disabled individuals had a positive impact on student nurses' attitudes toward them.(12,13) Female students consistently showed more positive attitudes than male students. Research indicates that schooling can influence societal attitudes, but direct contact and relationships with disabled individuals have a stronger impact.(14)

The findings of Hammad et al. showed that religious youths held positive attitudes toward PWDs, with both religiosity and family income contributing to these attitudes.(15) Studies across different countries highlight various factors influencing attitudes toward individuals with disabilities. Research at the World Islamic Science University found no differences based on social status but noted variations by gender, academic level, and faculty.(13) In China, rehabilitation students consistently demonstrated more positive attitudes than business students, while DPT students showed no significant change in attitudes over time (12,16). Similarly, physiotherapy students generally held positive views, but stereotypes and discrimination persisted regarding the emotional capacity of individuals with disabilities, underscoring the need for educational strategies in Nigeria.(17) A U.S. study at the University of South Dakota highlighted gender differences in attitudes among health professional students, with nursing students exhibiting more negative views.(14) In Japan, social work and psychology students, as well as those interested in working with individuals with intellectual disabilities, displayed the most positive attitudes, emphasizing the impact of professional interests on perceptions.(18)

Existing studies show that attitudes toward people with disabilities vary based on factors like education, gender, and personal experience. However, little research explores how university students from different fields view disabilities. Most studies focus on medical and nursing students, ignoring the wider student population. This study aims to fill that gap by assessing attitudes across various disciplines, challenging stigmas, and emphasizing support over sympathy.

Methods:

A Cross-sectional study was conducted on students of Riphah international university using non-probability convenience sampling technique. Before conducting the research, informed consent was obtained from all participating students, ensuring their right to privacy and confidentiality.

Student's aged between 18-30 years and non-disabled university students were added in study. The study excluded physically disabled students to avoid bias, as their experiences could differ from non-disabled students, affecting generalizability. Participants who struggled with comprehension were also excluded to prevent data inconsistencies. Additionally, only willing participants were included to uphold ethical research standards.

The study was completed in 6 months from October 2019 to March 2020. Attitudes towards Disabled Persons Scale (ATDP) questionnaire form (A) was used. The scale demonstrated a content validity index exceeding 0.8, and excellent reliability, indicated by a Cronbach's alpha of 0.78 and an ICC of 0.96.(19) The scale range (0-180) was further categorized into negative attitude (0-60), moderate attitude (61- 120) and more positive attitude (121-180). So, the range of scores (61- 120) was considered moderate.

The sample size for this study was calculated using the Epitool epidemiological calculator to estimate a single mean with a specified level of confidence and precision. The calculation considered an assumed population standard deviation of 13.8, a confidence level of 95% (Z = 1.96), and a desired precision of ±2. Using these parameters, the required sample size was determined to be 183 participants.(20)

After taking approval from the Riphah Ethical Committee with REC reference # Riphah/RCRS/REC/00624 and Riphah International University, participants meeting the inclusion criteria were selected. The study employed a convenient sampling technique, collecting data from readily available students at a single point in time. The ATDP questionnaire was used to assess their attitudes, and participants provided demographic information (name, age, gender, and degree program) before completing it. This approach ensured an effective data collection process, enabling researchers to analyze how demographic factors influenced students' attitudes. All statistical analyses was performed through SPSS version 23.

According to Yoker (1970), the first step in the analysis is to change the signs of all the items with positive wording in it.(21) The positive items indicates that the disabled people were not different from non-disabled people. After changing the signs of the positively worded questions, the algebraic sum of all the questions was taken. The sign of the algebraic sum was reversed from positive to negative or negative to positive. Now the total score ranges from -90 to +90. Then the score was made positive by adding a constant of 90 in the total score to eliminate the negative values. The resultant score ranged from 0 to 180.

Yuker stated that if more than 10% or more than 4 responses were left empty, the test is not to be score. So, less than 10% or less than 4 responses if left empty, the test is still scorable. The responses in which less than 4 questions were left un-attempted, the analysis was done just like the procedure mentioned above i.e. by adding the constant of 90. Yuker states that this constant becomes an equivalent to the omitted items.(21) All the tests were calculated using this method. Kolmogorov Simonov was applied to check the normality of data and the p-value came out to be 0.200 indicating no significant deviation from normality.

