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EMPATHY AND ATTITUDE TOWARD STUDENTS WITH DISABILITIES AMONG UNIVERSITY STUDENTS: CROSS-SECTIONAL STUDY

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ABSTRACT

Research on university students' empathy and attitudes toward peers with disabilities has gained increasing scholarly attention, given the critical role these factors play in promoting inclusive and supportive academic environments. Students with disabilities constitute an essential component of diversity within higher education institutions and frequently encounter physical, social, and psychological barriers that hinder their full participation in academic and social activities. Empathy and positive attitudes among peers are therefore crucial in facilitating their inclusion, psychological well-being, and academic success. This study aimed to assess levels of cognitive and affective empathy, examine attitudes toward students with disabilities, and explore the relationships between these variables among university students in Jordan. A descriptive correlational cross-sectional design was employed. Data were collected from 574 undergraduate students at the University of Jordan using a self-administered questionnaire comprising a sociodemographic form, the Basic Empathy Scale, and the Attitudes Toward Disabled Persons scale. Descriptive and inferential statistical analyses were conducted to evaluate empathy levels, attitudes, and their associations. The results demonstrated moderate levels of both empathy and attitudes toward students with disabilities. A statistically significant positive correlation was found between overall empathy and attitudes ($r = 0.41$, $p < 0.001$), indicating that higher empathy levels were associated with more favorable attitudes. Additionally, significant differences were observed across selected sociodemographic variables. These findings underscore the importance of integrating empathy-based educational strategies, awareness campaigns, and inclusive initiatives within university curricula. Targeted empowerment programs are recommended to enhance social interaction, reduce stigma, and promote the academic and social inclusion of students with disabilities in higher education settings.

KEYWORDS: Affective Empathy, Cognitive Empathy, Attitude, Students, Disabilities.

1. INTRODUCTION

Students with disabilities represent a significant and integral component of society and constitute an essential element of diversity within academic institutions (Moriña, 2019). A student with a disability is defined as a university student who has a chronic or long-term physical, sensory, or intellectual impairment that may result in daily barriers to full participation and contribution in academic and social activities (Sharma et al., 2021). According to the U.S. Department of Education, approximately 20% of higher education students report having a disability, including physical, sensory, or intellectual impairments.

Students with disabilities have the fundamental right to enrol in higher education institutions and to participate as productive members of society and active contributors to community activities (Levett-Jones et al., 2019). However, they frequently encounter various physical, social, and psychological challenges, including difficulties related to inclusion in regular classrooms, limited understanding of their needs, and inadequate academic accommodations provided by faculty members (Moriña, 2019; Thompson-Ebanks, 2014). Consequently, students with disabilities are particularly vulnerable to experiencing empathic or non-empathic emotional responses from their peers, shaped by prior personal experiences, social interactions, and prevailing cultural perceptions of disability (Wlodarski, 2015).

Empathy is defined as a cognitive and emotional capacity that enables individuals to understand others' feelings by placing themselves in another's situation, accompanied by the intention and willingness to provide support (Hojat et al., 2020). Empathy consists of two primary dimensions: affective empathy, which refers to emotional responsiveness and compassion toward others, and cognitive empathy, which involves the ability to accurately understand and interpret others' thoughts and emotional states (Cabedo-Peris et al., 2021).

Previous evidence suggests that integrating empathy training into undergraduate education programs is an effective strategy for enhancing students' empathic abilities, leading to meaningful improvements in interpersonal understanding and professional competence (Levett-Jones et al., 2019; Pagano et al., 2018).

Attitude is conceptualized as a multidimensional construct comprising affective, behavioural, and cognitive components and is considered susceptible to change over time (De Laat et al., 2013; Kowalska & Winnicka, 2013). University students' attitudes toward individuals with disabilities represent a

critical factor influencing their psychological well-being, self-esteem, motivation, and level of social engagement. Negative attitudes may hinder social integration, reduce academic aspirations, and limit participation in university life (Main et al., 2016). Furthermore, unfavourable attitudes have been associated with increased exposure to social exclusion, psychological distress, and reduced perceptions of safety among students with disabilities (Uysal et al., 2014).

A growing body of literature indicates that several sociodemographic variables may influence attitudes toward individuals with disabilities, including age, gender, culture, religion, academic achievement, self-esteem, and personal familiarity with individuals with disabilities. Nonetheless, negative attitudes often stem from insufficient training, limited awareness, and inadequate exposure to disability-related education among university students (Sze, 2009). Despite increasing scholarly interest, empirical evidence examining empathy and attitudes toward students with disabilities remains limited, particularly within the Middle Eastern and Jordanian contexts.

