



## Participants' Feedback about and Knowledge before and after a Two-Day Medical Humanities Workshop at Mysuru, India

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*The authors collaborated in designing, analysing, interpreting and preparing the manuscript.*

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### **ABSTRACT**

**Background:** Medical humanities is using subjects traditionally known as the humanities for specific purposes in education in medicine. A two-day medical humanities workshop was facilitated at JSS medical college, Mysuru, India on 9<sup>th</sup> and 10<sup>th</sup> March 2020.

**Objectives:** The authors obtained participant knowledge before and immediately post-conclusion of the workshop and their feedback regarding the workshop.

**Methods:** Participants' knowledge was measured by asking them to answer true or false a set of twenty statements. Some statements were worded negatively, and their scores reversed when calculating the total score. Total scores pre and post-workshop were compared using appropriate statistical tests ( $p < 0.05$ ). Participant feedback about various facets of the workshop including venue, organization, facilitators, role-plays, activities related to paintings, home assignment, debate, and elicitation sessions were obtained. Free text comments were also invited.

**Results:** Thirty-four medical students (15 male and 19 female) participated. Most students were from Karnataka and the neighbouring Kerala state. The median total scores before and immediately following the workshop were 16.00 and 17.00. The increase was highly significant ( $p < 0.001$ ). The mean student ratings of all parameters were 3.8 and above. Role-plays and debates were the most enjoyable. A greater range of activities and more involvement of students from other institutions were suggested. A few other topics were recommended.

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**Conclusions:** Participant feedback was positive. They wanted similar workshops in the future. The workshop could serve as a launchpad for a medical/health humanities module at the institution.

*Keywords: Medical students; medical humanities; paintings; role-plays.*

## 1. BACKGROUND

Medical humanities (MH) has been defined as 'an interdisciplinary, and increasingly international endeavour that draws on the creative and intellectual strengths of diverse disciplines, including literature, art, creative writing, drama, film, music, philosophy, ethical decision making, anthropology and history in pursuit of medical educational goals' [1].

India has the highest number of allopathic medical colleges globally at 534 and admits nearly 80000 students to the undergraduate medical (MBBS) course [2]. There has long been a keen interest in MH in India. An article published in 2012 by Supe mentioned that medical humanities should be introduced into the curriculum of every Indian medical college to improve healthcare and the quality of medical graduates [3].

The University College of Medical Sciences (UCMS) was one of the first institutions to establish a medical humanities group for staff and students according to Gupta and co-authors [4]. Theatre of the oppressed (TO), a unique form of theatre introduced by the noted Brazilian theatre personality, Augusto Boal is designed to empower communities to understand their reality and find solutions to their problems [5].

Gupta and co-authors mention that the medical humanities group at UCMS organized a two-day workshop on theatre of the oppressed which was attended by participants from different institutions [6]. The Bengaluru-based Centre for Community Dialogue and Change conducts frequent workshops using TO techniques in different Indian colleges and institutions [7]. In a recent article Shankar describes his involvement with MH modules in Nepal and the Caribbean [8].

The Caribbean MH module was conducted in small groups and used group activities, presentations, facilitator inputs, paintings and activities, role-plays and debates to explore different aspects of the discipline. Among the sessions facilitated were Introduction, Empathy,

What it means to be sick, The patient, The patient-doctor relationship, The student of medicine and Death and dying. The two-hour sessions were held once a week and the module was completed over nine weeks including time off for students to prepare for routine assessments in other subjects.

Though there have been initiatives that have not been published, descriptions of medical/health humanities workshops in India are sparse. Medical and health humanities courses have also been offered online especially as massive open online courses (MOOCs) by western universities. The authors decided to provide an overview of the MH module organized at the institution, participant knowledge before and after the workshop and their feedback on the workshop.

One of the challenges for the authors of the present study was to offer the module over two days as a workshop. A total of twelve hours spread over two days was available to explore the subject.

