

## Dissection Room Reactions of First Year Medical Students

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**Abstract :** *The first sight of a cadaver can evoke negative influences in a new medical student and may constitute a substantial barrier to learning. To assess the physical and psychological reactions of students to this situation and find ways of dealing with those disadvantaged by negative experiences, a questionnaire was distributed to 200 first year female students of 18-20 year age group of LHMC. Physical symptoms, level of stress, factors that help them cope and any change in their attitude after dissection were elaborated. Any suggestions from their side were noted. The first sight of cadaver was very upsetting to 10% of students, 29% were not affected and the rest were moderately upset. 33% showed physical manifestations like nausea, loss of appetite etc. About 20% found the attitude of staff members of the department a helping tool in coping with the situation. 68% of students developed a deep sense of gratitude towards donors of cadavers and most felt that adequate preparation at institutional level prior to first dissection room visit would be a big morale booster. Counselling for stressed out students was also suggested.*

### INTRODUCTION

In the context of scientific study of human anatomy, dissection of a human cadaver forms an essential part of teaching and research. At the first sight of dissection room and the first dissection experience, a plethora of emotions are raised in students' mind. For some it may be anxiety provoking and for others death, formalin and smell together may be aesthetically repulsive as observed by Jones<sup>1</sup>. It has been suggested that these negative influences may constitute a substantial barrier to learning. Finkelstein and Mathers<sup>2</sup> reported marked disturbances like nightmares, intrusive visual images, insomnia and depression and learning impairments. A number of physical and psychological reactions have been observed by Penny<sup>3</sup> and Horne et al<sup>4</sup>. Charleton et al<sup>5</sup> had suggested that students learned to detach themselves from their feelings and in this way cope with dissection but this may have a detrimental effect on their subsequent ability to empathise with living patients. However O'Carroll et al<sup>6</sup> felt that many students may report a positive experience after the initial exposure to a cadaver.

The present study was undertaken to assess the reaction of students to cadavers, both positive as well as negative, so as to enable us to "dissect the pros and cons of dissection room experience and build up data about different views on the task of cadaveric dissection". The study may help us find ways of dealing with students disadvantaged by negative experiences with cadavers. With appropriate preparation, the anatomy room experience is sure to be positive with students stimulating them to think about fundamental questions and whenever possible remedial action can be taken.

### MATERIAL AND METHOD

A questionnaire was distributed to 200 first year female medical students, of India nationality and between 18-20 years of age. After noting any previous exposure to dead bodies and death of close relative in the near past, physical symptoms and level of stress resulting from exposure to dissection room were assessed.

The students were questioned on whether they were mentally prepared to face a cadaver, had any apprehensions in this regard and once in the dissection room, how upsetting was the first experience. They were asked to rate their physical symptoms and first reaction to the cadaver.

After the initial encounter, factors that helped them cope with the situation and any change in their attitude after dissection were elaborated. Any suggestions regarding dissection room experiences were noted.

### RESULTS

Table - 1: Student's Reaction (in percentage)

Students reaction	Yes	No
Exposure to dead body before introduction to dissection room	50	50
Death of a close relative in last 2 years	43	57
Apprehension before seeing a cadaver	26	74
Mental preparation for dissection	69	31
Interest in cadaver	43	57
Excitement	31	69
Anxiety, disgust, confusion	15	85
Anorexia nausea, loss of sleep, nightmares	23	77

**Student's Reaction** A 100% response to the questionnaire with all questions answered was obtained from the students. Half the respondents had seen a dead body before their introduction to dissection room and 43% reported death of close relative within last 2 years. Most of the students (74%) had no apprehension before facing the cadaver and 69% said they were mentally prepared for dissection. The first sight of cadaver was very upsetting to 10% of students, 29% were not at all affected and remaining were slightly to moderately upset. The degree to which the students were upset fell as they touched and gave their first incision. After a few sessions, only one student was still very upset and 47% had no problem.

