

PERSPECTIVE ABOUT EFFECTIVENESS OF AUTOPSY AMONG PRIVATE MEDICAL STUDENTS' OF FAISALABAD

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ABSTRACT:

Objective: To explore the knowledge, perception and attitude of the undergraduate medical students' of Faisalabad about autopsy.

Design: The study design was cross-sectional.

Methods: A structured and self-administered questionnaire was distributed among the 3rd year undergraduate medical students of the private medical institutes of Faisalabad.

Result: Our study showed that 99% students comprehend the meaning of autopsy but only 55.9% know about the purpose and indication of autopsy. With regard to their perceptions, 42 % of the students believed autopsy to be contrary to their religious beliefs while significant number of students considered autopsy a disrespect and disfigurement to the human body. A majority of the students considered autopsy a great utility in society and medical education. Maximum number of students wanted to watch more autopsies as 55% have seen a total of 1-2 autopsies only. 67% suggested autopsy to be a compulsory part of the medical curriculum & did not want a replacement of the traditional autopsy with E-autopsy. However, only 46.6% of the students were of the view that fresh medical graduates should be posted as Casualty Medical Officers and deal with medicolegal cases.

Conclusion:

A better comprehension of the purpose of autopsy and its indications among the undergraduate medical students is required which demands an increased exposure of these students to autopsy.

Keywords: Medical Students, Autopsy, Forensic Medicine

INTRODUCTION:

Autopsy is a procedure that involves a thorough examination of a dead body to establish the cause of death. Autopsy can be done for medical and legal purposes^{1, 2, 3}. A hospital-based medical autopsy determines the undiagnosed or misdiagnosed cause of death during the course of a disease where as a forensic or medico legal autopsy has legal implications.^{2, 3, 4}

The Medico legal autopsy is fundamental in identification of deceased, determining the cause of death, calculating the time since death & resolving medico legal issues pertaining to death.^{1, 5}

Every country has a system of judicial inquiry into unnatural & sudden deaths. Broadly two major systems exist in the world namely English or Coroner System and the European or Continental System. In Pakistan, a modified continental medico legal system is

being operated which deals with death cases of unnatural origin having a suspicion of foul play. This system authorizes the police to subject such cases for medico-legal autopsy.^{5, 6}

According to the instructions given by Surgeon Medico legal, Punjab⁷ regarding the conduct of medico legal & postmortem examination, all the male and female doctors of Government of the Punjab Health Department working on a regular/contract basis in the casualty departments of Rural Health Centers, Tehsil Head Quarter hospitals, District Head Quarter Hospitals, Teaching hospitals and Forensic Medicine departments of all the Medical Colleges are authorized to

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perform medico-legal autopsy. It also allows the medical students to view autopsy for academic purposes.⁷ Therefore, the emerging doctors in Pakistan are being made cognizant of the standard autopsy procedure during their academic years.

The medical students in Pakistan observe medico-legal autopsies during the third year of their medical education as part of the curriculum of Forensic Medicine and Toxicology. As private medical institutes of Pakistan are not authorized to conduct medico-legal & autopsy work, the students of these institutes are taken to the authorized medical centers affiliated with government medical colleges under the supervision of assigned trained staff. In Faisalabad, the third year medical students of private medical institutes are taken to Punjab Medical College, Faisalabad to view autopsy.

In this study, the knowledge, attitude and perception of the third year medical students of three private medical colleges of Faisalabad has been explored as these students are considered to be a mainstay in the enhancement of medical science and betterment of humanity in the near future.

Materials and Methods:

256 third year medical students of University Medical and Dental College (UMDC), Independent Medical College (IMC) and Aziz Fatima Medical & Dental College (AFMDC), Faisalabad participated in this study. A structured and self-administered questionnaire was distributed to the all the students. The participation in the study was voluntary and anonymous. The study was an evaluation of the student's knowledge, perception and opinion about autopsy and its

utility in medical education. The questionnaire also implored about the student's reaction on first exposure to autopsy, the number of autopsies they have attended, and their likelihood of specializing in Forensic Medicine, and their suggestions for improvement in autopsy procedure on a Likert scale.

RESULTS:

Out of the total 256 questionnaires that were distributed (117 in UMDC, 71 in IMC and 68 in AFMDC), 247 were returned completely filled as shown in Fig-1. The total response rate was 96.5%. There were 80 (32.4%) males and 167 (67.6%) females out of the total 247 respondents. There was no statistically significant difference seen in the results obtained by male and female respondents of the study. The age range of the participants was between 21 – 23 years.