Therefore, the present study aimed to evaluate the levels of cognitive and affective empathy and to examine the strength and direction of the relationship between empathy and attitudes toward students with disabilities among university students in Jordan, the research questions were:

- a. What are the levels of cognitive and affective empathy toward students with disabilities among university students in Jordan?
- b. What are the levels of attitudes toward students with disabilities among university students?
- c. Is there a significant correlation between empathy and attitudes toward students with disabilities?
- d. Are there significant differences in empathy scores according to sociodemographic variables (age, gender, academic specialty, GPA, year of study, and having relatives with disabilities)?
- e. Are there significant differences in attitude scores according to sociodemographic variables (age, gender, academic specialty, GPA, year of study, and having relatives with disabilities)?

2. METHODOLOGY

2.1. Design

A descriptive correlational cross-sectional design was employed.

2.2. Setting, Sample, And Sample Size

The study was conducted at the University of Jordan, the largest public university in the country, located in the capital city, Amman. The required sample size was calculated using G*Power software. The minimum estimated sample size was 500 participants. To enhance statistical power and ensure the rigor of the findings, an additional 15% was added to account for potential non-response or incomplete questionnaires. Eligible participants who met the inclusion criteria were invited to participate using a structured invitation cover letter that explained the study aims, estimated time required to complete the questionnaire, data collection procedures, and the researcher's contact information. Students who agreed to participate received the questionnaire along with detailed instructions regarding its completion and return.

2.3. Measures

Data were collected using a self-administered questionnaire comprising three sections: (1) sociodemographic characteristics (age, gender, academic specialty, academic level, and presence of family members with disabilities), (2) the Arabic version of the Basic Empathy Scale (BES), and (3) the Arabic version of the Attitudes Toward Disabled Persons (ATDP) scale.

The BES, developed by Jolliffe and Farrington (2006), consists of 20 items rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The scale includes two subscales: cognitive empathy (9 items) and affective empathy (11 items) (Cabedo-Peris et al., 2021; Jolliffe & Farrington, 2006).

The ATDP scale, developed by (Yuker & Hurley, 1987), is designed to assess attitudes toward individuals with disabilities. It comprises 20 items rated on a six-point Likert scale ranging from -3 (strongly disagree) to +3 (strongly agree), with higher scores indicating more positive attitudes.

Both instruments were translated into Arabic following the World Health Organization (WHO) guidelines for the translation and cultural adaptation

of research instruments, using forward-backward translation procedures. A pilot study was conducted to assess the clarity, cultural appropriateness, and acceptability of the translated items. Internal consistency reliability was evaluated, yielding Cronbach's alpha coefficients of 0.87 for the BES and 0.85 for the ATDP, indicating good reliability.

2.4. Ethical Considerations

Ethical approval was obtained from the Institutional Review Board (IRB) of the Faculty of Education at the University of Jordan. All participants were informed that their participation was voluntary and that they had the right to withdraw from the study at any time without penalty. Confidentiality and anonymity were strictly maintained throughout the study.

3. RESULTS

The mean age of the participants was 21.07 years (SD = 2.6), ranging from 18 to 40 years. A total of 355 students (61.8%) were female, and 219 (38.2%) were male. Regarding academic disciplines, 214 students (37.3%) were enrolled in scientific faculties, 246 (42.9%) in humanities faculties, and 114 (19.9%) in health-related faculties.

In terms of academic performance, 244 students (42.5%) reported a very good grade point average (GPA), 179 (31.2%) had a good GPA, 95 (16.6%) had an excellent GPA, and 56 (9.8%) reported an acceptable GPA. Concerning academic year, 50 students (8.7%) were in their first year, 149 (26.0%) in their second year, 160 (27.9%) in their third year, 188 (32.8%) in their fourth year, and 27 (4.7%) in their fifth year. Furthermore, 173 students (30.1%) reported having relatives with disabilities, whereas 401 (69.9%) did not.

The first and second research questions were addressed using descriptive statistics. The majority of participants demonstrated moderate levels of affective empathy (90.4%) and moderate levels of cognitive empathy (80.3%). Descriptive statistics for empathy levels are presented in Table 1.

Table 1: Frequency And Percentages for Empathy Levels.

Level	Affective Empathy		Cognitive Empathy		Total Empathy	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Low	46	8.0	9	1.6	9	1.6
Moderate	519	90.4	461	80.3	554	96.5
High	9	1.6	104	18.1	11	1.9
Total	574	100.0	574	100.0	574	100.0

Additionally, 495 students (86.2%) exhibited a moderate level of attitude toward students with

disabilities, while 41 students (7.1%) reported low levels, and 38 students (6.6%) demonstrated high

levels of positive attitudes. Descriptive statistics for attitudes are presented in Table 2.

