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Empathy and attitude of university students toward students with disabilities in Jordan: A cross-sectional study

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Abstract

Introduction: The prevalence of students with disabilities has increased in universities recently. Negative attitudes toward students with disabilities may contribute to a negative impact on them. This study was conducted to evaluate the levels of university students' empathy and attitude toward students with disabilities.

Methods: A descriptive cross-sectional design study was conducted at a public university in Jordan. The study sample was comprised of 303 participants who were conveniently selected. Self-reported questionnaires were used to collect data, including demographic characteristics. Empathy was measured using the Basic Empathy Scale (BES). The attitude was measured using the attitude towards disabled person scale (ATDP).

Results: The mean age of participants was 20.8 years (SD±1.56). Approximately half of the students were females, enrolled in scientific faculties, and in their fourth academic year. Two-thirds of students have no relatives with any mental or physical disabilities. The students showed a high level of empathy and no significant differences in empathy total scores about students' demographics. The mean total score for ATDP was 62.99 out of 120 (SD±13.49). Female students had higher scores of ATDP than male students (M=65.48 ±13.9). Students in humanistic faculties had higher scores of ATDP than students in scientific faculties (M=64.8 ±14.1). The level of empathy among university students was negatively correlated with the total score of ATDP ($r = -.197$, $p \leq .001$).

Discussion: The findings suggest that exposure to students with disabilities' culture may promote positive attitudes and better cultural understanding toward them. Actions are urgently needed to empower students with disabilities and make them feel more accepted and productive in academic institutions.

Take-home message: Addressing students' beliefs and behaviors can improve their empathy and attitudes toward students with disabilities and create a supportive study environment.

Keywords: Attitude; disabilities; empathy; university students.

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INTRODUCTION

Recently, there has been an increase in the significance of studying the attitudes toward students with disabilities (SWDs) as they are a vital component of the community as well as a valuable asset that adds diversity to academic institutions [1]. According to Sharma et al, SWDs are defined as college students who have long-term or chronic physical or sensory impairments that provide a variety of obstacles to engaging in productive social interactions or making equal contributions to society [2]. As human beings, SWDs have the right to an education and the ability to contribute to their communities and fields as active members of society. There has been a notable surge in the number of university students with impairments enrolled in recent times. The US Department of Education estimates that 15% of students enrolled in higher education have some form of impairment, such as mental illness, learning disabilities, or chronic illnesses, and already received special education or related services [3]. According to Papadakaki et al, statistics show an underreporting of students with impairments. This may be due to students not reporting their conditions to prevent stigmatization [4].

Numerous obstacles face SWDs, including integration into regular classrooms [5], faculty members' lack of empathy in enforcing rules, mistrust of their needs [6], and inadequate accommodations [7]. About two-thirds of university students (62.6%) acknowledged discrimination against individuals with disabilities [8]. Students' understanding of the many challenges SWDs face may help ease their difficult worries. Most notably, it was shown that SWDs had a higher likelihood of dropping out of college than their non-disabled counterparts, were less likely to enroll in higher education, and were more likely to experience study delays [9]. Three variables make up the multifaceted concept of attitude: affection, conduct, and cognition, all of which are subject to change [10,11]. One of the biggest challenges faced by students with impairments is said to be attitude barriers [12]. Age, gender, culture, religion, self-esteem, knowing or caring for a disabled person, and socially engaged individuals are among the variables that may impact attitude [10,13].

Students' educational journeys are negatively impacted by negative views about students with impairments, which can discourage them from requesting and receiving assistance. Negative attitudes may lead to a greater tendency toward violence, biased methods, overly safeguarding, prejudice against those with disabilities, and distancing from them [13]. Lack of training and

awareness about disabilities may lead to negative attitudes toward SWDs [14]. There is a consensus that more intimate or frequent contact, such as having a friend or relative with a disability or inclusive activities, promotes more favorable attitudes towards SWDs [15]. Classroom moral identity and interactive learning can lessen prejudice toward those with impairments [16].

Empathy refers to the cognitive ability to understand others' feelings by considering oneself in that other's situation, and it is accompanied by the willingness and intention to help [17]. Affective and cognitive empathy are the two categories of empathy. According to Wodarski, affective or emotional empathy is the capacity to feel compassion for others or to share their sentiments. In contrast, cognitive empathy is the degree to which one can accurately infer the thoughts and emotions of another person [18].

Empathy is an important attribute of students. According to research by Aye et al, women score better on empathy than men do [19], and they also exhibit more positive attitudes than men do [20]. Evidence suggests that integrating empathy training and education in undergraduate curricula is vital for the students and leads to practical improvement in the students' empathy level [21,22]. Empathy activities that improve student nurses' understanding of persons with impairments favorably affect their attitudes toward impaired people [23].