The topics which were chosen after extensive discussion among the authors were introduction, what it means to be sick, the patient, the patient-doctor relationship, and the student of medicine. The workshop was carefully designed to provide an active learning experience for the participants. The learning methods and activities used were similar to those offered to students elsewhere during the previously described MH modules but were modified in many areas to suit the local context. A home assignment to create a hundred-word story about the scene depicted in a painting was provided at the end of the first day.

The manuscript provides an overall description of the workshop, offers participants' opinions about the workshop, and compares their knowledge about MH at the beginning and conclusion of the workshop.

## 2. METHODS

The two-day workshop was conducted at the JSS Medical College, Mysuru, India on 9<sup>th</sup> and

10<sup>th</sup> March 2020. JSS Medical College, a constituent institution of JSS Academy of Higher Education and Research has been accredited A+ grade by National Assessment and Accreditation Council (NAAC).

The Medical Education Unit of the medical college regularly conducts several value-added programmes to enrich the knowledge and skills of medical students. The current workshop used various methods to provide participating students with an introduction to certain important topics. The workshop started with a pre-test. Students were asked to mark a set of twenty statements about the medical humanities as either true or false. No personal demographic information was collected. A cross-sectional pre-post study design was chosen for the study. All workshop participants were invited to be involved in the study. It was stressed that participation was voluntary.

The statements addressed different areas that would be covered during the two-day workshop. Table 3 mentions the statements used. A brief opening ceremony attended by university administrators underscored the university's commitment to the workshop.

Four student groups were created for the sessions. The room where the sessions were held had comfortable seating, worktables, flip boards, and flip charts, LCD projectors, microphones, whiteboards and whiteboard and permanent markers. Air conditioning and fans provided a comfortable room temperature. A group leader was selected by the group members at the beginning of each day.

The other roles of timekeeper, scribe and presenter were rotated among the group members. There was an open space at the front with a table and chairs which could be used for role-plays. Snacks, tea/coffee, and lunch were provided on both days. Near the completion of the first day, a home assignment was given to the participants which they had to complete individually. Participants had to write a hundred-word story about the scene depicted in the painting. We selected the painting 'Scream' by the Norwegian artist, Edvard Munch. Printed copies of the activities, role-play scenarios, and paintings were made available. These were also projected and made available through the participant WhatsApp group.

Participants knowledge was again measured using the same set of twenty statements after the workshop. The order of the statements was shuffled. A certificate and a letter mentioning the participant's specific achievements were distributed at the end of the module. Feedback from the participants about the workshop was also obtained. Again, no personal demographic information was collected.

Participants were explained the importance of the pre and post-test and their feedback about the workshop and requested to participate. Any concerns and queries were addressed.

Among the areas addressed were the venue, organization, facilitators, role-plays, activities related to paintings, home assignment, debate, and elicitation sessions. Two strengths of the workshop and two areas for further improvement were also elicited. Participants' opinion about which learning method they enjoyed the most and why was also noted. Opportunity for free text comments was also provided. The pre and post-test statements were scored 1 for a correct answer and 0 for the wrong one.

To reduce guessing and the chance of providing a stereotyped answer certain statements were negatively worded. The total score was calculated by adding the scores of individual answers. The normality of distribution of the total scores was assessed using the one-sample Kolmogorov-Smirnov test. The appropriate measures of central tendency and variation were then calculated. The total scores before and after the workshop were compared using appropriate statistical tests ( $p < 0.05$ ).

### 3. RESULTS

A total of 34 medical students participated in this workshop on a voluntary basis of whom 28 were from JSS Medical College and six were from another medical college in the neighbouring district. Among these participants, 15 were male and 19 were female students.

Fourteen students were studying in first year MBBS, 16 were in the second year and 4 were in the third professional year. The home state of majority (16) of participants was Karnataka and others belonged to the states of Kerala (07), Tamil Nadu (02), Andhra Pradesh (01), Telangana state (02) Delhi (02), Haryana (01),

Madhya Pradesh (01), Uttar Pradesh (01), and Maharashtra (01). Table 1 shows the demographic characteristics of the participants.

