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# Exploring empathy among undergraduate nursing students at universities in India and South Africa

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## Abstract:

**BACKGROUND:** Empathetic involvement is an essential ingredient in forming a therapeutic nurse–patient relationship, which would lead to more optimal patient care. It is one of the essential professional values possessed by nurses. This study aimed to assess empathy among nursing students at two universities on different continents.

**MATERIALS AND METHODS:** This was a cross-sectional online questionnaire-based study conducted among the Bachelor of Science (BSc) nursing students at Yenepoya Deemed to be University (YU), India, and the University of the Western Cape (UWC), South Africa. A total of 377 students from India and 245 students from South Africa voluntarily took part in the study. The study participants were selected based on convenience sampling techniques. A sociodemographic proforma and the Jefferson Scale of Empathy were used to collect the data. An analysis of variance (ANOVA)/t-test was computed to compare the empathy between students at two universities. The level of significance was fixed at a probability of <0.05.

**RESULTS:** On the statistical analysis, it was shown that respondents from both settings showed a higher level of empathy. Overall, students at UWC showed higher empathy scores than those at YU ( $P < 0.05$ ). Empathy scores of students from UWC did not differ significantly based on their age, year of study, and ethnicity, whereas empathy scores showed significant differences for students from YU in terms of gender, year of study, and religion ( $P < 0.05$ ).

**CONCLUSION:** In this study, the majority of respondents from both settings showed a higher level of empathy. Though students demonstrated high level of empathy, nurse educators need to pay more attention to value training, during undergraduate education for preparing the nurses to work in today's complex healthcare context.

## Keywords:

Empathy, nursing, students, university

## Introduction

Empathy is the ability to understand and share the feelings of another. It is the action of understanding, being aware of, being sensitive to, and vicariously experiencing the feelings, thoughts, and experiences of another.<sup>[1]</sup> It is often described as the feeling that a person imagines himself or herself in another's situation, or "putting himself or herself in the other's shoes." It represents the skill of understanding other

people's feelings and then communicating these feelings to others.<sup>[2]</sup> Empathy has been considered an important component of professionalism in health care, especially for those in direct contact with patients, such as doctors and nurses. Empathizing with their patients is a desirable quality for nurses. Empathetic and emotionally competent nurses provide better outcomes in patient care. Moreover, the literature shows that empathy enables nurses to handle difficulties better.<sup>[3,4]</sup>

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Empathy can be considered universal in that it is recognized through basic emotional expressions that transcend language and culture.<sup>[5]</sup> Healthcare professionals across the globe follow the same scientific and ethical principles of patient care; thus, an empathetic approach to patient care also becomes an integral part of patient care globally.<sup>[6]</sup> Research supports a strong correlation between empathy and healthcare outcomes.<sup>[7]</sup> Empathetic nursing care benefits the patients by reducing their psychological stress, improving their self-concept, reducing anxiety and depression, and lowering complication rates.<sup>[8,9]</sup> In addition, compassion and empathy play an important role in providing quality care.<sup>[10]</sup>

Empathy is a central aspect of the nurse–patient relationship. It strengthens the relationship between them, making the treatment work more efficiently. It makes patients more relaxed, motivated, and willing to cooperate.<sup>[11-13]</sup> In recent years, scientific knowledge and technological advances have influenced the growth of the nursing profession but the essence of the profession continues to be a helping relationship with the person receiving care.<sup>[14]</sup> An empathic approach is fundamental to the development of the therapeutic relationship between nurse and patient,<sup>[15,16]</sup> and of all of the attitudes that are most desirable in a nurse, empathy is the most important. The objective of the nurse–patient relationship is to ensure that the patient’s needs are identified and that the necessary therapies and care are provided. To identify these needs, nurses should be capable of fully understanding their patients’ feelings, opinions, and conditions. All of these things require a high capacity for empathy.<sup>[17,18]</sup> Nursing students are the future professional nurses, and it is essential to develop professional values among them.<sup>[19]</sup>