Action is necessary to improve others' attitudes and empathy towards SWDs [24]. Several strategies could be implemented to enhance students' empathy, such as effective communication skills, practical learning, professional education [25], and friendly infrastructures and support [26]. The academic environment may affect students' formation of personal and professional identities. To enable SWDs to participate fully in the educational process, students need to have a positive attitude and a high degree of empathy for them. To determine the most effective ways to improve the social acceptability of SWDs in educational programs, it is necessary to identify the obstacles that prevent these students from seeking assistance. Experiential learning positively impacts students' attitudes toward youth with disabilities [27]. Academic institutions should be designed to encourage the active involvement of SWDs [28] and reformulate the educational environment to consider SWDs [29].

Evaluating students' attitudes and empathy for SWDs during their university years is crucial in the context of the university experience. Research about university students' empathy and attitudes toward SWDs is lacking in Jordan. There aren't many studies on this subject in higher education because most of the prior studies have focused on how people view school children with disabilities. Thus, the primary objectives of this research were to measure the degree of empathy and attitudes toward students with impairments and the correlations between the two.

METHODS

Study design, setting, and sampling

A descriptive cross-sectional design study was conducted at a public university in Jordan. Students from several faculties were invited through invitation letters and a convenient non-probability method of data collecting. The invitation letter included the study's purposes, significance, eligibility criteria, instructions for data collection, estimated time to fill out the questionnaire, and privacy protection protocol. Data had been collected from the eligible participants during 2021-2023. Three hundred and fifty questionnaires were issued; 303 were returned, yielding an 86.5% response rate.

Study instruments

The eligible students completed two parts of self-reported questionnaires, each containing two data sections. In the first section, the author produced the demographic traits of age, gender, academic level, specialization, and presence of family members with impairments. The second section included the Arabic translations of trustworthy and valid instruments for assessing attitudes and empathy for kids with disabilities.

Empathy among university students was measured using the Basic Empathy Scale (BES), which was developed by Jolliffe and Farrington and consisted of 20 items [30]. Each item has five points of ordinal responses, ranging from 1 (not agree) to 5 (fully agree). The empathy scale included two subscales: cognitive empathy (9 items) and affective empathy (11 items). The total scores of BES were calculated by adding the values of all items, which range from 20 (low empathy) to 100 (high empathy). When used in the literature, the BES has good evidence of construct validity and internal consistency [30,31]. Experts evaluated the instrument before it was used to confirm its cultural and content validity.

The attitude was measured using the standard version of "Attitude towards Disabled Person" (ATDP), which was designed initially by Yurker (1987) to evaluate the perception of attitude toward disabled people who have different (15) types of disabilities [32]. The ATDP included 20 items, each with a 6-point Likert scale ranging from -3 (disagree very much) to +3 (agree very much). The scale's total score ranged from 0 - 120, and the interpretation indicated that the high score reflected a positive attitude towards disability.

Both BES and ATDP were translated into Arabic according to WHO guidelines for translating and adopting a tool using forward-backward translations. Then, a pilot study was conducted to evaluate the items' appropriateness and acceptability. The internal consistency reliability for the translated scales was evaluated. The Cronbach alpha for the BES scale was .78, while for the ATDP was .80

Data analysis

Statistical analysis was performed using SPSS software, Version 25. The data were screened for missing values using frequency and central tendency measures. Descriptive statistics (mean, median, and standard deviation) were used to describe and summarize the main study variables (empathy and attitude toward SWDs). Reliability analytical tests were used to evaluate internal consistency for the study measures. Independent sample t-tests and one-way ANOVA tests were used to assess the differences in the mean empathy scores and attitude toward SWDs about demographic variables. Pearson (r) correlation coefficient tests assessed the relationships between empathy and attitude toward SWDs. Before conducting these tests, Skewness, kurtosis, and p-p plot were used to assess the assumptions, such as normality and linearity.

Ethical aspects

The deanship of academic research and the faculty of education's institutional review board (IRB) granted ethical approval before data collection. Permission to use the study measurement tools was obtained via email from the statement's developers. Eligible students were invited to participate using the invitation letters. All participants were asked to fill out the informed consent form, which included clear information about the study's purposes, voluntary participation, and possible benefits of participation. A subject identification number was used instead of names to protect the participants' confidentiality, and all students' responses were kept in a secure file.

RESULTS

In total, 303 students were involved in the current study as participants. The mean age of participants was 20.8 years (SD±1.56), ranging from 18 to 25 years. More than half of the students (n = 156) were females, and 48.5% (n = 147) were males. Half of the students, 50.5% (n = 153), were enrolled in scientific faculties, while 49.5% were in non-scientific faculties. Only eighteen students (5.9%) were in their first academic year, seventy-four students were in their second academic year (24.4%), eighty students were in their third academic year (26.4%), while 43.2% of the students were in their fourth academic year or higher. Most of the included students, 66.3% (n=201), reported that they have no relatives with any mental or motor disabilities. Participants' demographics are summarized in Table 1.

