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Assessment of empathy among first-year medical students: A knowledge, attitude and practice study

Sanjib Kumar Ghosh[1,2,*], Soumya Chakraborty[1]

[1] Department of Anatomy, ESI- PGIMSR & ESIC Medical College, Joka, Kolkata, West Bengal, India
[2] Department of Anatomy, All India Institute of Medical Sciences, Patna, Bihar, India

Abstract

Good clinicians are expected to demonstrate empathetic behaviour whereby it is necessary for medical students to develop an empathetic attitude during the curriculum. The anatomy classroom is possibly the ideal place to cultivate the sense of empathy among medical students as they deal with the feelings associated with dissecting a human cadaver. Hence we conducted this knowledge, attitude and practice study to assess the empathetic attitude among first-year medical students. A self designed, pretested questionnaire was framed to explore the sense of empathy and the questionnaire was administered among 100 first year MBBS students before the summative assessment and their responses were collected and analyzed. We observed that 55% and 16.3% of the respondents were inclined for adopting a mechanized approach to patient care as they were in favour of investigation oriented diagnosis and medicine based treatment respectively as primary component of medical practice. Only 16.3% and 12.2% of the respondents prioritized patient oriented approaches in the form of understanding the disease process and emphasizing on communication with patients respectively. During clinical training 70.4% and 15.3% of respondents would concentrate on self development as they look forward to honing their clinical skills and acquiring high level of knowledge respectively. Only 8.2% and 6.1% of the respondents opted for developing patient oriented skills like developing an empathetic attitude and enhancing communication skills respectively. However 60.2% agreed that empathy of a physician does influence the clinical outcome and 74.5% opined that they have developed/enhanced a feeling of empathy by learning anatomy through human cadaver based teaching. Empathy among first-year medical students was on the lower side, however they have developed a baseline empathy level after one year of attending dissection classes in anatomy. Effectively designed education strategies can further enhance the feeling of empathy during clinical training.

Key words

Empathy, medical practice, anatomy, human dissection, clinical training.

Introduction

The word 'empathy' was introduced into English literature more than hundred years ago. However its actual value in the domain of clinical practice is being explored presently (Batt-Rawden et al., 2013). In recent times researchers have observed that patients are overwhelmingly in favour of consulting physicians with humanistic qualities and empathetic attitude (Walsh et al., 2016). Subsequently empa-

* Corresponding author. E-mail: drsanjib79@gmail.com

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thy has emerged as a popular topic for medical scholars and is fast evolving as a crucial goal for medical educators (Sulzer et al., 2016). Training of empathetic physicians has always been an area of concern in medical education. Recent reports suggest that educational interventions in a medical school can be effective in maintaining as well as enhancing empathy among undergraduate medical students (Batt-Rawden et al., 2013). As the dominance of technology-based diagnosis continues in modern health care setup with the patient-physician interaction taking a backseat, it is appropriate and critical to continue studying the influence of medical education in the development of empathy among medical students who are expected to express this personality trait as clinicians in future (Hojat et al., 2002).

The anatomy curriculum presents ample opportunities to develop the sense of empathy among medical students as they are confronted for the first time with issues related to death anxiety (Bertman and Marks, 1989; Tschernig and Pabst, 2001). Apart from imparting essential anatomical knowledge, the human dissection room can serve as an ideal ground for cultivating humanistic values among medical students. Medical training essentially begins with the cadaveric dissection and nearly all clinicians remember the details of their first interaction with the human cadaver (Rizzolo, 2002). Hence, the dissection lab premises provide the educator with an immediate opportunity to teach and encourage humanistic qualities of respect, empathy and compassion among first semester medical students (Crow et al., 2012). Researchers have noted that while dissecting a human cadaver, students come across a myriad of emotional reactions which later on helps them to comprehend the psychosocial factors associated with patient's illness and thereby contribute to the making of empathetic physicians of tomorrow (Ghosh, 2017).

There is a general consensus that in present day health care setup, clinicians/physicians should demonstrate empathetic attitude towards their patients and medical teachers are responsible to develop the same among the students while they are being trained within the medical education curriculum (Ross, 2016). Being an integral element of the anatomy teaching model, the dissection room experience constitutes a unique education strategy and an effective tool to reflect upon the human side of medical profession among the students (Ghosh, 2017). We hypothesized that analyzing the empathetic attitude among medical students at the end of their anatomy teaching curriculum would be significant in the present day medical education scenario. After an extensive search of the existing literature, we found that very few studies have been undertaken till date on this topic. Hence we conducted the present study to assess the baseline empathetic attitude among first year students in a medical college in India.

