

# An Examination of Nursing Students & Empathy Levels: A Cross-Sectional Study

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**Abstract** - Nursing is an honorable profession that calls for a rare blend of scientific knowledge and humane concern. Empathy is crucial to nursing because it helps nurses to form meaningful relationships with their patients and provide them all-encompassing care when they are at their most vulnerable and distressed. In order to determine whether or not a nursing student is qualified to provide patient-centered care and promote good healthcare experiences, it is important to understand and measure their levels of empathy. In the field of nursing, empathy is the capacity to identify with and care about the experiences and circumstances of one's patients, their loved ones, and one's peers. It entails putting oneself in the patient's shoes in order to better understand their worries and concerns and actively listening to them without passing judgment. Increased patient satisfaction and better health outcomes may be achieved via the efforts of highly empathic nurses who establish rapport, calm fears, and promote open lines of communication. The purpose of this study was to analyze the interns' perceptions of their own degree of empathy. Descriptive and cross-sectional in approach, this research. The mean empathy score of the nursing interns in this research was 67.46 (SD = 18.86). This finding suggested that the nursing interns' empathy was around average.

**Keywords** - Nursing, patient, students, healthcare, empathy

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## 1. INTRODUCTION

As the cornerstone of patient-centered care, empathy is a fundamental principle in the nursing profession. As future nurses begin their training, learning to empathize with others is more important. Nurses who possess the trait of empathy are better able to connect with their patients on an emotional level, enabling them to tailor their treatment to each person's unique needs. The importance of empathy in nursing cannot be emphasized since it has such a direct impact on patient outcomes, contentment, and overall experiences.[1]

Recent years have seen a rise in the amount of attention paid to the correlation between empathy and nursing students. To better equip future nurses with the emotional intelligence and communication skills they'll need to care for patients of all backgrounds, it's important to examine how empathy develops in the classroom. The purpose of this introductory piece is to investigate the complex nature of empathy in nursing students, the elements that contribute to its growth, and the repercussions this quality has for the nursing profession and the healthcare system as a whole. A common misunderstanding is that empathy is the same thing

as compassion or pitying someone. The nursing profession expands well beyond that. To have empathy, one must be able to listen attentively, recognize feelings, and put themselves in the patient's shoes. Learning to empathize with others helps nursing students better understand their patients' perspectives and feelings. This, in turn, fosters a more nurturing and trusting atmosphere for their patients.[2]

Modern healthcare is based on the notion of patient-centered care, which recognizes the centrality of each individual patient. The nurses' ability to empathize with their patients has a significant impact on the care they get. Better treatment adherence and general health are the results of the positive effects that empathy from nurses has on patients. Patient satisfaction and provider loyalty are both boosted by the strong connections that are fostered via empathic treatment.[3]

Evaluating nursing students' empathic abilities is difficult since it requires testing both their reasoning and their emotions. There are a number of scales and instruments available for gauging empathy, including the Jefferson Scale of Empathy (JSE) and the Interpersonal Reactivity Index (IRI). These tools

let instructors better understand nursing students' levels of empathy and utilize that information to tailor training and interventions to students' specific needs.[4]

Numerous personal, pedagogical, and contextual variables impact nursing students' capacity for empathy. Students' capacity for empathy may be influenced by a variety of factors, including their individual personalities, backgrounds, upbringings, and previous experiences in healthcare settings. Furthermore, the learning setting, instructional strategies, and contacts with clinical instructors all play significant roles in either encouraging or discouraging the development of empathy in nursing students.[5]

Opportunities and threats to nurses' capacity for empathy are created by the ever-changing nature of healthcare technology. While technological advancements have greatly benefited patient care and results, they also pose a risk of isolating doctors and nurses from their patients. Students of nursing must learn to strike a balance between using technology to improve efficiency and retaining personal connections and empathy with patients.[6]

While developing empathy for patients allows future nurses to better understand their needs, it also makes them vulnerable to the stresses their patients are experiencing. Compassion fatigue, burnout, and emotional depletion may result from empathically engaging with patients' suffering. If we want nurses who will stay in the field and care about their patients over the long haul, we need to know how empathy affects nursing students' mental health and take steps to improve it. Nursing education must actively include empathy-focused training and experiences into the curriculum to equip students with the empathy essential for future employment in nursing. Nursing students may be better prepared to handle the emotional intricacies of healthcare encounters via the use of simulation exercises, reflective practices, and communication seminars.[7]