Table 1. Description of sample characteristics (n = 303).

Variable	N (%)	Mean of ATDP (SD)	Mean of BES (SD)	Mean of Cognitive Subscale (SD)	Mean of Affective Subscale (SD)
Gender					
Males	147 (48.5%)	60.4 (12.5)	59.1 (6.7)	28.5 (3.8)	30.6 (4.5)
Females	156 (51.5%)	65.48 (13.9)	59.3 (6.8)	28.4 (3.5)	31.0 (4.6)
Faculty classification					
Scientific faculties	153 (50.5%)	61.2 (12.6)	59.3 (6.7)	28.5 (3.6)	30.8 (4.4)
Humanistic faculties	150 (49.5%)	64.8 (14.1)	59.1 (6.8)	28.3 (3.6)	30.7 (4.7)
Educational level					
First-year	18 (5.9%)	61.2 (14.0)	59.8 (5.1)	28.8 (3.0)	31.1 (3.6)
Second year	74 (24.4%)	65.4 (11.1)	58.5 (6.6)	27.9 (3.5)	30.6 (4.7)
Third year	80 (26.4%)	62.6 (14.1)	60.2 (6.1)	28.9 (3.4)	31.4 (4.1)
Fourth year or more	131 (43.2%)	62.1 (14.2)	58.9 (7.3)	28.4 (3.6)	30.8 (4.5)
Relatives with disabilities					
Yes	102 (33.7%)	65.0 (13.7)	58.6 (7.3)	28.4 (3.9)	30.2 (4.5)
No	201 (66.3%)	61.9 (13.2)	59.5 (6.4)	28.4 (3.5)	31.1 (4.5)

Empathy levels among university students

The results showed that the mean total score for the basic empathy scale was 59.22 out of 100 (SD =6.7). The mean score for the cognitive subscale of empathy was 28.43 out of 45 (SD = 3.6), while the mean score for the affective subscale was 30.78 out of 55 (SD = 4.5). However, the highest score on the basic empathy scale indicated an elevated level of empathy. The results also showed no significant differences in the mean scores of empathy, cognitive subscale, and affective subscale concerning gender, type of student-faculty, presence of relative with physical or mental disabilities, and educational levels.

The attitude of university students toward students with disabilities

The total scores of ATDP were calculated after reversing the signs of negatively worded items, calculating the summation of all items, and then adding the constant value of 60 to eliminate the negative values [32]. The results showed that the mean total score for ATDP was 62.99 out of 120 (SD

= 13.49); however, the highest scores for ATDP indicated that students perceived disabled people as being quite similar to non-disabled people [32]. The differences in the mean scores of ATDP regarding demographic variables were analyzed. The results showed that female students had higher mean total scores of ATDP (mean = 65.48, SD=13.9) than male students (mean = 60.36, SD = 12.5), t (301) = −3.36, p ≤ .001. Furthermore, students who enrolled in humanistic faculties reported higher mean scores for ATDP (mean=64.8, SD= 14.1) than students who enrolled in scientific faculties (Mean= 61.2, SD=12.6), t (301) = -2.35, p=0.019, The findings also showed that the mean total scores of ATPD did not differ significantly based on the academic year or the presence of relatives with a mental or physical disability.

The correlation between empathy and attitude toward students with disabilities

The Pearson correlation coefficient test showed a negative correlation between the levels of empathy and the total score of ATDP among university students (r = -.197, p≤ .001). However, prominent levels of empathy toward SWDs were associated with high levels of perception of disabled persons as being "different" from non-disabled persons. Specifically, the affective subscale of empathy had a significant negative correlation with ATDP (r= -.277, p≤ .001), while there was no significant correlation between the cognitive subscale of empathy and ATDP. The results of the point correlation showed no significant correlation between the presence of relatives with physical disabilities and ATDP, a total empathy scale, a cognitive subscale of empathy, and an affective subscale of empathy (Table 2).

Table 2. Correlation coefficient values between the presence of relatives with disabilities and ATDP with Total Empathy Scale, Cognitive Subscale of Empathy, and Affective Subscale of Empathy (n = 303).