Table 2: Frequency And Percentages for the Levels of Attitude.

Level	Frequency	Percent
Low	41	7.1
Moderate	495	86.2
High	38	6.6
Total	574	100.0

The third research question was examined using Pearson's correlation coefficient to determine the strength and direction of the relationship between empathy and attitudes. The results revealed a significant positive correlation between overall

empathy (cognitive and affective) and attitudes toward students with disabilities ($r = 0.41$, $p < 0.001$), indicating that higher levels of empathy were associated with more positive attitudes. The correlation results are presented in Table 3.

Table 3: Correlation And Significant Values Between Empathy and Attitude.

	Pearson Correlation	Sig. (2-tailed)	N
Affective empathy	0.32**	0.000	574
Cognitive empathy	0.33**	0.000	574
Total Empathy	0.41**	0.000	574

The fourth and fifth research questions explored differences in mean scores of empathies and attitudes across sociodemographic variables. The findings indicated no statistically significant differences in

empathy or attitude scores based on age, gender, faculty, academic year, GPA, or having relatives with disabilities. These results are summarized in Tables 4.

Table 4: Mean Differences in the Empathy Levels in Relation to Socio Demographic Variables.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Faculty	0.002	2	0.001	0.01	0.988
age	0.023	1	0.023	0.26	0.611
Academic Year	0.373	4	0.093	1.07	0.370
Academic average	0.193	3	0.064	0.74	0.530
gender	0.085	1	0.085	0.98	0.323
Relative with disabilities	0.075	1	0.075	0.85	0.356
Error	48.946	561	0.087		
Corrected Total	49.886	573			

4. DISCUSSION

This study aimed to assess levels of empathy and attitudes toward students with disabilities among university students in Jordan. The findings demonstrated moderate levels of empathy, which are consistent with previous research (Triffaux et al., 2019). These results may reflect cultural and societal norms within Jordanian society, which emphasize compassion, support, and social responsibility. Additionally, students may perceive peers with disabilities as individuals requiring special care and consideration, thereby influencing their empathic responses and interpersonal behaviors.

Both dimensions of empathy— affective and cognitive—were examined separately, and the results showed no substantial differences between them. Cognitive empathy reflects individuals' understanding and interpretation of others' emotional states, whereas affective empathy

represents emotional responsiveness. The moderate levels observed across both domains may be influenced by pre-existing beliefs, social narratives, and prior exposure to individuals with disabilities. Cultural beliefs and media portrayals may contribute to perceptions that individuals with disabilities are dependent, vulnerable, or in constant need of support, which may shape students' empathic attitudes (Sharma et al., 2021). The findings also revealed moderate levels of positive attitudes toward students with disabilities, which align with previous studies (Girli et al., 2016). These outcomes may be explained by Islamic and Arab cultural values that promote kindness, respect, social justice, and care for vulnerable populations. Moreover, the inclusive environment fostered by university policies that support equal access and integration of students with disabilities may further contribute to reducing stigma and encouraging positive social engagement. A central objective of this study was to examine the

association between empathy and attitudes toward students with disabilities. The findings revealed a significant positive correlation, suggesting that higher levels of empathy are associated with more favorable attitudes. This result is consistent with prior research indicating that meaningful interactions and direct contact with individuals with disabilities enhance empathic understanding and promote positive attitudes (Barr, 2013; Geçkil et al., 2017). Furthermore, exposure to academic courses, workshops, or awareness campaigns addressing disability-related topics may contribute to shaping students' empathy and attitudes within academic settings.

Several limitations should be acknowledged. First, the study was conducted at a single university using a convenience sampling method, which may limit the generalizability of the findings. Second, the reliance on self-administered questionnaires may

have introduced social desirability bias, potentially influencing participants' responses. Despite these limitations, the study provides valuable insights into university students' empathy and attitudes toward peers with disabilities and contributes novel evidence within the Jordanian and regional context.

Given the limited research addressing empathy and attitudes toward students with disabilities in university settings, this study provides a foundational basis for future investigations. It is recommended that universities integrate structured empathy training programs, awareness campaigns, and inclusive educational strategies to enhance students' understanding and positive engagement with peers with disabilities. Future research should employ multi-center designs, longitudinal approaches, and qualitative methodologies to gain deeper insights into students' perceptions and experiences.

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