**Physical Reaction and Stress :** The first reaction to cadaver during dissection was that of interest in 43% students followed by excitement

in 31%. There was detachment, anxiety, indifference, confusion and disgust in the range of 5-15%. There was feeling of horror and fascination in 2% while 12% had no particular emotional reaction. In the assessment of their physical reactions, 6% felt nauseous, 10% developed loss of sleep and nightmares and 7% had loss of appetite. There was no physical manifestation of any type among 77% of students. (Table 1)

**Coping Strategies** Students found different ways of coping with the situation. Roughly half of them found talking and sharing experiences with others helpful. About one fifth found that the attitude of the faculty and other staff members of the department of anatomy as well as black humor helped and 10% found solace by taking a detached and philosophical view on this subject.(Table 2).

**Table - 2 : Coping Strategies (in percentage)**

Coping Strategies	Yes	No
Talking and sharing experiences	50	50
Attitude of faculty & staff members and black humor	20	80
Detached and philosophical view	10	90

After a few sessions in the dissection room, there were a number of changes in the attitude of students (Table3). 68% felt a deep sense of gratitude towards to donors of cadavers and about 16% recalled awareness of own mortality and unwillingness for own or any close relative's body donation. About 12% of students felt that they had developed tendency to callousness.

**Table - 3 : Changes in Attitude (in percentages)**

Change in Attitude	Yes	No
Deep sense of gratitude towards donors	68	32
Awareness of own mortality	16	64
Tendency to callousness	12	88

**Suggestions:** Students were given opportunity to suggest means by which their experience with cadavers could be made less stressful. Most felt that adequate preparation at institutional level in the form of discussion on death, sharing of fears and knowledge of facts on donors and burials prior to first visit to dissection room would be a big help. About one fifth of them also suggested that there should be better handling and attitude of reverence to cadavers by the staff and information on embalming and preservation of cadavers would be appreciated. It would be helpful if arrangements could be made for counselling for stressed out students.

## DISCUSSION

It is important to determine whether students experience strong and persistent reactions to human dissection, severe enough to interfere with work or well being as suggested by Evans and Fitzgibbon<sup>7</sup>. This knowledge is a prerequisite for helping them to cope and for enabling staff to minimize the potential difficulties that students might experience.

Our study revealed that serious psychological distress from human dissection is rare. This is in agreement with findings of Evans and Fitzgibbon<sup>7</sup>. In contrast to Penney<sup>3</sup> who observed appreciable

apprehension in about 63% of students, our students (74% of them) showed no such reaction on their first exposure to a cadaver. There was anxiety, confusion and disgust in the range on 5-15% as against 30% anxiety reported by Penny<sup>3</sup>. 43% of our students showed interest in the cadaver but only 18% had a similar reaction in the study carried out by Penny<sup>3</sup>. In both the studies, same percentage (23%) of students showed physical reactions like nausea, loss of sleep, nightmares, etc. The present study showed that 20% of students used humor as a coping strategy, a finding in contrast to that reported by McGarvey et al<sup>8</sup>, Abu-Hijleh et al<sup>9</sup>, Evans and Fitzgibbon<sup>7</sup> and in keeping with the finding of Horne et al<sup>4</sup>. In assessing changes in attitude of students after a few sessions in the dissection room, 68% were observed to feel a deep sense of gratitude towards the donors of cadavers, a finding not observed in the literature cited.

The impact of anatomy course on the psychological and sometimes spiritual well-being of students can be an issue of long standing concern as reported by Gustafson<sup>10</sup>. McGarvey et al<sup>8</sup> reported that 27% of medical students felt the need for more preparation before first visit to the anatomy room. In our study majority were of similar view. It is seen that though initial cadaver dissection is experienced as significant emotional life event by many students, majority do adapt to the situation quickly. They feel that dissection room experience stimulates thoughts about mortality. This experience, with appropriate preparation, can be quite positive and help students to feel the need to balance comparison and objectivity.

Therefore, an orientation programme is recommended prior to first dissection with instructions regarding dissecting techniques and small group discussion with faculty members. They should be made aware of source of cadavers, their processing and arrangements regarding their reception and disposal. The students should be made to realize their responsibility towards the cadaver as well as their own health and safety. Finally, the students should abide by certain minimum standards of behaviour and procedure.

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