ORIGINAL ARTICLE

Medical Science 2018; June, Vol-6(1):6-10

Assessment of empathy among medical students in a teaching hospital, Pokhara, Nepal

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Information about the article

Received: June 6, 2018
Revised: Oct. 21, 2018
Accepted: Nov. 23, 2018
Published online: Nov. 30, 2018

Abstract

Background

Empathy is the ability to understand patients' ability and experiences and capability to communicate this understanding. Empathy plays important role in maintaining the relationship between patient and doctor. Therefore the aim of the study is the assessment of empathy among Nepalese medical students using Jefferson scale of physician empathy questionnaire.

Methods

This questionnaire based study was conducted among undergraduate students in Gandaki Medical College, Pokhara, Nepal. Data were collected from 4th year, 5th year students and interns who were exposed to clinical postings. Empathy was assessed by the Jefferson Scale of Empathy (JSE), a 20item self-reporting questionnaire.

Results

Females had a slightly higher empathy score than males. Empathy scale scores for subjects of different years of education showed non statistically significant difference.

Conclusion

Empathy can be increased in the students by effective interaction between emotional and behavioural factors. Empathy related cultural awareness, ethics and discussions should be adopted among medical students to promote its development.

Key words

Doctor, education, empathy, questionnaire, medical

ISSN 2321-5291
Medical Science 2018; June, Vol-6(1):6-10

Background

The communication skills and understanding between health care practitioner and patient has created keen interest in medical society. The effective way to recognize patient's concerns, feelings and experiences depend upon one's empathy. Empathy is the ability to share, understand and respond with care to the experiences of others. [1] Empathy was derived from two Greek terms, "em" and "pathos," meaning "feeling into" and has its origin from the German word "Einfulung."Empathy is generally viewed as a relatively stable constitutional trait. [2-4]

Empathy involves cognitive as well as emotional domains. The cognitive domain of empathy involves the ability to understand another person's inner experiences and feelings and a capability to view the outside world from the other person's perspective. [5] The emotional domain involves the capacity to enter into or join the experiences and feelings of another. [6, 7] Empathy is considered to be an essential professional characteristic for clinicians. One of the goals in a curriculum for medical education includes improvement of empathy.

Since previous studies have suggested that physician's empathy may reduce with clinical trainings. [8] There is a concern among educational managers in health care system and medical universities as to the bad effects of clinical training on altruistic feeling and empathy with patients in different years of studies in medicine. So, we aimed to evaluate and compare the empathy scores of Nepalese medical students between 4th year, 5th year and interns.

Material and Methods

Study Period

Data were collected over a period of 3 months (March to May, 2018).

Study design, participants

This study was conducted among undergraduates in Gandaki Medical College, Pokhara, Nepal. Data were obtained from the students enrolled in Bachelor of medicine and Bachelor of surgery (MBBS). Participants were 4th year, 5th year students and interns who were exposed to clinical postings. Participants were explained about Jefferson scale of empathy and about the nature of study before completing the questionnaire. Any doubts from students were clarified. Then, Jefferson Scale of Empathy (JSE), Health Professionals Version (JSPE-HP), a 20 item self-reporting questionnaire was administered.

Response Rate

In our survey, everyone responded

Questionnaire and validity

Jefferson Scale of Empathy (JSE), a 20 item self-reporting questionnaire was administered to the medical students. The Jefferson Scale of Physician Empathy-Health Professionals Version (JSPE-HP) was used to measure empathy in our subjects. HP version reflect actual caregiver behavior. This scale was developed by researchers at the Center for Research in Medical Education and Health Care at Jefferson Medical College to measure empathy in physicians and health care providers. The 20 item test uses a 7-point Like rt scale for each item (1=strongly disagree and 7= strongly agree). High scores are interpreted as having more empathic behavioural orientation than lower scores. The JSE-HP scale has been already validated elsewhere. [9,10]

Data collection

The students were approached in their respective lecture halls at the end of lectures. They were explained about Jefferson scale of empathy and about the nature of study before completing the questionnaire. Any doubts from students were clarified. Participants also specified their gender and age. Printed questionnaires were provided that were to be filled out and submitted in the class itself.

Inclusion criteria

All the students (3rd year, 4th year and interns) who were exposed to clinical postings were included in the present study.

Exclusion criteria

1st and 2nd year students were excluded from the study.

Ethical committee approval

The present study was cleared by the Ethical Committee of Gandaki Medical College.

Data management and statistical analysis

The data was entered manually on Microsoft excel (MS Office Excel 2000; Microsoft Corporation, Redmond, WA, USA), checked for possible data entry errors. Frequencies and percentages were taken out for categorical variables. The data were analyzed using SPSS version 21.0(IBM Corp. Armonk, NY: IBM Corp) for generation of descriptive, as well as inferential statistics. The statistical significant difference among groups was determined by the T tests and ANOVA including post hoc tests.

Results

Table 1 shows comparison of Jefferson Empathy scale scores among gender in over all subjects.