Materials and methods

The study was conducted at the Department of Anatomy, ESI-PGIMSR & ESIC Medical College, Joka, Kolkata. Prior to the onset of the study, we obtained ethical approval from the Ethics Committee of the above mentioned institution. The study involved responding to a self-designed questionnaire (Box 1), which was framed to explore the expression of empathy among first-year medical students from 2015-16 batch. A pilot study was conducted with the study questionnaire among the first-year students of the previous batch (2014-15) to test and validate the same. The students

Questionnaire for 1st Prof MBBS students (Please tick wherever applicable)

Please fill up the Questionnaire without discussing. It will not take more than 10 minutes to fill up completely

1. Sex: Male/ Female 2. Age (years): 3. Place of Residence: Rural/ Urban

4. Who influenced/ motivated you to undertake a career in medicine?
Yourself / family members / relatives/ friends/ others (please specify)

5. Since when you developed an interest in medical career?
Before class X exams/ during +2 level/ after results of entrance examination

6. Are there any doctor(s)/ medical students among your?
Family members/ relatives/ friends

7. After attaining medical education what is your future plan?
Self practising physician/ become a medical teacher/ join corporate sector/ join rural service

8. Which single factor in medical practice is most attractive to you as a student?
Respect associated with medical profession/ opportunity to serve the society/ scope for independent practice/ Provision for higher studies/ possibility of shifting abroad/ possibility of good earning

9. Among the given options which should be the primary component of patient care in your opinion?
Understanding the disease process/ prescribing appropriate medicines/ making an exact diagnosis through Investigations/ communicating with patients/ possibility of good earning

10. What should be your priority during medical training? To develop:
High level of knowledge/clinical (manual) skills/communication skills/ an empathetic attitude towards patients

11. Do you think empathy of a doctor has a bearing on the clinical outcome of the patient?
Yes/ No/ Not sure

12. Do you feel that you have developed/ enhanced a feeling of empathy by learning anatomy from human cadavers?
Yes/ No/ Not sure

13. Do you feel that dealing with live patients later on in your career could enhance feeling of empathy?
Yes/ No/ Not sure

THANK YOU FOR YOUR VALUABLE SUPPORT AND CONTRIBUTION

Box 1. A sample of the study questionnaire.

were made to understand that participation was voluntary and responses would remain anonymous. They were assured that absolute confidentiality would be maintained regarding their responses, the documents would be retrieved only for a short period of time and would be used only for research purpose. Written informed consent was obtained from all the participants and the objectives of the study were clearly explained to them to reduce the risk of participant bias. The study questionnaire were distributed among 100 first-year medical students in June' 2016, prior to their summative assessment and responded questionnaires were collected by hand.

Preparation of the study questionnaire

The rationale behind the design of the questionnaire is as follows:

a) At the beginning (Q 1-3) the participants were requested to provide their basic demographic data.
b) In the second part of the questionnaire (Q 4-6) we tried to obtain data about the background of participants as we felt that these could have an influence on their personality traits as a medical student.
c) The third part of the questionnaire (Q 7-8) was aimed to gauge the perception of the participants regarding their future as medical professionals. In our opinion this aspect significantly contributes to building empathy among medical students.
d) The fourth part (Q 9-11) forms the core of this study and was framed to assess the real time expression of empathy among the participants at the time of conducting the study.
e) In the concluding part (Q 12-13) opinion were solicited from the students regarding contribution of cadaver based teaching in anatomy towards incorporating a sense of empathy and also regarding possibility of enhancement of that feeling while interacting with live patients later on in their career.

Statistical analysis

Pearson's chi-square test was used to assess the differences between frequencies observed in relation to the responses for a particular question. Fisher's exact test was employed when the frequency for any response was less than five. All statistical analyses were performed with the help of SPSS (Statistical Package for Social Sciences) version 18.0 (SPSS Inc., Chicago, IL). A p value <0.05 was considered as statistically significant.