It is seen that gender, age, job training, and experience influence the ability to empathize.<sup>[20]</sup> The environment also plays an important role in the development of empathy. People with greater prosocial indicators, such as higher well-being and higher volunteering rates, have shown higher empathy, whereas those who were living in communities where violence and crime rates were higher had low empathy.<sup>[21]</sup> The literature has shown that women demonstrate greater empathy than men.<sup>[22-24]</sup> In a study among nursing students on empathetic attitudes, female students reported statistically significant higher ( $P < 0.05$ ) mean scores compared to male students.<sup>[25]</sup> A systematic review and meta-analysis to evaluate the empathy ability of nursing students with 19 cross-sectional studies and 5407 nursing students showed that females have a higher empathy ability than males, and the empathy ability of rural students is higher than that of provincial students.<sup>[26]</sup>

It was found that students in their sixth semester in an undergraduate nursing program expressed more empathy than did students in their second-semester and master’s nursing students. Among the five master’s programs, public health nursing students expressed the most empathy and intensive care nursing students the least.<sup>[27]</sup> Nurse educators can conduct training programs that could enhance the empathy of students. It was shown that a specific training course enhanced empathic skills in student nurses during a 3-year degree course.<sup>[28]</sup> A study found that empathy is influenced by gender, grade, satisfaction with nursing as a major, and clinical practice experience. Empathy was correlated with self-awareness and interpersonal relationship stress.<sup>[29]</sup> Yet, another study showed that nursing students demonstrate acceptable empathy levels.<sup>[30]</sup> It is also understood that among medical students, personality, personal motivation for studying medicine, and career interest have also been described as other influencing factors in the development of empathy.<sup>[31,32]</sup> The competency-based educational approach would help medical students transform and reconsider their own values and beliefs by relating to the behaviors that are expected by the profession, colleagues, and patients when they graduate as medical doctors.<sup>[33]</sup>

Cross-cultural studies performed with healthcare professionals,<sup>[34]</sup> especially medical and nursing students,<sup>[35,36]</sup> indicate that culture plays a role in the empathic response to patients.<sup>[37]</sup> Studies conducted in different countries<sup>[38,39]</sup> showed that parents and family environments play a role in the development of empathy in medical students. Empathy among healthcare professionals is the key to their successful professional lives. Students of healthcare professionals should develop empathy during their study period itself. If the nursing students have good empathy, it will help them during their clinical postings to develop a good therapeutic nurse–patient relationship, which would bring about good patient outcomes. This study was conducted to explore empathy among nursing students at two universities in India and South Africa. This study would bring out one of the essential values of nursing students, that is, empathy. This would help the nurse educators to analyze the existing level of empathy among nursing students, and further educational programs could be conducted by both universities for their students to further enhance empathy among students.

## Materials and Methods

### Study design and setting

A cross-sectional online questionnaire-based study was conducted between January 2021 and December 2021 using a self-administered questionnaire using Google Forms to obtain data regarding students’ empathy. The

study was conducted at the Nursing College of Yenepoya Deemed to be University (YU), India, and the Nursing Institute of the University of the Western Cape (UWC), South Africa.

### Study participants and sampling

The study targeted undergraduate nursing students studying in YU, India, and the UWC, South Africa. The Bachelor of Science (BSc) nursing students were selected as the study participants. The total number of students pursuing BSc nursing during the study period at YU was 416, and at UWC, it was 1233. An overall convenience sampling technique was used to select study participants. At YU, the total enumerative sampling technique was used, and of 416 students, 377 voluntarily took part in the study. To calculate the sample size at UWC, at a 95% confidence level, 5% margin of error, and 50% response distribution, the calculated sample size was 294 but only 245 students filled out the questionnaire and were included in the study.

### Eligibility criteria

Participants included both male and female students pursuing BSc nursing at YU and UWC. Participants who did not fill out the Google Forms were excluded from the study.

