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RESEARCH ARTICLE
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ASSESSMENT OF CHANGE IN EMPATHY IN MBBS STUDENTS TOWARDS PATIENTS AFTER RURAL SETTING EXPOSURE IN A TERTIARY CARE INSTITUTE OF INDORE (M.P).

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Abstract

- Background : Empathy is defined as "a personality trait that enables one to identify with another's situation, thoughts, or condition by placing oneself in their situation. However Definitions of empathy may also include cognitive, emotional, behavioural, interpretive, and moral aspects. Medical students' empathy has been widely researched, most of the time using self-report measures for example the Jefferson Scale of Empathy, however such studies on empathy have rarely been conducted on Medical Students in India, in spite of there being a dire need to address the issues on empathy.
- Aim & Objectives: To assess the change in empathy among phase 3 medical students after exposure to patients and their surroundings.
- Methodology: This cross sectional study was conducted on 104 phase 3 medical students in SAMC & PGI, using a questionnaire based on the Jefferson Scale of Empathy (S- Version). Exposure was provided in the form of field visits to the patients' homes for Family surveys.
- Results: The results suggest mostly positive impact in terms of change in empathy among majority of the students, and the change is much higher in female students as compared to male students.
- Conclusion: The results obtained do mimic the results that have been obtained by majority of the studies conducted in similar settings, however the study needs to be conducted on a more grand scale so as to reduce any bias that may arise.

Introduction/Background

Empathy is defined as "a personality trait that enables one to identify with another's situation, thoughts, or condition by placing oneself in their situation. For decades this ability has been acknowledged as a crucial skill for healthcare professionals when evaluating the patient–doctor relationship as well as patient satisfaction and clinical outcomes – both of which have been found to improve with increasing physician empathy. Given the significant role that empathy can play in medical student education, several studies have examined the ways to measure empathy in medical

students. [1] However Definitions of empathy may also include cognitive, emotional, behavioural, interpretive, and moral aspects. [2]
Studies have shown that clinical empathy enhances patient satisfaction, comfort, and trust.[3] The ideal physician, according to Flexner (1910) and his contemporaries, was empathic, understanding, dedicated, creative, and curious—in addition to being knowledgeable about the latest scientific concepts and technologies. [4] Patients who trust their doctors are more likely to be open and to provide more detailed information enabling better diagnosis and shared decision making.[5] Medical students' empathy has been widely researched, most of the time using self-report measures for example the Jefferson Scale of Empathy, however such studies on empathy have rarely been conducted on Medical Students in India, in spite of there being a dire need to address the issues on empathy. [6]

AIM

To Assess the change in Empathy in Pre Final Year Mbbs Students after Rural Setting Exposure.

OBJECTIVES

1. To assess empathy in study subjects before rural setting exposure using Jefferson scale
2. To assess empathy in study subjects after rural setting exposure using Jefferson scale.
3. To determine change in empathy scores among study subjects from before and after Jefferson scale findings.

Inclusion Criteria

1. The student must consent to the study in writing.
2. He/ She must be a registered Pre Final year student of SAMC & PGI
3. He/ She is available for the minimum required rural visits

Exclusion Criteria

1. The students who did not consent to the study
2. He/ She is not available for the minimum required rural visits

Materials and Methods

This was a cross sectional study which was carried out in Sri Aurobindo Medical College and PG Institute(Indore). Duration of the data collection was from Aug 2023 to December 2023. The tool which was used was a pre-designed and pre-tested semi-structured questionnaire based on the Jefferson Scale of Empathy (S Version). Students were posted as per yearly schedule to attend Family visits in the Rural setting and/or attend OPDs in the Rural Health and Training Centre (Sanwer) affiliated with the institute. Questionnaire was Based on a prevalidated scale, i.e. Jefferson Scale of Empathy HMS version, however the questionnaire was further validated by showing the questionnaire to the senior faculty members of the Department of Community medicine (Face Validity). Permission to officially use the questionnaire was obtained from the Jefferson University, USA. Prior written consent was taken from the students in the form of a question (which was a part of the questionnaire) and the questionnaire was administered twice, once before initiation of family visits, after which three rural visits were arranged and families allotted to the students for completing their family surveys. After completion of all three visits the questionnaire was administered once again to the students. The statistical analysis was performed using Paired T test and Chi Square Test on free webware, i.e. socscistatistics.com.

