

Original Research Article

# Experience of first year medical students in dissection hall

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## Abstract

**Background:** Dissection of human cadavers has been central part of medical education since renaissance. Dissection has also been labelled as the royal road and cadaver as the first patient. First year medical students when encounter human cadavers for first time, faces a variety of emotional reactions and mixed feeling.

**Aim and objectives:** For the assessment of impact of anxiety and physical symptoms from the experience of dissection hall, we prepared questionnaires to see whether emotional stress can be diminished and observed changes in feeling and attitude in first year medical students.

**Materials and methods:** The present study was conducted on 180 first year medical students over 2 years (Batch 2013 and 2014) at Darbhanga medical college, Laheriasarai, Bihar, India. All the students were given 3 sets of questionnaire. The students were asked the answer in either yes or no.

**Results:** The difference in the rate of anxiety initially and 3 months later was significant.

**Conclusion:** For improving the attitude of the students towards cadaveric dissection there must be better teacher-students interaction which in turn will help in improving their mental status to handle the highest level of stress in clinical carrier.

## Key words

First year, Medical Students, Dissection hall, Experience.

## Introduction

The word "Anatomy" derived from Greek meaning cutting up [1]. Anatomical knowledge

remains a base of medical and related professions, in spite of reductions in its importance, time committed to, and status of

anatomical education in modern curricula [2]. Since renaissance, dissection of human body has been central to medical education [1, 3]. Cadaver dissection has been called the “sharp-end” of medical education. Dissection has also been labelled as the “royal road and cadaver as the “first patient” [4]. Dissection of human body raises for first year medical students questions about invasion of privacy, cadaver sources, dying and death [5]. First year medical students when encounter human cadavers for first time, faces a variety of emotional reactions and mixed feeling [6].

There are various responses regarding students attitudes and views towards cadaver dissection. The main aim of present study was to explore further insights into these area in students. For the assessment of impact of anxiety and physical symptoms from the experience of dissection room, we prepare questionnaire which provide an insight into the difference in attitudes and dissection hall experience of male and female medical students.

### **Aim and objectives**

For the assessment of impact of anxiety and physical symptoms from the experience of

dissection hall, we prepared questionnaires to see whether emotional stress can be diminished and observed changes in feeling and attitude in first year medical students.

### **Materials and methods**

Every year 100 students are admitted at Darbhanga medical college, Laherisarai for the MBBS course. The present study was conducted on 180 first year medical students over 2 years (Batch 2013 and 2014) at Darbhanga medical college, Laherisarai, Bihar, India. All the 180 students were given 3 sets of questionnaire, one set before entering the dissection hall, other set at the 3 months of exposure of dissection hall and last set after completing first year. The students were asked the answer in either YES or NO option.

### **Results**

The results of questionnaire showed males (120) and female (60) with age between 18-30 years of age. 155 students were seen the dead body first time. 117 students do not have any idea about dissection. 166 students saw the cadavers first time. 108 students want to give first incision (**Table - 1**).

**Table – 1:** Questionnaire 1- Before entering the dissection hall.

| No. | Questions   | No. of 'YES' response | No. of 'NO' response |
|-----|---|-----------------------|----------------------|
| 1   | Did you feel excitement                             | 162 (90%)             | 18 (10%)             |
| 2   | Are you to going see dead body first time           | 155 (86.11%)          | 25 (13.89%)          |
| 3   | Have you any idea about dissection                  | 63 (35%)              | 117 (65%)            |
| 4   | Have you any relatives in medical field             | 121 (67.22%)          | 79 (43.88%)          |
| 5   | Are you suffering from any illness                  | 18 (10%)              | 162 (90%)            |
| 6   | Did you have any previous exposure of cadavers      | 14 (7.78%)            | 166 (92.22%)         |
| 7   | Is cadaveric dissection ethically acceptable to you | 112 (62.22%)          | 68 (37.78%)          |
| 8   | Do you want to give first incision                  | 108 (60%)             | 72 (40%)             |
| 9   | Did you see human bone first time                   | 25 (25%)              | 165 (75%)            |
| 10  | Did you want to touch human skeleton                | 162 (90%)             | 18 (10%)             |

In the **Table - 2**, 119 (66.11%) students have recurrent thoughts of dead body even after away from college. 118 (65.56%) students have recurrent smell of formalin. 119 (66.11%) of

students have dreams of dead body. 85 (47.22%) students give the first incision. 96 (53.33%) felt nausea, vomiting, dizziness, fainting or restlessness. 171 (95%) students felt that

dissection enhances the skill of thinking in logical manner.

year MBBS course. 172 (95.55%) students feel that if they further join any surgical branch this will give them better confidence.