Variable	ATDP r (P value)	Total Empathy Scale r (p value)	Cognitive Subscale of Empathy r (P value)	Affective Subscale of Empathy r (P value)
ATDP	1	-.197 (.001)	-.082 (.155)	-.277 (.000)
Presence of relatives with disabilities	-.108 (.062)	.069 (.231)	.005(.935)	.099 (.086)

DISCUSSION

Research on attitudes and empathy for students with impairments has proven important. Despite this, this population has not received much attention. This study sheds light on university students' attitudes and levels of empathy for their disabled peers. According to the findings, the basic empathy scale had a mean total score of 59.22 out of 100 (SD = 6.7). This moderate level of empathy agreed with the scientific literature [33]. The current level of empathy among university students toward SWDs may be explained by cultural, traditional, and societal elements that view these students as "special people" who should be allowed to integrate into the community. Furthermore, the preconceived notion that persons with disabilities are weak and burdensome has been altered by the use of social media and connectivity with other communities.

Affective and cognitive empathy are the two categories of empathy that the BES revealed. The affective or emotional empathy reflected the students' feelings about another person with disabilities, while the cognitive subscale of empathy reflected the thoughts or beliefs about a person with disabilities [2]. While the levels of affective or cognitive empathy in the current study reflect students' awareness that people with disabilities can perform the majority of daily tasks independently and that they are normal people like non-disabled people, the presumptive ideas about empathy in Arabic society are the result of stigma and discrimination toward persons with disabilities.

According to the ATDP questionnaire, the attitude level in the current study was 62.9, which was quite similar to other studies [8]. The Arabic and Islamic cultures, which promote interpersonal respect and treating people with disabilities with the utmost dignity, may help to explain these findings. Moreover, the universities' regulations support the admission and integration of students with disability within the university community, which increases the interaction and collaboration with other students, leading to promoting the attitude of university students toward persons with disabilities. Additionally, the integration of a person with a physical or sensory disability into the community after graduation through working in particular jobs reduces the stigmatization perception toward them, which may positively support the attitude toward the person with disabilities [2]. The results of the current study, however, did not significantly differ in the mean scores of empathy or the presence of a relative with a physical disability because it was carried out in Jordan's largest university and involved students from a variety of cultural and geographic backgrounds, increasing their likelihood of meeting and interacting with other SWDs.

The primary goal of this study was to determine whether empathy and attitudes toward SWDs are related. The findings indicated a strong negative correlation between the two; students who felt they had low levels of empathy were interacting and dealing with SWDs in a typical way. The findings are consistent with earlier research, which shows that interaction and coexistence with disabled individuals within the university community led to high levels of empathy toward SWDs [34, 35]. No differences between the genders or specialties in empathy scores [36]. This, in turn, decreased misconceptions about the students and improved self-awareness about their abilities. Furthermore, a significant association was found between the affective subscale of empathy and attitude, related to higher optimism, lower hopelessness, and lower misconceptions toward SWDs [35].

Finally, a strong relationship between empathy and attitudes toward college SWDs contributed significantly to the eradication of disability prejudice as well as to the improvement of coexistence and acceptance within the same community [34]. However, as legitimate individuals with diverse physical or sensory disabilities, students' participation is essential to enhancing their quality of life and independence [37]. This may also help to improve students' social relationships and psychological well-being [38]. In addition, providing students with courses or workshops about disabilities within the academic context may have contributed to the acceptance of those with disabilities in community contexts [39]. It is crucial for future implementation to take steps to get institutions and students ready for academic learning [40].

The study has several practical implications. The results of this study can be utilized to identify the gaps in regulatory implementation in the universities and to guide necessary steps toward raising disability awareness toward SWDs. This study can be applied in academic settings to foster positive

attitudes, increase students' empathy, and sensitize them to the SWD's needs through attitude-empathy interventions [41-55].

Study limitations and strengths

The current study has some limitations. The data were gathered from a single institution using a convenience sample that has the potential to be less representative of the university population. Another limitation was using a cross-sectional design. Using a self-administered questionnaire posed additional limitations, making it impossible to ignore the social desirability bias. Hence, these findings may provide novel knowledge in this field. We believe the study findings are useful and guide knowing the university students' empathy and attitude toward their colleagues with disabilities. This is the first study reporting the university students' attitude and empathy toward SWDs and offering initiatives to accurately focus stakeholders' efforts on improving the target population. The study asserts that the participants were chosen from different specialties, levels, and disabilities, ensuring they are representative of the population.

CONCLUSION

Considering the study's findings, addressing students' attitudes and behaviors is critical to enhancing their empathy and communication skills with disabled students. This will help foster positive study environments and a greater acceptance and tolerance for SWDs. Given the paucity of research on university students' empathy and attitudes toward SWDs, this study would serve as a baseline. The current study suggested teaching students' empathy-related abilities could improve their empathy and attitude scores. The current study addressed the importance of determining the need for SWDs to take concrete steps to meet those needs. Assessing attitudes towards specific disabilities is highly recommended. Therefore, interested scholars could be invited to conduct phenomenological qualitative studies to deeply understand' the lived experience of SWDs during the academic journey.

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