A nurse's ability to empathize with their patients is crucial to delivering high-quality, person-centered care. Knowing how empathy develops is crucial for nursing students on their way to become skilled and compassionate practitioners. In this introductory article, we looked at what empathy is, why it's important in the nursing profession, how to measure empathy, and what influences it in students. It has also brought to light the significance of technological factors, cultural awareness, and moral issues in the process of nurturing empathy. The goal of nursing education is to enhance healthcare outcomes and patient experiences by preparing nurses with the knowledge and skills necessary to provide compassionate care to their patients.[8]

## 2. METHODS

A descriptive, cross-sectional approach was used to achieve the study's goal. King Saud University's College of Nursing in Saudi Arabia hosted the research, which took place between January and March of 2023. Four years of classroom study plus a year of clinical experience make up the Bachelor of Basic Science in Nursing curriculum. Students who have completed four years of an undergraduate nursing school are required to complete a 52-week hospital-based internship at institutions that have been verified as meeting the standards necessary to fulfill the internship program's goals.

Participants were intern nurses who had graduated from a four-year nursing program and were in the midst of a 52-week clinical rotation. The nursing interns were selected by a non-probabilistic convenience sampling process. The individuals for a convenience sample are approached until the desired number of responses are attained.

### Inclusion and exclusion criteria

Selected and included nursing interns had to meet the following criteria: (a) they had to be open to participating in the study; (b) they had to have graduated from the Bachelor of Science in Nursing program at King Saud University; and (c) they had to have finished the 2-month orientation program and be working in a clinical setting. Interns at KSU's college of nursing who were still in the orientation program did not participate.

### Sample size

Prior to data collection, the sample size was determined with the use of G power, version 3.1. The researcher has estimated the sample size using the parameters of power = 0.80, alpha = 0.05, and effect size = 0.50. The study's conclusions are bolstered by the inclusion of 128 total individuals in the sample. However, the point of oversampling is to learn more about the phenomenon. The total number of nursing students used in this research was 130.

### Study instruments

- **Interpersonal reactivity index**

The IRI (Davis) is a 28-item scale broken down into four, 7-item subscales measuring fantasy, perspective taking, empathy, and suffering. EC refers to a person's empathy and care for others around them. The Perspective Taking Scale (PT) measures spontaneous efforts to understand things from another person's point of view. The likelihood that a person will relate to a made-up persona is measured on the Fantasy Scale (FS). A person's PD reflects how nervous or disturbed they are when exposed to the terrible experiences of others. On a 5-point scale similar to the popular "Likert" scale,

responses range from "0" for "very poorly describes me" to "4" for "very well describes me." There is a wide range of potential total scores, from 0 (extremely little empathy) to 112 (very strong empathy), with 56 being the norm. Higher mean scores indicate that, on average, these nursing interns are more empathic than their peers. By averaging the replies to each subscale's seven items, aggregate scores may be determined for each dimension.

Davis's initial study found considerable internal consistency for the ISI, with values ranging from .70 to .78. The subscales' internal consistency was moderate (0.78 for FS, 0.75 for PT, 0.71 for EC, and 0.78 for PD). Other research has shown that the IRI's subscales have Cronbach's alpha values between 0.70 and 0.83, with correlation coefficients across subscales ranging from 0.01-0.37. Twenty nursing interns who were selected at random and thought to be representative of the research population participated in a pilot study to assess the instruments' readability and clarity. The equipment and instructions were all deemed understandable by the participants. This research found that IRI has excellent internal consistency, as measured by a Cronbach's alpha of 0.89.

#### • Survey of Socio-Demographic and Academic Background

In order to gather information on the sample's demographics and background, the researchers developed a questionnaire. Gender, marital status, or age were all included as socio-demographic factors. Nursing interns were characterized by their academic preferences, clinical training concentrations, and grade point averages (GPAs). The questions were based on those used in comparable research that had already been examined.