Among the paintings used during the workshop were Chemotherapy by the Canadian artist, Robert Pope, New field by the same artist, Tree of hope by Frida Kahlo, Science and charity by Pablo Picasso, Doctor and doll by Norman Rockwell, Scream by Edvard Munch, Before the shot by Norman Rockwell, Visitors by Robert Pope, Preoperative examination by Joseph Wilder and The Doctor by Sir Lukes Fildes. Table 2 shows the role-plays used during the workshop.

The role-plays were similar to those used previously but were modified to suit the local scenario and circumstances. Role-plays were used during the sessions on what it means to be sick, the patient, the patient-doctor relationship and the student of medicine and were a major learning modality employed. The total scores were not distributed normally, and hence median and interquartile range were used to describe the scores.

The same was also true for individual statement scores. Table 3 shows the median scores of individual statements before and after completion of the workshop. The median total score before the workshop was 16.00 and increased to 17.00 after the workshop. The increase was highly significant ( $p < 0.001$ ). Table 4 shows participant feedback about the workshop. The average respondent scores about different parameters related to the workshop are shown.

**Table 1. Socio-demographic characteristics of study participants**

Socio demographic character	Number	Percentage
<b>Age in years</b>		
18	12	35.3
19	16	47.1
20	04	11.8
21	02	5.9
<b>Gender</b>		
Male	15	44.1
Female	19	55.9
<b>Professional year</b>		
First	14	41.1
Second	16	47.1
Third	04	11.8

All scores were above or equal to 3.8 out of a maximum score of 5. Eighteen respondents

mentioned that they enjoyed the role-plays the most. Among the reasons mentioned were 'better interaction, impact on thought process, helped in understanding the situation better, we were able to feel the situation we were in, they were fun and learning too did happen, we were able to express our views, ideas and talents, we usually experience those incidents in our daily life and it gave an opportunity to look closely at the situation of what it means to be a doctor or a patient'.

Seven respondents enjoyed debates the most as 'the thoughts of different people came up in the team voice, most informal being the most fun, we get many perspectives on a single issue, a person has to immediately cross question and answer so that one can have deeper thoughts being highlighted at that time'. Others enjoyed paintings as multiple perspectives on a single painting were brought out.

Among topics they wanted during future sessions were communication, ethics, stress management, personal development, interpersonal relationships, euthanasia, abortion and professionalism. Among the strengths of the workshop were role-plays (10 respondents), debates (7 respondents), activities related to paintings (6), group work (2) and brainstorming sessions (2 respondents). Other strengths were the involvement of the facilitators, planning and storytelling activities.

Among areas that may need strengthening were interactions (3 respondents), lesser role-plays and incorporation of other activities (6 respondents), greater importance to debate, the involvement of more students from other institutions and increasing time for the activities. Among other comments were 'great workshop, I would like to participate in future, we worked out various issues and were not taught like this any time before, the workshop let us learn new things and new ways of learning, overall it influenced me a lot and really spend my two days in a well and good manner'.

#### 4. DISCUSSION

Participant feedback about the workshop was positive. They thought that the workshop was different from the traditional sessions, provided a different perspective and they were supported to arrive at solutions on their own. Previously participant feedback about the MH module at a medical school in the Caribbean was obtained [9].

The responses shared similarities with those obtained in the current study. Respondents mentioned that the module offered a different perspective compared to other basic science subjects. The activities related to paintings taught the importance of creativity and of appreciating multiple viewpoints. Role-plays encouraged active learning.

The respondents mentioned that they had fun while learning which is like that mentioned in the present study. At a medical college in Nepal feedback of the participants about the modules facilitated for students and faculty members was positive [10]. Students opined that the module was fun, and the issues addressed will be important in their future practice.

They were also proud that their institution was one of the few, at that time (around 2010) offering the module in South Asia. At a medical college in Saudi Arabia, history of medicine during the Islamic era, Islamic medical ethics, and medically relevant Arabic poetry were taught using a mix of lectures alternating with interactive sessions [11]. The sessions were appreciated by participants.