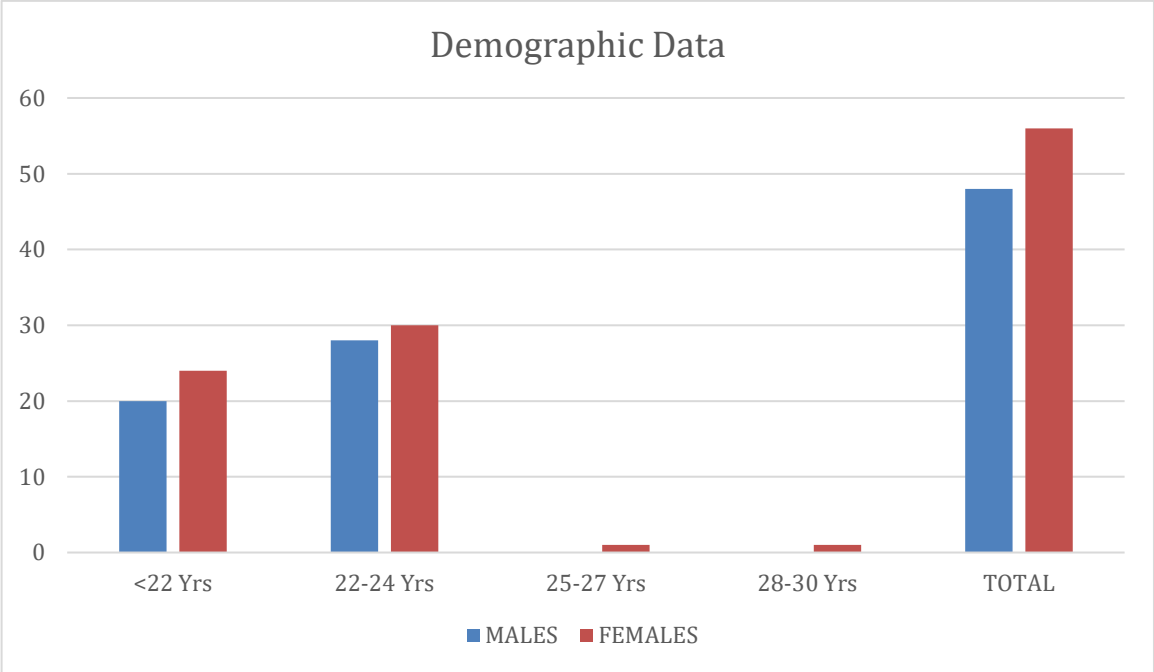
Results/Observations

	MALES	FEMALES	TOTAL
<22 Yrs	20	24	44
22-24 Yrs	28	30	58
25-27 Yrs	0	1	1
28-30 Yrs	0	1	1
TOTAL	48	56	104

Table 1: Demographic Data

Table 1 shows that, out of the 150 students that were targeted only 104 actually met the prerequisite inclusion criteria, and the rest were excluded. Out of the total students 48 were Males and 56 were females. Majority of the students i.e. 102 were below the age of 24 years.

Chart 1: Demographic Data



The Chart 1 depicts the demographic distribution of the study population. A total of 104 students were included out of which 48 were males and 56 were females with 102 students falling in the below 24 years category.

Table2: Change in Empathy Scores after Field Visits

Change in Empathy Score	Male	Female	Total
More Than -10	0	1	1
-6 to -10	5	4	9
-1 to -5	12	2	14
0	3	2	5
1 to 5	12	15	27
6 to 10	6	11	17
More Than 10	10	21	31
Total	48	56	104

The empathy scores were tabulated and evaluated for both pre and post tests in Table 2 and Chart 2. The difference in scores was calculated for each student individually, and for simplification the range

of change that was considered was as -10 to +10. On further evaluation it was seen that 5 students did not show any change in empathy, but 24 students showed a reduction in empathy, while 75 students showed an increase in empathy after the field visits. Females showed a higher increase in empathy as compared to males.