#### Analyzing the Data

SPSS®-PC Version 28 (Statistical Package for the Social Sciences) The information was analyzed using for Windows. The 0.05 threshold was used for all statistical tests. Demographic and methodological characteristics of the sample and the IRI tool were described using descriptive statistics. Different levels of empathy were analyzed in connection to respondents' gender, marital status, and choice of nursing profession using an independent -sample t-test. ANOVA was also performed to examine variations in empathy according to age, grade point average, and field of clinical study.

### 3. RESULTS

#### Participants' Socio-Demographics and Other Personal Information

The response rate for this research among 130 nursing interns was 100%. The majority of the study's participants were women (65.3%), the vast majority

were single (74.8%), and their mean (SD) age was 23.10 (1.05). The majority of those surveyed are enthusiastic about nursing as a career option (86.7%). 55.6 percent of pre-licensure nurses in training.

**Table 1: Intern Nurses' Socio-Demographic Traits.**

VARIABLE	MEAN	SD	NO (%)
AGE	23.10	1.05	
GPA	4.06	0.51	
Age group			
< 23			90(69.3)
>24			40(30.7)
GPA			
<3			9(6.7)
3.1-4			51(37.8)
>4.1			51(37.8)
Gender			
Female			85(65.3)
Male			45(34.6)
Marital Status			
Unmarried			101(74.8)
Married			29(22.3)
Preferred nursing as a profession			
Yes			117(86.7)
No			13(10)

Training Area			
Emergency Department			20 (15.3)
Catheterization Lab.			8 (6.1)
Surgical Ward			14 (10.4)
Medical Ward			21(15.6)
Operative Room			11 (8.1)
ICU			13 (9.6)

CCU			9 (6.7)
Gynecology Ward			5 (3.7)
Hemodialysis			10 (7.4)
OPD			10 (7.4)
Pediatric Ward			6 (4.4)
Orthopedic Ward			1 (0.7)
Endoscopy Ward			2 (1.5)

Earned a grade point average (GPA) of 4.10 (0.51), higher than 4.1. At the time this data was collected, there were a number of settings where nursing trainees may get their feet wet. However, the emergency room was far and away the most popular.

#### The findings from a survey of nursing interns' perceived empathy

Nursing students reported an average overall empathy level of 67.46 (SD=18.86) on the IRI. Overall, the nursing interns in this research may show moderate levels of empathy, since their mean score was just over the IRI's midpoint of 56. Table shows that among nursing interns, the mean score on the Perspective-taking subscale of the Interpersonal Relating Inventory (IRI) is 17.7 (SD=5.34). Therefore, the nursing interns in this research had the ability to shift their point of view and see things from another's point of view or get a deeper understanding of a topic.

**Table 2: Interpersonal reactivity central tendency and subscale measurements. A standard deviation is defined as:**

Variables	IRI	Fantasy scale	Perspective-taking scale	Empathic concern scale	Personal distress scale
Minimum	23	3	4	4	1
Maximum	107	28	28	28	28
Mean	67.46	16.6	17.7	16.7	16.3
SD	18.86	6.15	5.34	4.73	5.65

Findings from a correlation analysis between nursing students' stated levels of empathy and other socioeconomic variables

**Gender** To analyze gender differences in overall empathy and its component scores, a t-test was conducted on a random sample of participants. Mean scores on the perspective-taking subscale were higher among men than among female as shown in Table 3. In addition, the mean scores on the empathic concern subscale are different for men and women as shown in Table . This suggests that, in contrast to their female counterparts, men nursing interns have a greater capacity for empathy and understanding of situations from the viewpoint of others. More so than their female counterparts, men nursing interns reported higher levels of empathy and compassion. On the other hand, there was no p0.05 gender difference in either overall empathy or the fantasy or personal distress subscales. These findings indicate that both male and female nursing interns had similar levels of empathy overall, as well as on the fantasy and personal distress subscales.