Role-plays have been utilized in medical education for a variety of purposes. They have been used for enhancing the communication skills of second-year students concerning breaking bad news and difficult interactions among others [12]. Students felt playing the doctor's role was more important than playing the patient.

During MH sessions playing the role of the patient, the caregiver and the patient's family is important for putting oneself in their position and developing empathy for these individuals. At a medical school in India, it was hypothesized that role-plays can better guide students by helping them gain knowledge and attitudes through simulation to better guide them in real-life situations [13].

The post-sensitization scores in the knowledge, skills, and attitudes domains in cases from the cardiovascular, respiratory and gastrointestinal system were significantly higher after enacting role-plays. Paintings have also been commonly used in medical education. Visual thinking strategies (VTS) are getting increasing attention in medical education.

**Table 2. Case scenarios used for role-plays during the workshop**

Session	Role-play scenarios
What it means to be sick	Ms. Mohini is a 28-year-old lady who was trafficked and was compelled to become a sex worker. After ten years she was sent back to her country and village as she became HIV positive. The disease is at an advanced stage and she has no money for treatment. Her family has reluctantly allowed her to stay with them but is not happy that a retired sex worker is living with them. <i>Explore what it means to be sick using a role-play.</i>
	Ms. Rugmini is a 35-year-old lady living in Mysuru and suffering from pneumonia who has presented to the hospital. She works part-time in a fast-food restaurant chain. Her husband is paralyzed from the waist downwards following an accident at the factory where he was working three years back. Ms. Rugmini does not have health insurance and has three children. <i>Explore what it means to be sick using a role-play.</i>
The patient	Ricky Singh is a 30-year-old man who has been diagnosed to be suffering from HIV/AIDS. He lives in Bengaluru and is the owner of a night club. On learning that he is suffering from HIV/AIDS his wife has left him taking with her their children. She has accused him of having intimate relations with the exotic dancers in his club. He is very depressed and has come to you accompanied by his mother. <i>Explore the scenario from the patient perspective using a role-play.</i>
	Ms. Gowda is a 27-year-old single mother with two young children living in Mysuru. She has been recently diagnosed to be suffering from pancreatic cancer at JSS Medical College hospital and has

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	<p>been given less than three months to live. The lady is deeply worried about her young children. <i>Explore the scenario from the patient perspective using a role-play.</i></p> <p>Gayathri is a married lady living in Mysuru. While going out to buy food for her family she was injured in a hit-and-run truck accident. Her right leg was badly damaged. She is admitted to your hospital and you are the treating doctor. You must amputate her limb from above the knee to save her life and gangrene and infection have set in the limb. <i>Explore the scenario from the patient perspective using a role-play.</i></p>
The patient-doctor relationship	<p>Dr Irena is a doctor in Mysuru who has completed her postgraduate training in Int Medicine. A twenty-two-year-old college student named Richard has been visiting the clinic for the last five years. The handsome gentleman suffers from severe attacks of migraine and is on drug prophylaxis. Irena has realized that she is in love with Richard. She wants to live happily ever after with him. However, she is not sure about whether it would be correct for a doctor to marry her young male patient. <i>Analyse the issues involved using a role play.</i></p> <p>Sushmita is a young lady suffering from the terminal stage of cancer. She is in severe pain and her once beautiful body has been reduced to a skeleton. Her family cannot bear to see Sushmita in pain and want you, their family physician to put Sushmita out of her misery. <i>Analyse the issues involved using a role play.</i></p> <p>Doctor Verma runs a clinic in Mysuru. He despises Bangladeshis. Recently a Bengali lady has come to his clinic. The lady is suffering from pain in the lower abdomen and speaks only Bengali. She has come to the clinic accompanied by her brother in law who knows three-four words of English and Kannada. Dr. Verma is not happy that he has a Bengali patient and wants to refer her to some other doctor. <i>Analyse the issues involved using a role play.</i></p>
The student of medicine	<p>Jeanne Rambo is a medical student at JSS Medical college. She is a talented musician and has won several prizes during her school days. She wants to participate in an international student festival. However, her parents are concerned about her poor academic performance. They have invested a lot of money in the education of their daughter. They want her to concentrate on her studies and forget about playing the guitar. <i>Explore the situation using a role play.</i></p> <p>Roopa is a second-year medical student studying at JSS Medical College. She feels overwhelmed by the pressure of subjects in the curriculum. She also believes herself to be in love with Shahrukh, a handsome guy studying in her class. The guy however does not reciprocate Roopa's tender feelings. Irena, a pretty young girl is often seen with Shahrukh. Roopa is very much disturbed and is neither able to study nor sleep. <i>Explore the situation using a role play.</i></p> <p>Preethi is a third-year nursing student. She is very pretty. She is also good at her studies. She feels that a second-year postgraduate medical student is taking a lot of interest in her and maybe attracted to her. He hangs around her all the time and tries to get her to go out on dates with him. Preethi is worried and does not know what to do. <i>Explore the situation using a role play.</i></p>