Chart 2: Change in Empathy Scores

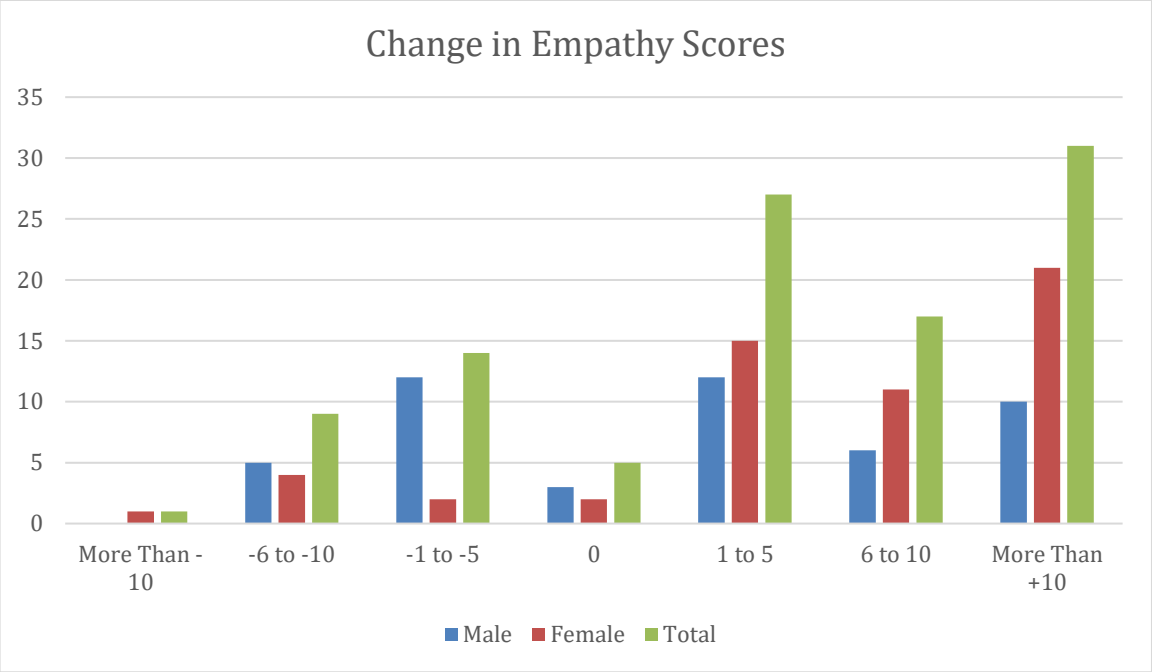


Table 3: Paired T Test Evaluation

	Mean	Standard Deviation	T Value	P Value
Pre Test	87	9.6	7.02	<0.001
Post Test	93.3	11.2		

Paired T test was applied to the empathy data obtained to analyse the difference in the means between pre and post test scores of the students in Table 3. The result showed a significant difference in the means with a P- Value of <0.001.

Table 4: Chis Squared Test for Comparison of Gender and Change in Empathy

	+ve Change in Empathy	-ve Change in Empathy	Total	Chi Square Value	P Value
Females	47	7	54	8.23	**0.004***
Males	28	17	45		
Total	75	24	99**		

*Significant at value less tha0.01

**Five student who had no change in empathy were excluded out of the grand total of 104 students

In Table 4, Chi Square test was applied to the data to assess the significance of the higher number of females having a positive change in empathy as compared to males. The result obtained showed a significant P Value (0.004) which shows that the field visits were more likely to have a positive empathetic impact on female students as compared to male students

Discussion & Conclusion

The fact that empathy is required in every doctor, not just towards his/her patients, but towards colleagues, and the world in general. However this area always seemed to be neglected in terms of

exploration, or evidence, possibly because of the difficulty in its assessment as well as the difficulties we may face when trying to influence it. It's always been the general misconception along many levels that empathetic attachment with a patient or their family members will hamper a Doctor's ability to function properly in society. Our study certainly shows that exposure to patients as well as field activities will result in some form of change in empathy. A total of 99 students out of 104 (which is more than 95%) showed some change in the empathy felt towards patients. This is a critical finding in that previous studies have tended to provide a mixed result in such circumstances. The study done by Collins et al[1] has shown that house calls have no particular change in empathy in third year students, however a majority of other studies[7-13] have shown that house calls and clinical exposure do tend to influence the perception of the students towards patients and in turn affecting their empathetic drive. Some studies done such as the ones done by Hojat et al and others[14-17] tend to suggest that there is a distinct possibility that when empathy is assessed longitudinally (or over a period of time) there may be erosion of empathy, which may not have been possible to exactly assess in the current study, but such a result may indicate that there may be many more layers to explore as far as empathy is concerned. Another very important finding of this study suggests that female medical students tend to be more empathetic towards patients, and the change in empathy over exposure to patients and their surroundings is also higher and more positive as compared to male medical students. This result is actually supported by research done in a myriad of situations and settings, and geographical areas.[18-24]

Limitations & further recommendations

Firstly, the current study has been conducted on a few students due to the constraints, and this may be the biggest limitation of all and secondly this study can be conducted more longitudinally, i.e. across all the Phases and we can continuously assess the students from Phase 1 to Phase 4.

Therefore this study can now be continued in a similar vein and follow a particular batch throughout the course to assess the change. Simultaneously a cross sectional studies can also be done to see the difference in empathy and change in empathetic response in all the students across all four phases of MBBS.

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