In **Table - 3**, 171 (95%) students felt human cadaveric dissection as important part of first

**Table – 2:** Questionnaires set 2- after 3 months of exposure in dissection hall.

| No. | Questions   | No. of 'YES' response | No. of 'NO' response |
|-----|---|-----------------------|----------------------|
| 1.  | Did you feel elated after doing dissection  | 144 (80%)             | 36 (20%)             |
| 2.  | Do you have any recurrent thoughts of dead body even after away from college        | 119 (66.11%)          | 61 (39.89)           |
| 3.  | Do you have recurrent smell of formalin   | 118 (65.56%)          | 62 (34.44%)          |
| 4.  | Do you have dreams of dead body   | 119 (66.11%)          | 61 (39.89%)          |
| 5.  | Do you have fear of going in dark places  | 121 (76.22%)          | 59 (32.78%)          |
| 6.  | Did the peer discussion helped you  | 115 (63.895)          | 65 (36.11)           |
| 7.  | After seeing the dead body, did you give first incision                             | 85(47.22%)            | 95 (52.78%)          |
| 8.  | Have you felt nausea, vomiting, dizziness, fainting, restlessness                   | 96 (53.33%)           | 84 (46.67%)          |
| 9.  | Have you felt that dissection enhances the skill of thinking in logical manner      | 171 (95%)             | 9 (5%)               |
| 10. | Does the interaction with teachers and anatomy staffs lessen the fear of dissection | 155 (86.11%)          | 25 13.89%)           |

**Table – 3:** Questionnaires set 3- After completing first year MBBS.

| No | Questions   | No. of 'YES' response | No. of 'NO' response |
|----|---|-----------------------|----------------------|
| 1. | Do you feel human cadaveric dissection as important part of first year MBBS course            | 171 (95%)             | 9 (5%)               |
| 2. | Should it be replaced by plastic models or computer assisted technique                        | 6 (3.33%)             | 174 (96.67)          |
| 3. | Does it help to understand the deep understanding of anatomy                                  | 171 (95%)             | 9 (5%)               |
| 4. | Does it give confidence in part viva, semesters and university examination                    | 167 (92.78%)          | 13 (7.22%)           |
| 5. | Do you feel that if you further join any surgical branch this will give you better confidence | 172 (95.55%)          | 8 (4.45%)            |

## Discussion

Majority of students (95%) agreed that human cadaveric dissection is the important part of MBBS course and gives better results and also enhanced learning and confidence in the subject manner. This finding is consonance with previous study by Johnson [7]. This indicates that cadaver dissection as important in anatomy learning. Their view on replacing cadaver

dissection by plastic models near future were inconclusive.

In the present study 65.56 % of students experienced the formalin odor after their first encounter with the cadaver even when away from college. Dushashi, et al. found this experience of formalin odor in 75% of students [8]. Agnihorti and Sagoo reported the same in 66.66% of the students [9]. In the present study,

13.89% students seen the dead body before whereas as many as 86.11% students felt that an interaction with teachers and anatomy staff before entering dissection hall would lessen the emotional impact.

Studies have shown that MBBS students rapidly develop a coping mechanism [10] which enables them to view cadaver dissection as an occupation. The results of questionnaire in the first and second visits demonstrated that students enable them to adapt themselves as soon as they start working in dissection hall.

In European American and Canadian students develops adverse physical and psychological effects to human dissection [11]. In the dissection hall, medical students must gain a comprehensive understanding of human anatomy while dealing with their ethical, cultural and religious views on death. Discussing these facts enhances both personal growth as individuals and professional behaviour.

Emotional issues during human dissection should not be neglected but addressed repeatedly [12]. When students encounter first time with human cadavers and students should be offered the opportunity to discuss their emotions. The students should be advised to prepare mentally and emotionally before entering the dissection hall.

## Conclusion

The cadaver dissection is important part of learning anatomy. For improving the attitude of the students towards cadaveric dissection there must be better teacher-students interaction which in turn will help in improving their mental status to handle the highest level of stress in clinical carrier.

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