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**Table 3. Scores of individual statements before and immediately after the workshop**

Statement	Median scores	
	Pretest	Posttest
Health humanities is radically different from the medical humanities.*	0.00	0.00
Theatre of the oppressed was started by the great theatre artist, Mr Sreeram Lagoo.*	0.00	1.00
Measuring the long-term impact of the health humanities is relatively easy.*	0.00	0.00
Critical review of paintings can improve the visual diagnostic skills of students.	1.00	1.00
Countries which concentrate on primary health care have good health status.	1.00	1.00
Literacy of girls is extremely important to attain a good health status.	1.00	1.00
The Indian government spends over 5% of the GDP on health.*	0.00	1.00
Prolonged sickness of a patient can adversely impact the caregiver.	1.00	1.00
HIV/AIDS is a disease with a social stigma.	1.00	1.00
Euthanasia is legal in India.*	0.00	0.00
Most people in India pay from their own pocket for medical expenses.	1.00	1.00
The patient-health care provider relationship is becoming increasingly authoritarian.*	1.00	1.00
Medical malpractice is an important challenge facing doctors in many countries.	1.00	1.00
It is all right for a professional to have an intimate, personal relationship with his/her client.*	0.00	0.00
Sexual harassment is not an important problem in the health workplace.*	0.00	0.00
Lifelong learning is not important for professionals.*	0.00	0.00
A proper work-life balance is important for professionals.	1.00	1.00
Role-plays do not have an important role in the medical/health humanities.*	0.00	0.00
Self-care is an important skill for all health professionals.	1.00	1.00
Frida Kahlo paints about illness, sickness and disfigurement from a pessimistic perspective.*	1.00	1.00

\* These statements are negatively worded and the reversed score is shown

**Table 4. Average scores of different parameters related to the workshop**

Criteria	Mean	SD	Median score	IQR		Min	Max
				25th	75th		
Venue	3.87	1.01	4	3	5	1	5
Organization	4.40	0.77	5	4	5	2	5
Facilitators	4.80	0.41	5	5	5	4	5
Role plays	4.23	0.77	4	4	5	3	5
Painting activities	3.97	0.93	4	3	5	2	5
Home assignment	3.80	1.13	4	3	5	1	5
Debates	4.77	0.43	5	4.75	5	4	5
Brainstorming sessions	4.47	0.73	5	4	5	2	5

This facilitated discussion of an art image to develop the ability of persons to look carefully at an image, frame their observations and ideas into words, and actively scaffold on other's thoughts [14]. At a United States (US) medical school, residents and faculty enthusiastically participated in the VTS process [15]. Participants gained new insights, discovered further interpretations of the artwork and learned to work together as a group.

This was similar to the comments mentioned by participants in our module. At a medical school in Nepal, students enjoyed the use of paintings in the MH module [16]. They believed that some paintings were hard to interpret and the exercise 'what do you feel' on looking at the painting was challenging. The affective domain has received less attention during the student's course of study.