Results

Among 100 first year medical students to whom the study questionnaire was administered, 98 returned it after their response. Among the respondents, 66 (67.3%) were male and 32 (32.7%) were female. The median age of the respondents was 19 years (range 18-23 years) and 64 (65.3%) were urban residents, whereas 34 (34.7%) respondents were from rural areas.

Analysis of the background data among the respondents revealed that 49 (50%) were self motivated to undertake a career in medicine, while 46 (46.9%) of them were

influenced by family members to do so. Majority of the respondents (48, i.e. 49%) developed an interest in medical career during their +2 level i.e. shortly before undertaking the entry level examination to qualify for studying in a medical school. Nevertheless a significant number of respondents (40, i.e. 40.8%) were eager to pursue medical course even before their secondary level examinations. Among the respondents, 28 (28.6%) admitted that none of their known members in the society have ever been exposed to the experience of medical profession. However 25 (25.5%) respondents had physicians/medical students within their family, 25 (25.5%) among their friends and 20 (20.4%) among their relatives (Table 1).

The findings of the present study about the perception regarding their future as medical professionals showed that 50 (51%) respondents were in favour of being a self practicing physician and 23 (23.5%) were inclined towards joining rural service. However 17 (17.4%) respondents were looking forward to joining the economically lucrative medical corporate sector. Among the respondents, 47 (48%) acknowledged that the opportunity to serve the society was the single most attractive aspect of medical practice, whereas 8 (8.2%) opted for the possibility of good earning and 7 (7.2%) were inclined towards shifting abroad upon completing their medical studies (Table 2).

In relation to the real time expression of empathy among the respondents, it was observed that most of them (54, i.e. 55%) opted for investigation aided diagnosis as the primary component of patient care and 16 (16.3%) opined that prescribing appropriate medicines was the best option. Only 16 (16.3%) and 12 (12.2%) were in favour of following less mechanized and more patient oriented approaches such as understanding the disease process and communicating with the patients respectively. The same trend was observed when respondents had to prioritize the most effective component of medical training, as a majority (69, i.e. 70.4%) were inclined towards acquiring clinical skills and 15 (15.3%) were interested in achieving a high level of knowledge. Very few expressed the desire to develop a strong physician patient rela-

Table 1. Assessment of data about the background of the medical students as observed in present study.

Question	Respondents (n)	Response	P-value
Who influenced/ motivated you to undertake a career in medicine?	98	Yourself – 49 (50%) Family members – 46 (46.9%) Relatives – 2 (2.1%) Friends – 1 (1%)	<0.05 in each case
Since when you developed an interest in medical career?	98	Before class X exams – 40 (40.8%) During +2 level – 48 (49%) After results of entrance examination – 10 (10.2%)	<0.05 in each case
Are there any doctors/ medical students among your family members/ relatives/ friends?	98	None – 28 (28.6%) Family members – 25 (25.5%) Relatives – 20 (20.4%) Friends – 25 (25.5%)	<0.05 in each case

P value <0.05 was considered as statistically significant.

Table 2. Assessment of perception of the students regarding their future as medical professionals as observed in present study.

Question	Respondents (n)	Response	P-value
After attaining medical education what is your future plan?	98	Self practising physician – 50 (51%) Become a medical teacher – 8 (8.2%) Join corporate sector – 17 (17.4%) Join rural service – 23 (23.5%)	<0.05 in each case
Which single factor in medical practice is most attractive to you as a student?	98	Respect associated with medical profession – 28 (28.6%) Opportunity to serve the society – 47 (48%) Scope for independent practice – 04 (4.1%) Provision for higher studies -04 (4.1%) Possibility of shifting abroad – 07 (7.1%) Possibility of good earning – 08 (8.2%)	<0.05 in each case

P value <0.05 was considered as statistically significant.

tionship as only 8 (8.2%) and 6 (6.1%) respondents admitted that they would highlight on building an empathetic attitude towards the patient and develop good communication skills, respectively, during medical training. We observed an interesting paradox regarding the response as to whether empathy of a physician has an influence on patient outcome as 59 (60.2%) responded in favour and only 9 (9.2%) opted for the negative with 30 (30.6%) being not sure in this regard (Table 3).

An overwhelming majority of the respondents (73/74.5%) were of the opinion that human cadaver based teaching in anatomy had been useful in either developing or enhancing a feeling of empathy within them. Moreover 70 (71.4%) respondents were looking forward towards a possible enhancement of this sense of empathy when they will come across live patients later during their medical training (Table 4).

