ABSTRACT

To compare constructivist and traditional power point teaching modalities in a cardiology workshop for medical undergraduates. The purpose of introducing the constructivist method was to activate the cognitive domain of the students and promote self learning. A cross sectional qualitative and quantitative study was planned on hundred, second and third professional medical students (III to IX semester) who were screened to participate. Topics discussed with the constructivist method were clinical case discussion, basic and advanced cardiac life support, electrocardiography, and community cardiology. The traditional power point method topics discussed were cardiac surgeries, paediatric cardiology and advanced diagnostic cardiology. Assessment on feedback of the students and interpretation of the interviews of medical educators, students and patients and grading of lectures from 0-10 was undertaken. Seventy two percent liked the active participation of students in the constructivist method of teaching. Seventy two percent of the participants found power point presentations as monotonous and no different from the usual didactic lectures conducted in the class room teaching. There was an up gradation of scores after the teaching sessions for clinical case discussion, ECG, BLS/ACLS and cardiac surgeries. The medical educators also found the constructivist method of teaching more practical. Constructivist method of teaching may be regarded as a new better way of teaching medical students as it considers the students as adult learners and promotes self learning.

Keywords: Cardiology Workshop, Constructivist Method, Learning Session, Medical Educators, Patient Centred Healthcare, Successful Teaching

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INTRODUCTION

A successful teacher is no longer on a height; pumping knowledge at high pressure into passive receptacles... he is a senior student anxious to help his juniors said William Osler (Rani et al., 2012). While teaching medicine most doctors fail to realize their contribution towards the emerging tomorrow’s doctors and also how important it is to accept the idea of being a senior student. Where pedagogy applies to the education of children, educating adults is known as andragogy. Andragogy, introduced by Malcom Knowles is based on assumptions—about how adults learn and on their attitude and motivation for learning. Knowles emphasised on encouraging learners to develop their own learning objectives, allow an environment where they feel safe and comfortable expressing themselves and involved learners in mutual planning for the management (Kaufman, 2008). Jonassen proposed that constructivist learning environment provides multi-dimensional representations of reality and hence the complexity of the real world, knowledge building instead of knowledge reproduction, collaborative construction of knowledge through social negotiation and not competition (Jonassen, 1994).

With medical science incorporating new technologies for better diagnosis of a clinical situation in a patient we have come so far that today we are more interested in diagnosis than the patient himself, his needs, his affordability for the treatment and his concerns. Therefore a need was felt to conduct a qualitative and quantitative assessment of a new constructivist method of teaching where medical students were sensitised to see patient as another human being and not as a bundle of symptoms and signs. This qualitative and quantitative study was done to extrapolate and illuminate the actual situation of the patient and individualize the treatment and was different from the usual quantitative approach that may seek prediction, causal determination and universalization (Hoepfl, 1997). Data triangulation is one way to increase the trustworthiness of qualitative research and is considered a robust and comprehensive way to analyse data (Gliner, 1994). We applied data triangulation for interpretation of feedback from students, medical educators and organisers using different modalities of teaching. A ‘constructivist method’—with a discussion amongst students and medical educators on the broader perspective of the patient’s condition which not only discussed the patient clinically but also highlighted the emotional, psychosocial and spiritual queries of the patient with emphasis on ways how to help the patients and a traditional power point presentation method using a projector and screen with the teacher giving a didactic lecture and inviting questions at the end.

- **Design:** This was a cross-sectional qualitative (open ended questions were asked) and quantitative study (grading was done) design with attention to method of learning process used. Feedback of student perceptions, medical educators and organisers were used and the results were illustrated by comparing the expected and observed grades from 0-10 for each topic.

- **Hypothesis:** Constructivist method of teaching with special emphasis on social, psychosocial, spiritual factors of individual patient may be considered a better approach to teaching than the traditional power point teaching.

- **Anticipated Outcome:** Determine the perceptions of all the participants (students, medical educators and organisers) and compare the constructivist learning and traditional power point teaching modalities.

- **Methods:** Two different teaching modalities (Constructivist and traditional power point teaching) were used in a three day cardiology workshop held in a medical college in a semi-urban setup in September 2012. Three medical educators were allotted to the constructivist and traditional power point teaching methods each. Hundred students from the MBBS second and third professional part-I (ENT, ophthalmology and PSM) and part-II (Medicine, Surgery and obstetrics and gynaecology) were selected through a written
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