Results:

In this study, attitude of university students towards people with disability was determined and different variables were investigated. This cross-sectional study was conducted on 183 university students of all academic years in which 9% students from 1st year, 21% students from 2nd year, 21% students from 3rd year, 31% students from 4th year and 18% students from 5th year were included. The mean age of both male and female students was 21.32±1.935. Medical and non-medical students were 58% and 42% respectively. Total 25% male students and 75% female students participated in the study. Socioeconomic status was categorized into upper, middle and lower having 16%, 77% and 7% students respectively.

The total score of ATDP questionnaire of 183 students was calculated 98.08±16.741 with a minimum of 52 and a maximum of 146. The scale range (0-180) was further categorized into Negative Attitude (0-60), Moderate Attitude (61-120) and More Positive Attitude (121-180) respectively (Table 1.)

Table 1. Categories of ATDP Score

Categories of ATDP	N (%)
Negative Attitude	2(1.1%)
Moderate Attitude	165(90.2%)
More Positive Attitude	16(8.7%)

A significant difference in ATDP scores was found between medical and non-medical students (p = 0.008) (Table 2), indicating that the field of study influences attitudes towards individuals with disabilities. In contrast, there was no significant difference between male and female students (p = 0.141), suggesting that gender may not play a substantial role in shaping attitudes in this context.

The one-way ANOVA was employed to assess the differences in attitudes between students of different academic years, yielding a significant result (p = 0.003, F = 4.171). Despite demographic variations including age, gender, and academic program ANOVA is robust against such discrepancies when the sample size is sufficiently large and the data is normally distributed.

The subsequent Bonferroni post-hoc analysis

revealed significant differences between specific academic years, notably between 5th-year and 1st-year students (p = 0.007) and between 3rd-year and 1st-year students (p = 0.019). These findings suggest that while baseline demographic similarity was not present, the significant differences in attitudes observed can be attributed to academic progression and exposure over the years, rather than demographic factors alone. In conclusion, the statistical significance of the ANOVA results indicates that academic year and field of study play crucial roles in shaping attitudes toward individuals with disabilities, while gender does not appear to have a significant impact.

Table 2. Comparison of ATDP Variables

Variables	Group	N	Mean ± S.D	P Value
Program	Medical	107	95.33±16.60	0.008
	Non-medical	76	101.96±16.25	
Gender	Male	45	94.89±17.09	0.141
	Female	138	99.12±16.55	
Year of Study	1st	17	106.65±17.58	0.003
	2nd	38	100.03±14.98	
	3rd	38	102.11±15.58	
	4th	56	96.30±17.59	
	5th	34	90.06±14.93	

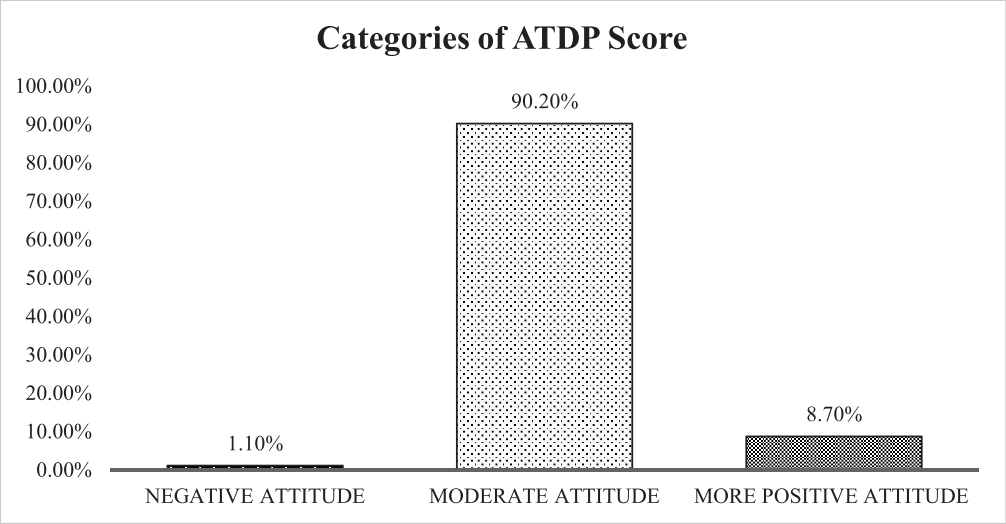

Figure 1. This figure shows that 165 students (90.20%) students showed moderately attitude, 16 (8.70%) showed more positive attitude and only 2 (1.10%) students showed negative attitude

Discussion:

The primary goal of current study was to find out the attitude of university students towards people with disability. A study by Kritsotakis, Galanis et al measured attitudes toward people having intellectual as well as physical disabilities among undergraduate nursing, social word and medical field students. Mean score of this study was 94.8. Medical students and all the other students who have worked with physically incapacitated persons having increased self -reported knowledge showed much high values on the ATDP -B questionnaire.(5)

The findings of the current study align with above mentioned study indicating similar attitudes among university students toward PWDs. The mean ATDP-A score in this study was 98.08, further supporting the notion that increased exposure and experience with individuals with disabilities may positively influence students' attitudes.