Discussion

Empathy is the ability to understand and share the feelings of others. It is an essential element of physician-patient relationship which kindles the desire within the physician to help the patient, communicate with the patient and eventually provide the best possible care to the patient (Hodges and Klein, 2001). In other words it is the key factor in healthcare that can propel the clinician towards an altruistic impulse which is critical for the well being of the patient. Empathy for the patient

Table 3. Assessment of real time expression of empathy among medical students as observed in present study.

Question	Respondents (n)	Response	P-value
Among the given options which should be the primary component of patient care in your opinion?	98	Understanding the disease process – 16 (16.3%) Prescribing appropriate medicines– 16 (16.3%) Making exact diagnosis through investigations – 54 (55%) Communicating with patients – 12 (12.2%)	<0.05 in each case
What should be your priority during medical training? To develop -	98	High level of knowledge – 15 (15.3%) Clinical (manual skills) – 69 (70.4%) Communication skills – 06 (6.1%) Empathetic attitude towards patients – 08 (8.2%)	<0.05 in each case
Do you think empathy of a doctor has a bearing on the clinical outcome of the patient?	98	Yes – 59 (60.2%) No – 09 (9.2%) Not sure – 30 (30.6%)	<0.05 in each case

P value <0.05 was considered as statistically significant.

Table 4. Assessment of students' opinion regarding their level of empathy in present and future as observed in present study.

Question	Respondents (n)	Response	P-value
Do you feel that you have developed/ enhanced a feeling of empathy by learning anatomy from human cadavers?	98	Yes – 73 (74.5%) No – 10 (10.2%) Not sure – 15 (15.3%)	<0.05 in each case
Do you feel that dealing with live patients later on in your career could enhance you feeling of empathy?	98	Yes – 70 (71.4%) No – 02 (2.1%) Not sure – 26 (26.5%)	<0.05 in each case

P value <0.05 was considered as statistically significant.

constitutes one of the key professional goals of medical education (Shapiro, 2008). The American Association of Medical Colleges has identified the development and enhancement of empathy in medical students as a key goal (The Medical School Objectives Writing Group, 1999). The Accreditation Council for Graduate Medical Education lists empathy as a component of professionalism (Shapiro, 2008). Research-

ers have acknowledged that among the most difficult tasks of medical educators is teaching the students the intricacies of effective, empathic interactions with patients. As such incorporating the sense of empathy among the students remain an elusive objective due to lacunae in consensual definitions of empathy and lack of effective pedagogic methods to teach the same (Dasgupta, 2004). Interesting enough is the observation which has been documented in recent literature that the atmosphere in anatomy dissection hall provides an ideal opportunity for the students to reflect on their ability to learn and achieve the elements of empathy (Ghosh, 2015). In fact there is an overriding consensus among researchers that dissection hall is the place where the "habits of mind of the clinician are developed" (Pawlina, 2006; Hamilton et al., 2008). Hence a baseline assessment of empathy among medical students after they have been in the anatomy department for one year could be critical in designing future strategies in medical education curriculum with regards to enhancement of that feeling as the students progress along the curriculum. Moreover, as empathy is determined by various factors such as age, gender, family background, culture, intelligence, emotional stability and education (Hojat et al., 2002), a full class of medical students which is available only in the first year of a given batch provides an ideal opportunity for a researcher to explore the influence of some of these factors. Accordingly in the present study we tried to assess the baseline empathetic attitude among first year medical students.

