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MEDICAL STUDENTS REACT TO CADAVERIC DISSECTIONS

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Abstract

The medical student is under considerable stress as he is facing a professional course that needs total dedication and concentration. As enters the course, he goes through the anatomy curriculum, which involves interaction with cadavers and cadaveric material. This study analyses the reactions of students on their first exposure to the human cadaver. 300 students were included in the study. A proforma was designed with the objective of identifying specific patterns of attitudes and problems faced by the students on their first exposure to the human cadaver. Viewpoints regarding the need for pre-education sessions were also elicited. The positive feelings included a curiosity and interest to learn about the structure of human body. Few were scared, some put off by the formalin fumes and few were hesitant to dissect the cadaver. Students also felt a sense of gratefulness to the people who donated their bodies for dissection. It was reported by some that negative feelings influenced their routine activities. Students felt the need to seek help from faculty in overcoming their anxiety. They felt that a pre-education session should be conducted before the formal dissection teaching begins which could instill a sense of respect into the minds of the students and eliminate the feeling of anxiety. A better teacher – student interaction will go a long way in improving the attitude of students towards cadaveric dissection. This will offer a stable mental status for the fresh medicos to handle higher levels of stress in their clinical careers, thereby reducing the drop- out rates.

Introduction

The medical student is under considerable stress as he is facing a professional course that needs total dedication and concentration. Cadaver dissection is an emotionally charged issue(Kennedy et al., 2009) Although the morality of dissection for advancement of medical science is widely accepted, the emotional impact on medical student is often ignored. Cadaver Dissection has been called the "sharp-end" of medical education. Dissection has also been labeled as the "royal road" and cadaver as the "first patient" (Newell, 1995). The first exposure to human cadaver dissection has the potential to be an actual stressor which can cause psychological trauma. Dissection of a human body during an anatomy course raises for the first year medical student questions about invasion of privacy, cadaver sources, dying and death (Bertman et al., 1985). The affective and emotional aspects of human dissection are salient ingredients in professional formation and professionalism signifies medical integrity and guarantees correct professional conduct (Warne et al., 2005).

Aims and Objectives

1. To analyze the reactions of fresh medicos on their first exposure to the human cadaver.
2. To emphasize the need for pre-education session for newly admitted medical students.

Materials and Methods

This is a prospective study conducted at Padmashree Dr. D. Y. Patil Medical College, Pune. 450 students were enrolled in the study. The study was approved by the Institutional Ethical Committee. The objectives of the study were clearly explained to the participants while obtaining their informed consent. The questionnaire contained demographic information, questions regarding previous exposure to information about human anatomy and positive and negative feelings related to cadaveric dissection. A ten-point Visual Analogue Scale (VAS) was used to assess the level of anxiety. They were also asked if they would prefer use of Computer Assisted Learning (CAL) to dissection. The need for pre-education sessions was also elicited. Since there were multiple responses for the questions, the recorded qualitative information was categorized into major themes. A total of415 questionnaires were analyzed statistically using the SPSS 11.0 software.

Results

The respondents were 223 males (54%) and 192 females (46%) with a mean age of 19.32 years. 61.6% students were anxious on their first experience with the human cadaver with an average of 5.6 on the 10 point VAS. Most of the students has previous exposure to information on the human anatomy (Figure 1), 95% students expressed curiosity and interest to learn about the structure of human body.* (Table 1).

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Table 1: Positive feelings

Description	No. of Students	Percentage
Curiosity and Interest to learn about the structure of human body	396	95
Enjoyable/Fascinating/Interesting	331	80
Helpful/Important part of UG Medical Curriculum	278	67
Sense of gratitude to people who donated their bodies	33	8

71% students were put off by the odour in the dissection hall.(Table 2). 217 students commented on influence on their routine activities (Table 3). 30% students felt the need for seeking help from faculty. 288 students cited different reasons for not approaching the faculty. (Figure 2). 84% felt that there is a need for conducting pre-education session for newly admitted medical students for various reasons.(Table 4). Only 20% students mentioned that they would prefer CAL over cadaveric dissection.

Previous exposure to information on human anatomy(Figure1)

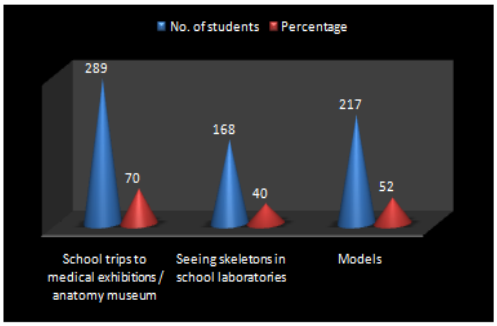

Table 2: Negative Feelings

Description	No. of students	Percentage
Scared/Emotional Shock	253	61
Put off by Formalin Fumes	294	71
Hesitancy to dissect the cadaver	167	40
Influence on routine activities	217	52
Thought of leaving the course	23	5
Disgusting smell	323	78

Table 3: Influence on routine activities (reported by 217 students)