### Data collection tool and technique

#### *Survey instrument development and implementation*

The demographic proforma and Jefferson Scale of Empathy were used for the study. The demographic proforma consisted of six items, including age, gender, year of study, religion (for Indian students), marital status, and ethnicity (for students of WC). The second section was the Jefferson Scale of Empathy [Physician/Health Professions (HP) version], which is used to measure empathy among physicians and other health professionals involved in patient care in a clinical setting, as well as students studying medicine and other forms of health care in preparation for working in a clinical setting.<sup>[40]</sup> This inventory consists of 20 items, which are responded to on a 7-point Likert scale, with 1 being strongly disagree and 7 being strongly agree for positively responded items and 1 being strongly agree and 7 being strongly disagree otherwise. Therefore, the scores ranged from 20 to 140. Higher scores indicate greater empathy. Data collection took place for a period of one year. Obtained data were recorded and subjected to statistical analysis.

### Ethical consideration

Initially, ethical approval was obtained from the Institutional Ethics Committees of both institutions. Before commencing the study, the purpose of the study was explained to the study participants, and their consent was obtained.

### Data analysis

The data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 23.0. The sociodemographic details of the respondents were expressed in frequency and percent. Empathy scores were compared using frequency and percentage; a *t*-test was computed to compare the empathy scores of respondents between two settings; and then, an analysis of variance (ANOVA) or *t*-test was used to compare the empathy between gender, year of study, ethnicity, and religion. *P*- values of <0.05 were considered statistically significant.

## Result

### Sociodemographic details of the participant

Details regarding the sociodemographic profile of the respondents are shown in Table 1. It is seen that the respondents in both settings are similar in their characteristics in terms of age and gender. The test of significance could not be applied to the marital status. Religion was assessed at YU [Figure 1], whereas ethnicity was assessed among respondents from UWC [Figure 2].

### Assessment and comparison of empathy among students at YU and UWC

Tables 2 and 3 compare the empathy scores of students at YU and UWC. There was no significant difference shown in empathy scores between the genders, years of study, or ethnicity of students at UWC [Table 2], whereas a significant difference was found between empathy scores and year of study as well as the religion of students at YU (*P* < 0.05) [Table 3].

Respondents from both settings showed a higher level of empathy [Figure 3]. Overall, students at UWC showed higher empathy scores than those at YU. The study found that there is a significant difference between the empathy scores of respondents at YU and UWC (*P* 0.05) [Table 4].

**Table 1: Sociodemographic details of the respondents**

Demographic variables	f (%) YU n=377	f (%) UWC n=245	Test of significance
Age	Mean±SD 19.70±1.19	Mean±SD 22.17±3.36	$\chi^2=57.32$ <i>P</i> =0.99*
Gender			
a. Male	59 (15.6)	35 (14.3%)	$\chi^2=1.55$ <i>P</i> =0.45*
b. Female	318 (84.4)	210 (85.7%)	
Year of study			
a. I year	114 (30.2)	62 (25.3%)	$\chi^2=55.97$ <i>P</i> =0.000
b. II year	87 (23.1)	62 (25.3%)	
c. III year	104 (27.6)	62 (25.3%)	
d. IV year	72 (19.1)	57 (23.3%)	
Marital status			
a. Married	2 (0.5)	12 (4.9%)	-----
b. Single	375 (99.5)	233 (95.1%)	

\*Significant

**Table 2: Comparison of empathy scores of students at UWC based on their sociodemographic variables**

Demographic variables	f (%)	Mean±SD	Range	t/ANOVA	P
Gender					
Male	35 (14.3)	102.23±23.12	21-140	t=-0.5	0.60
Female	210 (85.7)	104.10±20.13	21-140		
Year of study					
First year	62 (25.3)	103.79±17.70	32-140	ANOVA=0.1	0.90
Second year	62 (25.3)	103.21±19.84	21-140		
Third year	62 (25.3)	103.79±18.82	53-140		
Fourth year	57 (23.33)	104.05±25.71	21-140		
Ethnicity					
Black	132 (53.9)	101.02±21.51	21-140	ANOVA=0.89	0.13
Colored	85 (34.7)	107.69±17.90	44-140		
White	18 (7.3)	103.89±25.92	21-128		
Indian	10 (4.1)	99.33±10.26	88-108		