When we consider the responses to questions 9 and 10, which constitute the core area of this study, it was observed that majority of the respondents i.e. 54 (55.1%) and 16 (16.3%) were in favour of a more mechanized and protocol oriented approach towards patient care (Table 3). These students do not consider options like communicating with patients or understanding the disease process (which essentially requires a strong physician-patient interaction) as the primary component of health care delivery. Accordingly even higher percentage i.e. 69 (70.4%) and 15 (15.3%) of the students were interested in honing their clinical skills or enhancing their knowledge levels while undergoing clinical training during the medical course (Table 3). Consequently patient oriented approach such as acquisition of communication skills or expressing empathy once more takes a backseat. The above findings undoubtedly highlight a lack of empathetic attitude or at least its expression among the first year medical students (Figure 1). Our observations are similar to recent research reports from India, Republic of Korea, Kuwait and Iran, where authors have documented low levels of empathy among undergraduate medical students (Hasan et al., 2013; Khademalhosseini et al., 2014; Murthy et al., 2014; Park et al., 2015) Our findings are somewhat different from the observations made in another recent study conducted on medical students in India, where authors have reported highest empathy level among the entry level medical students. However such an observation is made on a comparative basis against empathy levels recorded among senior students from the same institution (Shashikumar et al., 2014). As we review the findings of the present study the first factor which appears to have an impact on the primary outcome of the study is the sex distribution of the respondents, which is dominated by the male students (Figure 2) with only 32 (32.7%) females. Our observation is supported by the fact that researchers worldwide have highlighted that females are associated with an increased feeling of empathy as compared to their male counterparts (Hojat et al., 2002; Kataoka et al., 2009; Hasan et al., 2013; Khademalhosseini et al., 2014; Mostafa et al., 2014;

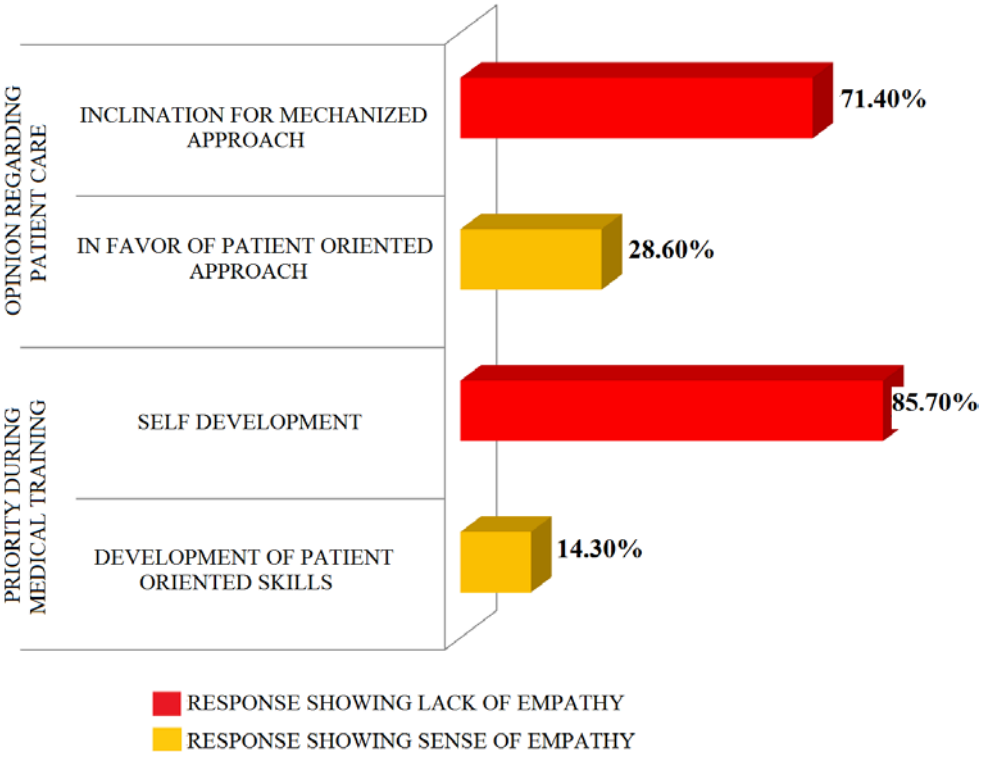

Figure 1. Graphical representation depicting the lack of empathy among a majority of the students as observed in the present study. The data used in the figure is obtained from the response to questions 9 and 10 of the study questionnaire (please refer to Box 1). Among the provided options, investigation based diagnosis and medicine oriented treatment have been considered as mechanized approach, whereas understanding disease process and communicating with patients have been considered as patient oriented approach. Similarly acquisition of clinical skills and attaining high knowledge level have been considered as self development, whereas incorporating empathetic attitude towards patients and developing communication skills have been considered as development of patient oriented skills.

Shashikumar et al., 2014). Nevertheless we tried to investigate the other factors that could be behind the primary outcome of the present study by performing an in depth analysis of the responses related to the background of the respondents and the perceptions regarding their future as medical professionals.