**Table 3: Disparity by Gender and IRI Severity Scales,**

Variable	IRI		Fantasy		Perspective-taking		Empathic concern		Personal distress	
Gender	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Mean	70.27	60.91	17.02	14.37	19.21	15.95	18.04	15.07	16	15.52
SD	20.24	15.99	6.3	5.09	5.31	4.21	5.04	5.43	6.71	5
t-Value	1.28		0.58		2.38		2.35		0.50	
df	130		130		130		130		130	
P-value	0.2		0.557		0.018*		0.020*		0.612	

**Table 4: Age and IRI Subscale Correlations,**

variable	Interpersonal Reactivity Index	Fantasy	Perspective-taking	Empathic concern	Personal distress
Age r	- 0.030	0.008	- 0.195*	- 0.060	0.127
p-value	0.734	0.924	0.023	0.492	0.142

**The Pearson product of age** -Table displays the results of an age-related correlation analysis using



the moment correlation coefficient for a two-tailed test of significance. A statistically significant inverse connection was found between the age in years and the degree of perspective-taking subscale. This indicates that the level of the perspective-taking subscale declines with increasing nursing intern age.

**An unaffiliated** - Total empathy and its component subscales were tested across age groups using a sample t-test. Nursing interns younger than 23 years old had a significantly higher mean score on the perspective-taking subscale than their older counterparts. According to the findings, nursing interns under the age of 23 fared better than their older counterparts on the perspective-taking component. This suggests that in comparison to their more experienced counterparts, the nursing interns in this study's younger cohort had a greater capacity for perspective taking and empathy.

**Table 5: Subscale Differences in the IRI by Age Group**

Variable	Interpersonal Reactivity Index		Fantasy		Perspective-taking		Empathic concern		Personal distress	
	≤ 23	> 24	≤ 23	> 24	≤ 23	> 24	≤ 23	> 24	≤ 23	> 24
Mean	69.3	61.38	17.11	15.48	18.61	15.86	17.24	15.74	16.34	14.31
SD	17.9	19.47	5.96	6.49	4.87	5.87	4.72	4.66	5.59	4.83
t-Value	1.7		1.43		2.84		1.71		0.03	
df	130		130		130		130		130	
P-value	0.092		0.155		0.005*		0.089		0.974	

Status in Marriage Differences in overall empathy and its subscales by marital status were investigated using an independent -sample t-test. Table shows that there is a significant difference between the means of the empathic concern subscale scores of the single and married groups. According to the findings, nursing interns who are married are more likely to show empathy for their patients than their single counterparts. This means that married nursing interns cared more about others than their single counterparts.

**Table 6: Distinction between Single and Married People on the IRI and Its Subscales**

Variable	Marital status	Mean	SD	t-Value	df	P-value
Interpersonal Reactivity Index (IRI)	Unmarried	66.33	20.09	-1.20	130	0.231
	Married	64.82	12.38			
Fantasy	Unmarried	16.39	6.45	-0.69	130	0.489
	Married	17.24	5.21			
Perspective-taking	Unmarried	17.51	5.62	-0.90	130	0.369
	Married	18.47	4.39			
Empathic concern	Unmarried	16.34	4.91	-1.84	130	0.044*
	Married	15.06	3.97			
Personal distress	Unmarried	16.09	6.05	-0.86	130	0.389
	Married	13.06	2.20			

GPA In this research, students' GPAs were used to separate them into three groups. The correlation between GPA and differences in empathy and its subscales was analyzed using a one-way ANOVA. The research found no significant correlation between grades and either the overall level or any of the subscales of empathy at the p 0.05 level.

**Surgical simulation lab** The participants in this research were split up into 13 different groups based on what kind of education or experience they had. Empathy and its subscales were tested for differences among training contexts using one-way ANOVA. At the p 0.05 level of statistical significance, the research found no difference between the types of empathy training and the subscales of fantasizing, perspective-taking, empathic concern, and personal suffering.

Advocated for Nursing as a Career Differences in overall empathy and its component scores were analyzed in relation to a preference for nursing using an independent - sample t-test. Table 7 displays the results of the study, which found that the mean level of scores on the empathic concern subscale differed significantly between those who preferred nursing as a profession and those who did not. Empathic concern was shown to be much greater among intern nurses who considered nursing as a career, as shown by this study's findings.