At the University of California, Irvine in the US, 38 year three students participated in either training with clinical photographs and paper cases (group 1) or training using art and dance (group 2) [17]. Observation and pattern recognition skills improved in both groups but group 2 also developed emotional recognition skills, empathy, identification of narrative, and awareness of multiple perspectives. Careful attention was paid to the composition and number of groups. Considering the physical space of the room and the number of facilitators available we arrived at a consensus that four groups were optimum. Each group had 8 or 9 students, and this provided a rich diversity of members. Men and women approach and function differently in a group environment and a proper balance was ensured as recommended in the literature [18]. Diversity in academic ability is also helpful. In a functioning group environment, the stronger members support the weaker ones.

More senior students can support junior ones. Women may be less likely to volunteer to assume leadership roles within groups, but they may be equally capable once they assume the role. Tutors may need to be more proactive in helping females assume leadership roles [19].

We are happy to note that in our groups, women students volunteered to be group leaders on both days. There was at least one student from the medical school in the neighbouring district in each group. Physical characteristics of the room where the sessions were held like temperature, humidity, lighting, and space are also important. Particular attention was paid to these characteristics. We also ensured that the material required for the completion of group work was readily available.

Sexual harassment in medical schools and during medical training is common. In the US, women medical students at five medical schools had either witnessed or observed sexual harassment [20]. The authors concluded that medical educators should have more information about how women medical students understand and respond to sexual harassment. In Ghana women medical students were much more likely to be sexually harassed than men [21]. Sexual harassment adversely affected the victim's health outcomes and the authors recommended that the sexual harassment policies of schools should be widely circulated and reporting procedures and support for victims provided. We briefly addressed the issue through

a role-play during the session on the medical student.

Respondents agreed that this is an important issue and may not be fully addressed in medical schools. Keeping in mind the importance of attitudes, ethics, and communication skills in the undergraduate medical curriculum, the previous national regulatory agency, the Medical Council of India has introduced the Attitude, Ethics, and Communication (AETCOM) module [22].

The module is spread over different years of the undergraduate medical (MBBS) course and topics like what it means to be a doctor, what it means to be a patient, the doctor-patient relationship, foundations of communication, working in a healthcare team, what it means to be the family of a sick patient, disclosure of medical errors, dealing with death, the patient-industry relationship, among others are addressed. Case studies are a strength of the module.

The AETCOM module can serve as a base to introduce MH in Indian medical schools. A recent article provides a road map to introduce MH in Indian medical colleges [23]. The number of topics covered during the workshop was a compromise between comprehensiveness and practicality. A recent article mentions that the new guidelines of the Medical Council of India do not mention the word 'medical humanities' and all non-medical components have been ossified under the AETCOM module [24]. This is inadequate and the emphasis on capsules of information can prevent any genuine engagement with the subject.

We had to ensure that each topic was addressed in adequate detail. Abortion and reproductive rights, death, euthanasia were among other topics suggested. Death and dying is addressed during the MH module in the Caribbean and in modules that were conducted in Nepal. Abortion education is limited in US medical schools and authors recommend that it be offered in all US medical schools [25].

We could not obtain published information on abortion education in India. A survey, however, found that one-quarter of respondents considered abortion to be morally wrong, one-fifth did not consider it acceptable for unmarried women, and only 13% had any clinical practice in abortion services [26]. The strength of the study



was the excellent response rate of the participants.

The limitation was that information was obtained only using a questionnaire and was not triangulated with information obtained from other sources. The participants were a self-selected and motivated group and they may have a more positive attitude toward MH compared to their peers. Participants' knowledge was only measured immediately after the workshop.

## 5. CONCLUSION

The response of the participating students to the workshop was positive. Feedback was obtained about various learning modalities used. The two-day workshop can serve as a launching pad to offer a formal medical humanities module at the institution. The module can be offered under the umbrella of the AETCOM module to increase faculty and student acceptance.

Logistic issues should be addressed to offer the module to a large student body using small group learning approaches.

## CONSENT AND ETHICAL APPROVAL

Ethical approval has been approved by the Institutional Ethics Committee, JSS Medical College. Informed and written participant consent obtained and preserved by the authors.

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## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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