**Table 3: Comparison of empathy scores of students at YU based on their sociodemographic variables**

Demographic variables	f (%)	Mean±SD	Range	t/ANOVA	P
Gender					
Male	59 (15.6)	92.79±18.65	52-140	0.76	0.44
Female	318 (84.4)	94.66±17.03	20-140		
Year of study					
First year	114 (30.2)	97.85±18.02	20-140	3.05	0.02*
Second year	87 (23.1)	92.45±15.82	60-140		
Third year	104 (27.6)	91.50±17.46	45-140		
Fourth year	72 (19.1)	96.00±17.57	62-133		
Religion					
Hindu	92 (24.4)	98.38±16.25	62-140	3.27	0.02*
Christian	211 (56)	92.10±17.83	20-140		
Muslim	53 (14)	95.33±16.93	67-140		
Buddhist	21 (5.6)	98.00±12.31	79-135		

\*Significant

## Discussion

On analyzing the empathy scores, students from both universities demonstrated higher empathy scores. These findings are supported by the literature where Ghazwani *et al.* (2023) reported in their study that nursing interns showed a mean level of empathy of 67.46 (standard deviation (SD) = 18.86), and it was said that the nursing interns have moderate levels of empathy overall. The younger the age, the higher the empathy, and married interns demonstrated higher empathy than unmarried interns; these results are consistent with this study.<sup>[41]</sup> Petrucci *et al.* (2016), in their cross-sectional study at an Italian university on health professional students, reported that undergraduate nursing students have significantly higher ( $P < 0.05$ ) levels of empathy than students of other healthcare professionals.<sup>[42]</sup>

In this study, female students demonstrated more empathy than males. These findings were similar to those of the studies conducted by Ferri *et al.* (2017),<sup>[25]</sup> Williams *et al.* (2014),<sup>[22]</sup> Jolliffe *et al.* (2006),<sup>[23]</sup> and

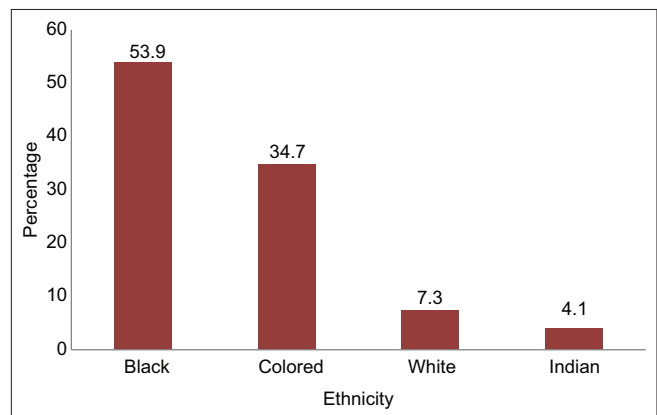


Figure 1: A bar diagram showing the ethnicity of UWC students

Field *et al.* (2011).<sup>[24]</sup> In a study among nursing students on empathetic attitudes, female students reported statistically significantly higher ( $P < 0.05$ ) mean scores compared to male students.<sup>[25]</sup> Altwalbeh *et al.* (2018) reported that in their study among nursing students at the University of Jordan, the mean empathy score was 92.9, lower than scores reported in other studies; female students' empathy scores were significantly higher than male students; and there was a significant increase in empathy scores by study year.<sup>[43]</sup>