A close look at the responses related to background of the students revealed some interesting facts. It was observed that half of the respondents (49, i.e. 50%) were influenced by either family members (46, i.e. 46.9%), relatives (2, i.e. 2.1%) or friends (1, i.e. 1.1%) to undertake a career in medicine (Table 1). Hence for these students the influence of family members or other close individuals of the society has a significant bearing on their decision making. A recent study from the Kingdom of Saudi Arabia has documented that influence of family members and the society as such has a remarkable influence on the emotional component of empathy of a medical student

(Hamed et al., 2015). Authors of another study from Portugal have observed that influence of family considerably affects the personality traits of a medical student and eventually affects the cognitive component of empathetic behaviour (Costa et al., 2014). Another notable finding from the present study is that 48 (49%) respondents developed an interest in medicine as a career as late as the +2 level and 10 (10.2%) even later i.e. after the results of qualifying examination were declared (Table 1). It might be suggested that these students decision to join medicine could have been incidental or could have been influenced by the financial aspects of the profession. Invariably the nobility or respect associated with the profession was not the deciding factor for these students, otherwise they would have made the decision in favour of medicine as a career much earlier. According to Kim et al. factors influencing career selection among medical students particularly the financial implications have substantial effects on the behavioural pattern of the physicians and overall quality of patient care (Kim et al., 2010). Another interesting finding from the present study is that 28 (28.6%) respondents would be the first generation physician among their known members of the society (Table 1). Hence they did not have a chance to closely observe a physician and his behavioural outlook. A group of Polish researchers have found that close influence of physicians/medical professionals have a considerable effect in enhancing the feeling of empathy among medical students (Bratek et al., 2015). The above observations among the respondents of the present study could possibly have an influence on their lack of expression of empathy (Figure 2).

We came across some interesting findings while analyzing the students' responses regarding their perception as future medical professionals. A majority were look-

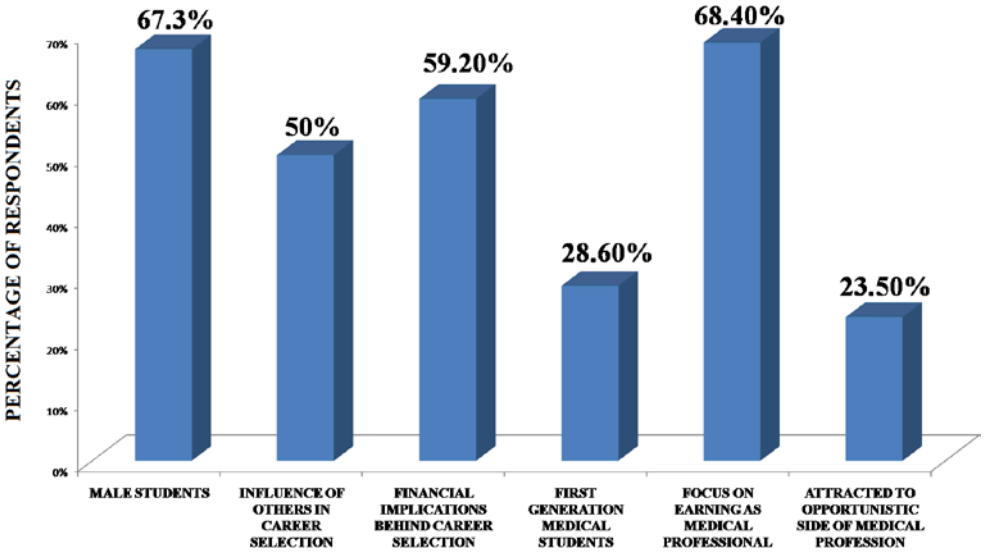

Figure 2. Graphical representation depicting the possible factors responsible for low level of empathy among the students as observed in the present study. The data used in the figure is obtained from analysis of the responses to question 1 and 4 to 8 of the study questionnaire (please refer to Box 1).