Description	No. of students	Percentage
Horrifying dreams	98	45
Difficulty in consuming non-vegetarian food	83	38
Shivering of hands	17	8
Fright	66	30
Sleep disturbances	182	84

Reasons for not seeking help from faculty -288 students(Figure 2)

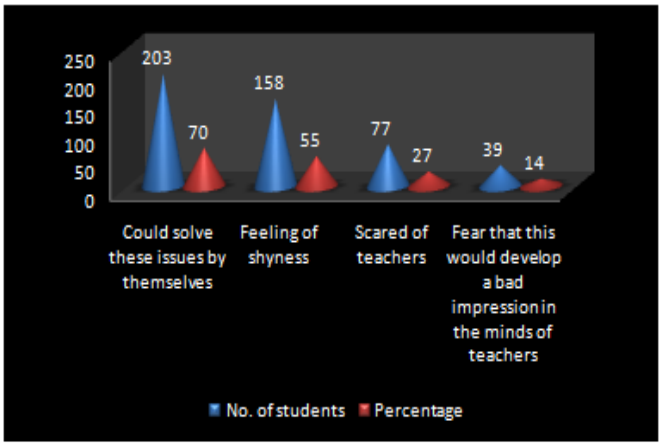

Table 4: Reasons for pre-education session

Reasons	No. of students	Percentage
Preparation for clinical practice	163	46
To overcome the fear about own death	54	15
To instill respect for cadaveric material	287	82
To eliminate fear about cadaveric dissection	211	60

Discussion

Cadaver based anatomical education is a prerequisite for optimal training and is necessary for establishing the primary of the patient, apprehension of the multidimensional body, anatomical variability, learning the basic language of medicine and touch – mediated perception of the cadaver/patient. First year medical students normally experience a variety of emotional reactions and mixed feelings when they encounter human cadavers for the first time in the dissection room. This study reflects a sample opinion of the medical students in the age group of 17 to 21 years.

80% of the students agreed that actual hands on training on cadaver dissection gave better results than demonstration of specimens/ CAL packages. This finding is in consonance with the study conducted by Johnson et al, 2002. Students also mentioned that dissection enhanced their skill of thinking in a logical manner. This finding is consistent with studies conducted by Weeks et al, 1995 and Mutyala et al, 1996.

Finkelstein et al, 1990 and Evans et al, 1992 reported that the initial exposure to a dead body caused emotional shock to the students. In the present study, 61% expressed emotional shock at the first exposure. 71% were put off by formalin fumes and 52% reported influence on routine activities.

Dinsmore etal, 2001 and O'Caroll et al, 2002 have mentioned in their studies that the students found cadaveric dissection to be a positive, significant and life challenging event. Mc Garvey et al, 2001 reported that 95% students found their first visit to the anatomy dissection room existing and 80% suffered very little or no stress at all on their first visit. This finding is supported by the present study that 80% of the students found their first visit interesting.The present study reports an average level of anxiety of 5.6 on the VAS. This indirectly relates to 61% of students expressing fear/emotional shock to cadaveric dissection.

The extreme view of the students with regards to first reaction to cadaveric dissection is to be noted with concern. Statements mentioning fear, influence on routine activities are clear indicators of the need for professional counseling. This also calls for greater vigilance in part of faculty in identifying such cases in time and providing necessary help. The need for seeking help from faculty was felt by 30% students in the present study and 84% expressed the need for pre-education sessions which would make them mentally prepared for the dissection room. It is to be noted that the teachers cannot anymore ignore an important student attitude and hope that students will settle down over a period of time. It is possible that in specific instances, the mental trauma faced during these formative years of a doctor's profession may be carried over into clinical years and remain a serious deterrent in the personality of the doctor and his attitude towards his fellow beings, especially the patients. (Balasubramanyam et al.,2003).

Studies conducted by Dinsmore et al.,2001 and Charlton et al.,1994, concluded that medical students rapidly developed a copying mechanism, which enabled them to view the cadaveric dissection as an occupation. In the present study , 40% students did not approach the faculty out of fear. A teacher must be strict to the extent of maintaining class discipline, but if this is to the extent of not being approachable for help, then necessary steps must be taken to improve communication. Better preparation and debriefing for coping with dissection is required which would help in "inoculating" individuals against the stressful effects of handling a dead body.

Conclusions

Facing a dead body at the begining of the medical curriculum, triggers a series of attitudinal conflicts in the minds of the medicos. There is no substitute for cadaveric dissection in the teaching of human anatomy. A better teacher – student interaction, pre-education sessions will help in improving the attitudes of students towards cadaveric dissection, which will in turn offer a stable mental status for medicos to handle higher levels of stress in their clinical career, thereby reducing the drop-out rates. Let us remember, "It is the dead who teach the living".

Recommendations

1. Pre-education sessions must be handled delicately and sensitively.
2. It must not be so detailed as to put off an otherwise confident student or so short of details as to leave the students with no improvement
3. Pre-education must include a professional counselor so that the students can opt for individual counseling if need be.

4. Senior students can also be called to explain how they coped up with the situation

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