ISSN 2321-5291
Medical Science 2018; June, Vol-6(1):6-10

Table 1: Comparison of Jefferson Empathy scale scores among gender in over all subjects

Year of study	Gender	N	Minimum	Maximum	Mean±SD
4	Male	25	72	115	88.76±10.56
	Female	24	61	105	87.00±9.55
5	Male	41	70	109	85.37±8.36
	Female	26	76	101	87.73±6.83
Interns	Male	56	56	110	83.98±12.49
	Female	27	67	91	84.04±9.18

Table 2: descriptive statistics for the total subjects and gender comparison within the respective year of study for jefferson empathy scale scores

Year of study	T-test for equality of means						
	T	Df	Sig. (2-tailed)	Mean difference	Std. Error difference	95% confidence interval of the difference	
						Lower	Upper
4	.611	47	.544	1.760	2.882	-4.037	7.557
	.612	46.839	.543	1.760	2.876	-4.025	7.545
5	-1.208	65	.231	-2.365	1.957	-6.274	1.544
	-1.264	60.768	.211	-2.365	1.871	-6.106	1.376
Interns	-.020	81	.984	-.055	2.702	-5.431	5.322
	-.023	67.659	.982	-.055	2.431	-4.905	4.796

Table 2 shows descriptive statistics for the total subjects and gender comparison within the respective year of study for Jefferson Empathy scale scores. In all the study year except 4th year groups, females had a slightly higher score than males. But the difference was statistically non significant (p>0.05) when assessed among all the year groups.

Discussion

The aim of this study was to measure the empathy among students in Gandaki Medical College, Pokhara, Nepal.

Empathy level of Dental students

Many attempts have been made to measure the physician's empathy. The Jefferson Scale of Physician Empathy (JSPE) is a valid questionnaire including twenty-items. The present study reported that undergraduate students had statistically no difference in empathy score compared to other years of student. This may be due to the fact that all the year of medical students that have been included in the study have been exposed to clinical posting and started treating the patient. Once the students started interacting with patients, they develop communication skills and begin to share the feelings of patients. However, the mean empathy score of present study is less than average scores of 103-117 reported by previous studies among medical. [11-15]

Table 3: Comparison of mean Jefferson Empathy scale scores for subjects of different years of education

ANOVA

TOTAL

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	499.245	2	249.622	2.491	.085
Within Groups	19642.102	196	100.215		
Total	20141.347	198			

Multiple Comparisons

Dependent Variable: Total (Tukey HSD)

(I) YEAR OF STUDY	(J) YEAR OF STUDY	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
4	5	1.614	1.882	.667	-2.83	6.06
	Intern	3.898	1.803	.081	-.36	8.16
5	4	-1.614	1.882	.667	-6.06	2.83
	Intern	2.284	1.644	.349	-1.60	6.17
Intern	4	-3.898	1.803	.081	-8.16	.36
	5	-2.284	1.644	.349	-6.17	1.60

Table 3 shows comparison of mean Jefferson Empathy scale scores for subjects of different years of education which showed statistically non-significant difference (p=0.085). Further Post-Hoc analysis revealed non significantly different pairs.

The mean empathy score of 4th and 5th year was higher than interns. Internship is a year of remarkable change, both personally and professionally. Many issues can challenge the adaptive capacity of interns, including relocation away from support systems, sleep deprivation, demands of patient care, financial issues, and reduced time with family.16 It has been well established that many interns have feelings of anxiety and depression at some point during the year.17,18,19,20 which leads to sub-optimal patient care practice and attitudes, sometimes even medical errors. Stress results in depersonalization and emotional exhaustion, which might explain the correlation between stress and empathy. The ability of interns to express concern and empathy in patient care would be compromised by the presence of appreciable levels of anger and depression. Studies have shown that negative mood that increased significantly during the internship is correlated negatively with empathic concern. [21]

The empathy score of 5th year students was lower than that of 4th year and interns. This may be due to the higher level of distress and anxiety during medical training as they need to learn large volume of information which is present in their curriculum and there is burden of examinations too.

ISSN 2321-5291
Medical Science 2018; June, Vol-6(1):6-10

Students become emotionally hardened and feel less care for patients. This undermines the idealism, humanism, and empathy

Gender Differences in Empathy

In the present study, females have higher mean empathy score than that of males in all the year except 4th year which is similar with the other studies. [22, 24] Women's sensitivity to emotional states might correlate with high empathy and stress levels among female medical students. This might mean that female students are more sensitive to stress, even though their stress levels are similar to those of males.

Conclusion

In medical practice, patient's value is one of the most affective concerns. The concept of empathy is widespread and is especially relevant in medical field. High empathy scores lead to accurate diagnose and successful treatment for effective patient-physician interactions. Proper evaluation and education of empathy in medical students is important for medical education. So, Empathy should be included in the curriculum as well as empathy related cultural awareness, ethics discussions and role-playing activities should be carried out to enhance the empathy of medical students.

Limitations & future scope of the study

This study had several limitations that may affect its result. Our study is limited to only one medical college. It would have been made applicable to several medical colleges of Nepal. Other limitation is that evaluation of empathy was done on subjective way of a validated questionnaire. Therefore, observational methods such as the History- taking Rating Scale (HRS) could be used with JSE-HPS to measure empathy level in dental students. Lastly, this study was cross-sectional in design which did not allow understanding the process of changes in empathy level through the years of medical education.

Competing interests

The author declares no conflict of interests.

Authors' contribution

This study was designed by RT. Data was collected by NT and MT. Statistical analysis was done by MB. Manuscript was prepared and finally accepted by all authors.

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ISSN 2321-5291
Medical Science 2018; June, Vol-6(1):6-10

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