Ahmed *et al.* (2022) explored empathy levels among nursing students at Sultan Qaboos University (SQU) and Alexandria University (AU) and found that nursing students had moderate levels of empathy (AU:  $92.80 \pm 19.70$ ; SQU:  $84.29 \pm 15.24$ ).<sup>[44]</sup> Ouzouni *et al.* (2012) studied empathy among nursing students in Greece, where they found that overall nursing students showed a moderate level of empathy (mean (M) = 88.63; SD = 8.93). Females were found to be significantly more empathetic than males ( $P < 0.001$ ). The sixth-semester students displayed more empathetic ability, and the first-semester students the least. Students who had made their own choice to study nursing and those who expressed a willingness to work as nurses after their graduation

**Table 4: Comparison of empathy scores between students at YU and UWC**

Groups	n	Mean±SD	Mean difference	Std. error difference	t	P	95% confidence interval of the difference	
							Lower	Upper
Students of YU	377	94.37±17.28	0.47	1.52	6.19	0.000***	12.47	6.46
Students of UWC	245	103.84±20.54						

\*\*\*Very highly significant

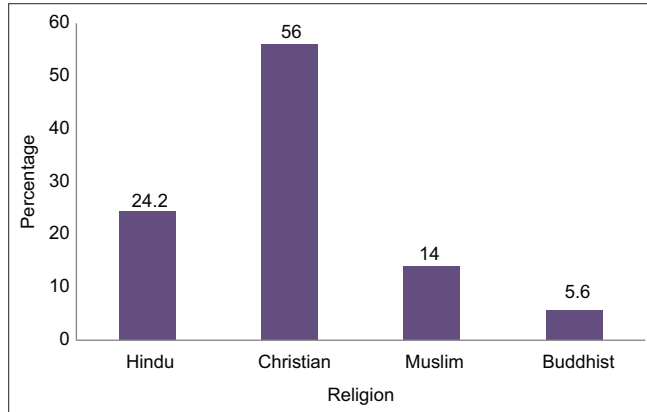


Figure 2: Bar diagram depicting the religion of YU students

recorded higher levels of empathy, as did those who acknowledged they had received emotional care from their families.<sup>[45]</sup>

**Limitations and recommendation**

The major limitation of the study is that only one institution from each country is taken as a study sample. The population varied at both universities; so, the sample size could not be equal at both institutions. The study results depend on the responses given by students via Google Forms only. This study recommends that research need to be conducted to explore various values among students and professionals, and educators to take appropriate measures to enhance these values.

**Conclusion**

This study explored empathy levels among nursing students at two universities (YU and UWC) on two continents. We found a higher level of empathy among participants from both universities, and female students were more empathetic than male students. The use of continuous reflection and regular educational activities is recommended to improve students’ empathic attitudes. Empathy among nursing students is of grave importance, as this field, at its core, is there to serve humanity and those who are suffering. It is thus very important that nurse educators pay attention to nurturing our nursing students’ empathy rather than losing it under the stress of academic performance. The empathy levels of various grades of students could be assessed yearly, and various workshops would be conducted to maintain empathy levels among students. Following students annually, from their first year to graduation, to find the true representation of

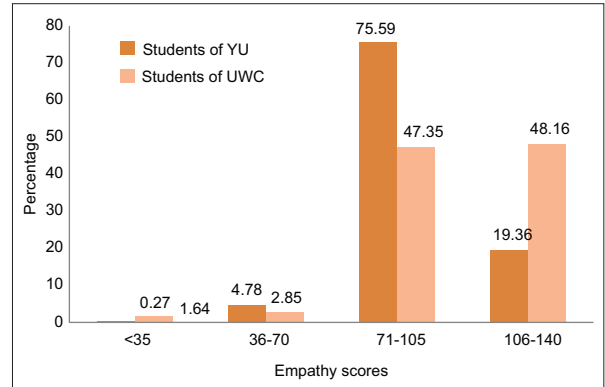


Figure 3: Empathy scores of students at YU and UWC

their empathy score should also be considered. The institutions should provide good infrastructure facilities for inculcating values among students and the professional development of the educators as well.<sup>[46]</sup>

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**Conflicts of interest**

There are no conflicts of interest.

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