**Table 7: When comparing Preferred Nursing as a Profession with the IRI with Subscales, there is a Difference.**

Variable	IRI		Fantasy		Perspective-taking		Empathic concern		Personal distress	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Mean	60.11	68.59	14.28	16.96	15.78	18.06	14.72	17.09	15.33	16.49
SD	22.44	18.1	7.05	5.96	7.03	5	5.45	4.56	5.07	5.73
t-Value	-1.78		-1.73		-1.69		-1.99		-0.80	
df	130		130		130		130		130	
P-value	0.076		0.086		0.092		0.049*		0.422	

## 4. DISCUSSION

The goal of this research was to have a look at how empathic nursing interns really are. The mean empathy score of the nursing interns in this research was 67.46 (SD = 18.86). This shows that nursing interns in this study had average empathy. This implies similar empathy to a previous Indian nursing intern study. The study found that nursing interns had a considerably higher mean empathy score than other students. Among nurses, Giovanna, Chi- ara states that it is important to have certain abilities, such as the ability to communicate effectively, the ability to use tactics for facilitating communication, the ability to actively listen to patients, and the ability

to handle the stresses of a demanding relationship. By empathizing with their patients and engaging in self-reflection, nurses are more equipped to create individualized adaption strategies. Therefore, nursing care programs should teach nursing interns how to empathize with their patients and collaborate effectively with other professionals.

The results of this research showed that the mean degree of empathy among nursing interns did not vary significantly between GPA categories. This finding agrees with those of previous research. The study's claim that students with higher GPAs are more empathic than those with lower GPAs is contradicted by other research. This discrepancy between studies may be explained by the fact that nurses who have finished their formal education do not factor in their grade point average during their internship.

In this study, socio-demographic characteristics varied with empathy. Male interns had more empathy & perspective-taking than female interns, statistically significant differences. Despite most study showing that women have greater empathy than males, this result contradicts. The findings may be due to empathy's cognitive component, which requires more complicated brain processes.[9]

Some socio-demographic factors were discovered in this research that vary with empathy degree. Statistically significant differences were found between the sexes in terms of empathy and perspective-taking, with male students expressing greater levels of empathy and perspective-taking than female interns. This finding runs counter to the majority of research, which have shown that women had more empathy than men. Empathy, which is defined from a cognitive component and hence necessitates more complex mental processes, may provide an explanation for the discrepancy in results. The capacity to understand and empathize with the experiences of another person (perspective taking) is closely linked to theory of mind [10]. The notion that men are less emotionally sensitive and more rational than women may explain how the sexes impact perspective taking. In contrast, [11] argued that perspective-taking and self-affirmation fostered empathy for feminists. Most notably, males who had previously had negative attitudes about women reported increased levels of empathy after experiencing this phenomenon. So, maybe the male nursing interns might lessen their bias towards feminists by developing more empathy. Because our findings go counter to those of the vast majority of prior research, we further recommend that phenomenological research methods be used in future studies on empathy and gender.[12]

This research indicated that the mean of the perspective-taking dimension was significantly higher among nursing interns younger than 23 years old

compared to nursing interns older than this age group. Studies demonstrate that elder nursing students are more empathetic than younger ones. This matches Berduzco-Torres, Medina's findings [13]. The loss in perspective taking shown with advancing age provides support for the study's conclusions. This justification was made because of the cognitive requirements of doing so. Overall, the findings corroborate this rationale, showing a correlation between younger age and enhanced perspective taking. The capacity to correctly interpret the feelings of others has been shown to deteriorate with age [14].

This study found that married nursing interns had a considerably greater mean empathetic concern component than single interns. This coincides with who found that married nurses had greater empathy concern ratings, and contradicts with who discovered that single nursing students were more empathetic. Researchers in Turkey found no correlation between nurses' marital status and their level of empathy for their patients with cancer[15]. The author speculates that the low number of married students in this research (25.2%), which has resulted in skewed results, is to blame for the discrepancies in the findings.

## 5. CONCLUSION

Researchers in Saudi Arabia surveyed nursing interns on their feelings of empathy. Younger male nursing interns showed greater increases in perspective taking, indicative of more cognitive flexibility. Additionally, married nursing interns who like nursing showed a greater degree of empathetic care. The findings of the study were dissected, and suggestions were made on how to raise nursing students' empathy. To better prepare nurses for real-world situations, simulation exercises using mannequins may be used to educate and practice communication, reflection, meditation, and cultural aptitudes.

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