ing forward to financial gains as a physician which is evident from the fact that 50 (51%) students have opted to become self practicing physicians and 17 (17.4%) wants to join the currency spinning corporate sector (Table 2). Both options are economically lucrative and would enrich the financial health of the individual. Ironically only 23 (23.5%) wants to join the service oriented rural medical program, although 34 (34.7%) respondents were actually from rural areas. Only 8 (8.2%) students were interested in becoming a medical teacher which is not so much attractive in terms of remuneration (Table 2). We observed a positive trend among the students regarding their perception of medical practice in general as 47 (48%) and 28 (28.6%) respondents identified opportunity to serve the society and respect, respectively, as the factors which symbolized medical profession. However the remaining students, who constitute a substantial proportion, gave a reflection of their career oriented outlook as they identified good earning (8/8.2%), going abroad (7/7.1%), scope for higher studies (4/4.1%) and independent practice (4/4.1%) as factors which make medical practice attractive (Table 2). If the above observations are correlated with the primary outcome of our study then it implies that orientation of medical students towards the financial aspects of the profession possibly leads to an erosion of empathy (Figure 2). Similar observations have been documented by Chen et al. (2007) and Nunes et al. (2011) in their research reports, whereby they have found a significant negative association between financial interests associated with medical practice and feeling of empathy among students. In other words both those research groups have concluded that financial orientation is cause for decline in empathetic attitude among medical students.

Although most of the findings from the present study highlight the lack of empathy among first year medical students, we would like to draw attention to an interesting observation, that 59 (60.2%) respondents felt that an empathetic approach of a physician definitely has an impact on the clinical outcome of a patient (Table 3). Another finding that could be of considerable interest to the medical educators and policy makers is that a majority (73, i.e. 74.5%) of the students were of the opinion that they have either developed sense of empathy or their feeling of empathy was enhanced during their dissection in anatomy involving human cadavers (Table 4). Such an observation is similar to what has been documented by multiple authors in their research (Crow et al., 2012; Dosani and Neuberger, 2016; Neumann et al., 2011). Regarding the present study, although this is self assessed empathy on part of the students, however the finding cannot be ignored considering the fact that the study population represented a young group (median age being 19 years) and were first year medical students. Both these factors i.e. young age and junior-most batch in a medical college have been found to be associated with a higher level of empathy as compared to their seniors, by researchers across the world (Kataoka et al., 2009; Neumann et al., 2011; Hasan et al., 2013; Costa et al., 2014; Khademalhosseini et al., 2014; Park et al., 2015). Based on the above discussion we may suggest that although overall empathy level may be low among the respondents, however there is little doubt that a baseline sense of empathy does exist among the first year medical students and the students have themselves attributed this aspect of their personality trait to the anatomy teaching, particularly the dissection room experience, where they come across an unique education model of medical curriculum i.e. human cadaver based teaching (Figure 3).

Based on the findings of the present study, it is clear that medical students after completing one year in the anatomy department develop a baseline empathy level,