A study by Vasu et al. (2024) examined healthcare

students' attitudes toward PWDs and the influence of demographic factors. The findings indicated an overall positive attitude, with no significant differences based on gender, age, or volunteering experience. However, attitudes varied significantly by year and program of study. Similarly, the present study found generally positive attitudes among healthcare students, with differences observed across academic years and fields of study.(22)

Result of the present study shows a similar result with an overall moderate attitude of university students towards PWD's and a significant difference in attitudes across different academic years. No significant difference was found at gender level.

In a comparative study assessing the impact of curriculum on students' attitudes towards individuals with disabilities using the ATDP Scale, it was found that 1st and 3rd year rehabilitation students exhibited significantly more positive attitudes. Conversely, business students displayed negative attitudes towards individuals with disabilities. This highlights the potential influence of academic curriculum on shaping attitudes towards individuals with disabilities among students in different fields of study.(16)

The results of the present study align with these findings, revealing a significant difference in attitudes across different academic years ($p = 0.003$). This further supports the notion that educational exposure and curriculum design may influence students' perspectives on disability.

A study by Sahin H et.al. (2019) found that health professional students (e.g., medical, nursing, physical and occupational therapy, communication disorders) generally had more positive views on the ATDP. Students with personal connections to people with disabilities (e.g., family or friends) scored higher on the ATDP-A scale than those without such connections. When comparing 1st and 2nd year nursing and medical students, medical students had a lower mean attitude score than nursing students, but overall, medical students showed more positive attitudes than non-medical students.(23)

The findings of the present study are somewhat consistent with these results, as a significant difference was observed between medical and non-medical students ($p = 0.008$). This further supports the idea that students' academic background and personal experiences may influence their attitudes toward individuals with disabilities.

The social attitudes of students of higher education institutions and their professors were found to be favorable towards the inclusion of people with disabilities with females having a more positive attitude as compared to males but this did not assure whether the students and the professors have a positive attitude towards people with disabilities at interpersonal level, rather it only emphasized on the accessibility of PWDs to the university.(24)

In comparison, the findings of the present study indicate no significant difference in attitudes between male and female students ($p = 0.141$). This suggests that while gender differences in attitudes toward PWDs have been observed in some studies, they may not be consistent across different populations and educational settings.

Some limitations of this study should be considered. This study only included students from one university. Thus, the generalizability of the results is not feasible. Male and female students were not in equal proportion. Students were having difficulty in understanding the questionnaire because of having some double negative questions.

There is a need to promote educational trainings of students to inculcate more positive attitude. In terms of practical applications, universities can create policies that promote inclusion, offer disability awareness training, and provide hands-on learning experiences to encourage a more accepting environment. These findings can also help improve policies in higher education and develop strategies to make universities more inclusive and accessible for people with disabilities. Unequal group sizes remain a limitation, and future studies should consider stratified or randomized sampling to improve generalizability and validity.

Conclusion:

This study found that the attitude of university students towards people with disability is moderate indicating a neutral or slightly positive perspective. Factors examined, field of study and academic year significantly influenced attitudes of medical students and senior-year students showed more positive views. In contrast, gender had no significant effect. These results suggest that academic exposure improves attitudes, highlighting the need for targeted educational programs to foster more inclusive and positive perceptions toward PWD's. Thus, there is a need to promote educational trainings of students to inculcate more positive attitude in them by generating such programs that are effective

in changing their viewpoints.

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Author's Contribution:

Fatima M: Writing original draft, design of the work, data acquisition, analysis or interpretation of data for the work.
Gul L: Data curation, visualization, results configuration.
Khan A: Investigation, data collection, formal analysis.
Riaz H: Concept and design, analysis and interpretation, statistical expertise.
Afridi A: Critical revision of the article for important intellectual content.