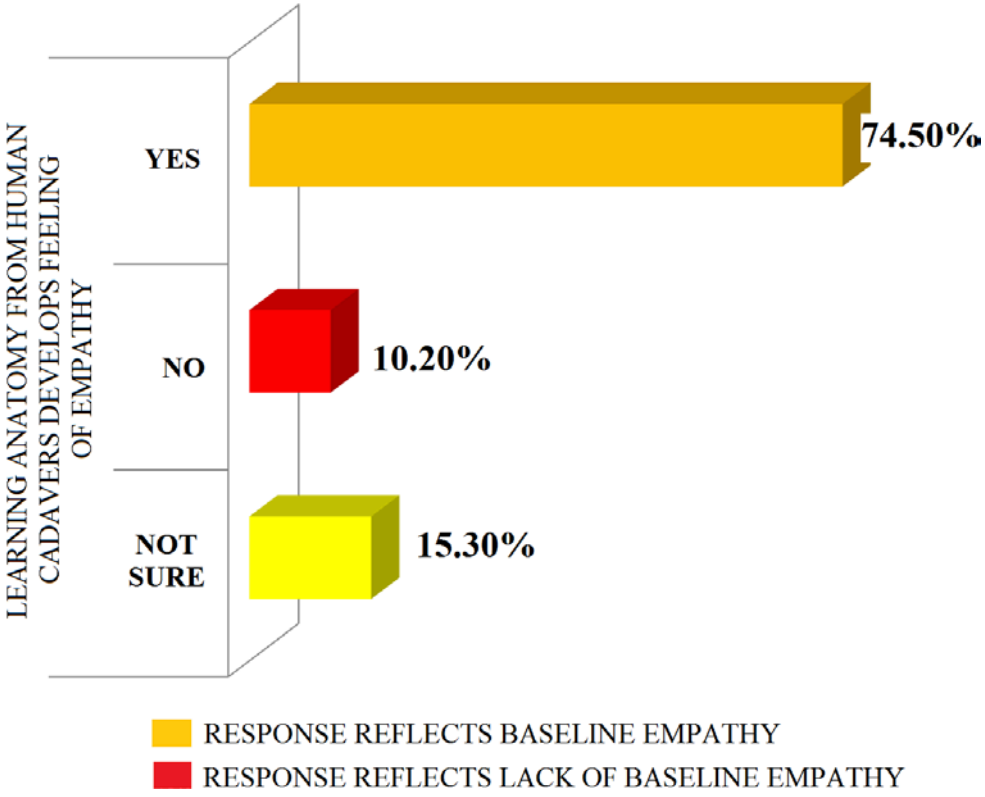

Figure 3. Graphical representation depicting the baseline empathy level among majority of the students as observed in the present study. The data used in the figure is obtained from the response to question 12 of the study questionnaire (Please refer to Box 1).

which although on the lower side, is significant in the modern day medical education curriculum. The relevance of this observation lies in the fact that it presents a golden opportunity for the educators to design effective strategies to enhance/build upon this baseline level of empathy among the medical students as they continue their training beyond the basic science subjects. In the present study, majority of the students i.e. 70 (71.4%) were of the opinion that their empathy level would increase when they come across live patients during clinical training (Table 4). Mostafa et al. (2014) have actually reported that the level of empathy in medical students gradually increases after undergoing clinical training in medical college. Kataoka et al. (2009) have also documented that empathy scores increased among students in Japan as they progressed along the medical curriculum. However most of the researchers have found that the empathy level actually follows a downward spiral as medical students progress through the academic years with lowest level of empathy being reported during clinical training (Neumann et al., 2011; Costa et al., 2014; Khademalhosseini et al., 2014; Shashikumar et al., 2014). Researchers have cited several reasons for this fall in

empathy levels which include: mistreatment by superiors, excessive workload, lack of support from colleagues, vulnerability regarding future, gender specific discrimination and reduced contact with family members (Neumann et al., 2011). Hence increasing the baseline empathy level or even maintaining it among medical students particularly during clinical training is a challenge for medical educators. Researchers have come up with novel approaches to counter this prevalent trend like encouraging students to undertake reflective writing about their interactions with patients, practice altruism (drawing closer to others), incorporate inclusive thinking and embrace patient centered medicine (Dasgupta, 2004; Shapiro, 2008). However the effectiveness of such measures is debatable till date and requires further evaluation through prospective and experimental multicenter studies. In future such projects could possibly constitute the core area of research in the domain of assessing empathy among medical students.

Conclusion

Till date most of the research work regarding the level of empathy among medical students was concentrated on those undergoing clinical training. Very few studies reflect upon the empathetic attitude among students while studying the basic science subjects. In the present study we observed empathy among medical students who have been learning anatomy for one year to be on the lower side and this was in accordance with the global trend. Analysis of their responses helped us to identify the possible reasons, like dominance of male subjects in the study population, influence of family members or other known individuals of the society on their decision to undertake medicine as a career, financial interests behind their career selection, being first generation medical students and money minded future outlook as medical professionals, which could possibly have led to diminished empathy levels among medical students. However we also observed that the students have developed a baseline level of empathy at the end of the first year of medical course, which the students themselves attributed to human cadaver based teaching in anatomy. In our opinion, such an observation presents an opportunity for medical educators to design strategies to nurture and enhance upon the level of empathy as the students progress through the years within the medical curriculum. However going by research reports this appears to be a challenging task as it has been found by most of the authors that empathy among medical students goes downhill during clinical training. However we look forward to convergence of efforts from educators and policy makers that would ensure that baseline empathy level acquired while learning a basic science subject such as anatomy is consolidated even when the students are undergoing clinical training as this would be a significant step towards preparing empathetic and compassionate physicians of tomorrow.

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Ethical standard

The authors hereby declare that the study was conducted only after approval had been obtained from the Ethics Committee of ESI-PGIMSR & ESIC Medical College, Joka, Kolkata, whose guidelines are in accordance with the Declaration of Helsinki (1964) and all subsequent revisions. They have no conflict of interest to declare. This study received no financial support.

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