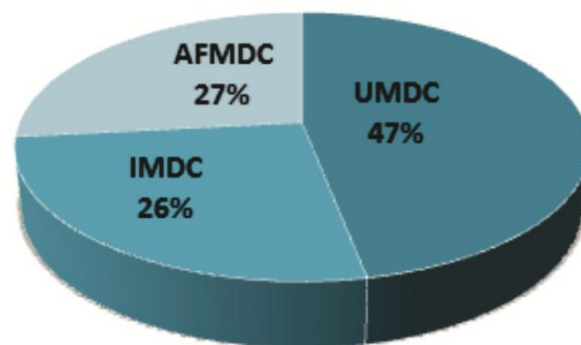


Figure: 1 Number of Respondents

The result of the students' knowledge, perception and opinion about autopsy and its utility in medical education is given in Table 1.

TABLE NO.1:

Sr.#	Knowledge about autopsy:	YES	NO	UNSURE
1.	Comprehend the meaning of word "Autopsy"	245 (99.1%)	1 (0.4%)	1 (0.4%)
2.	Know the purpose of doing autopsy	138 (55.9%)	105 (42.5%)	5 (2.02%)
3.	Postmortem examination needed in all cases of sudden & unnatural deaths	111(44.9%)	133(53.8%)	3(1.2%)
4.	Viscera collection & preservation is essential for histopathological & toxicological examination	222(89.9%)	20(8.1%)	5(2.02%)

Utility of autopsy:				
5.	Autopsy is useful to the society	186 (75.3%)	42(17%)	19(7.7%)
6.	Observing autopsy is useful & rewarding for medical students	211(85.4%)	28(11.3%)	8(3.2%)
7.	Autopsy has utility in medical education	204 (82.6%)	31 (12.6%)	12 (4.8%)
8.	Application of learning during autopsy in future medical practice	188 (76.1%)	46 (18.6%)	13 (5.3%)
Perception about autopsy:				
9.	Autopsy is disrespect to human body	93 (37.7%)	130 (52.6%)	24 (9.7%)
10.	Autopsy causes disfigurement of body	148 (59.9%)	84 (34%)	15 (6.1%)
11.	Autopsy is contrary to religious beliefs	104 (42.1%)	97 (39.3%)	46 (18.6%)
12.	Will allow autopsy on oneself	71 (28.7%)	156 (63.1%)	20 (8.1%)
13.	Will consent for autopsy of a deceased close relative	120 (48.6%)	104 (42.1%)	23 (9.3%)
Opinion about autopsy as a part of medical education:				
14.	Undergraduate medical students should watch autopsies	193 (78.1%)	46 (18.6%)	8 (3.2%)
15.	Number of autopsy cases witnessed by medical students is enough	85 (34.4%)	144 (58.3%)	18 (7.3%)
16.	Students should attend more autopsies	183 (74%)	58 (23.5%)	6 (2.4%)
17.	Given a chance will choose NOT to watch P.M examination at all	48 (19.4%)	183 (74%)	16 (6.5%)
18.	Autopsy should be compulsory part of academic curriculum	167 (67.6%)	57 (23%)	23 (9.3%)
19.	Autopsy should be scrapped from the medical curriculum	49 (19.8%)	170 (68.8%)	28 (11.3%)
20.	Traditional autopsy should be replaced by E- autopsy	94 (38.05%)	125 (50.6%)	28 (11.3%)
21.	After graduation, all doctors should be posted as CMOs & deal with medico-legal cases.	115(46.6%)	113(45.7%)	19(7.7%)

TABLE NO. 2: Knowledge about Purpose of Medico-Legal Autopsy:

Sr.#	Purposes	No. of Responses
1.	Done to know the cause of death	138 (55.9%)
2.	Mere legal formality	12 (4.8%)
3.	Harassment to the relatives of the deceased	1 (0.4%)
4.	Helpful in providing justice to the victim	95 (38.5%)

TABLE NO. 3: Number of Medico Legal Autopsies Attended:

Sr. #	No. of autopsies attended	No. of Responses
1.	Not a single one	8 (3.2%)
2.	1-2	137 (55.5%)
3.	3-4	88 (35.6%)
4.	5 or >5	14 (5.7%)

TABLE NO.4: Reaction on First Exposure to Postmortem Examination:

Sr.#	Reactions	No. of Responses
1.	Comfortable	45 (18.2%)
2.	Slightly uncomfortable	95 (38.5%)
3.	Moderately uncomfortable	57 (23.1%)
4.	Very uncomfortable	32 (12.9%)
5.	Indifferent	18 (7.3%)

TABLE NO. 5: Reasons for Not Specializing in Forensic Medicine:

Sr.#	Reasons	No. of Responses
1.	Will specialize in Forensic Medicine	18 (7.3%)
2.	Not interested in Forensic Medicine	56 (22.7%)
3.	Interested in other specialties	125 (50.6%)
4.	Not lucrative, scope in Pakistan is minimal	8 (3.23%)
5.	One has to deal with death	16 (6.5%)
6.	No reason	24 (9.7%)

TABLE NO.6: Suggestions for improvement in autopsy procedure:

Sr.#	Suggestions	No. of Responses
1.	Improvement in hygiene and sanitation in autopsy room	76 (27.2%)
2.	Staff performing autopsy should be more trained	55(19.7%)
3.	Replacement of primitive instruments with modern ones in the autopsy room	41 (14.7%)
4.	Active participation of students during autopsy	27(9.7%)
5.	Show more respect towards dead body	80(28.7%)

DISCUSSION:

The evaluation of the responses about knowledge of autopsy showed that 99% students understand the meaning of the word 'autopsy' which compares favorably with the study conducted in a public sector medical college of the same city.³ However, only 55.9 % students opted for the cause of death to be the correct option regarding the purpose of autopsy while 42.5% failed to do so. (Table No.2) Similarly, 53.8% students didn't know about the indication of autopsy. The findings of this study contrast drastically with the trend seen in the studies by Jadav et al⁵, Ahmad et al² and Singh et al⁸ where about 90% of the undergraduate students are well aware of the indication of autopsy. Nonetheless, a majority of students (89%) are aware of the importance of viscera

collection and preservation for histopathological and toxicological examination which correlates with the findings of the studies in India.^{2, 5, 8}

These unexpected results of our study indicate lack of knowledge about the purpose & indication of autopsy among about half of the students of private medical colleges of Faisalabad. This not only requires an adequate deliverance of concepts to the students theoretically but also necessitates a better understanding of autopsy on practical grounds as well.^{4, 9, 10, 11, 12} It cannot be ignored that the students of the private medical colleges in Pakistan are less exposed to autopsy procedure as compared to that of a government medical institute.³In addition to the allocation of a slot in the time table of an extensive medical curriculum, plenty of logistics are also involved in taking the

students to another institution to view autopsy.^{3, 11, 13, 14}

The data on the number of the autopsies attended by the students in this study is an evidence of the above mentioned situation which shows that 55.5% had observed 1-2 autopsies only during an academic year. This is in contrast with the findings of the study in the government medical college³ where 68.5 % had watched 3-4 autopsies and the studies in India and Nigeria where the students witnessed a minimum of ten autopsies.^{2, 4}

The respondents' view on the utility of autopsy was also encompassed in this study. The results are consistent with the studies conducted worldwide.^{1, 2, 3, 4, 5, 8, 9, 12, 16}

With regard to the opinion about autopsy as part of medical education, 74% recommended that the students should attend more autopsies. The need to watch more autopsies by undergraduates was also indicated by the participants of other studies.^{1, 2, 3, 4, 5, 8, 12}

Further exploring about their interest in viewing autopsy, it was found that most of the students believe that autopsy should be a compulsory part of the academic curriculum and it should not be scraped from it. This favorably correlates with the results of other studies^{1, 3, 4, 8, 9}

Moreover, 50.6% students wanted the traditional autopsy to continue. Similar trend was seen in the study by Waheed et al⁹ in which 54% of the students disagreed that watching videos for autopsies would be a better alternative. There were an even greater number of students (80%) in the government medical college in favor of traditional autopsy.³

Despite their awareness of the utility of autopsy in medical education, only 46.6 % students in our study recommend that fresh medical graduates should be posted as

casualty medical officers to deal with medico legal issues with 45.7% thinking otherwise. This is a reflection of the number of the students who look forward to the transference of knowledge gained about autopsy in their undergraduate training by deputing as a CMO in the future.

In Pakistan, the notion of autopsy is surrounded by various religious and cultural perspectives. Therefore, an assessment of the perceptions of the students about autopsy in this regard was one of the objectives of our study. 42.1% of the students believed autopsy to be contrary to their religious beliefs .Likewise a significant number of students agreed that postmortem is disrespect and a disfigurement to the human body. Probably, for this reason most of the students did not consent for autopsy on themselves or a close relative which is consistent with another study in Pakistan.³ However, these results were conflicting when compared with the studies in India, Sweden and Romania^{5, 12, 17}

Most of the students in this study stated that their initial response on exposure to autopsy was slightly uncomfortable. Only 18.2 % of the students were comfortable during their first autopsy session which compared to students in a government institute is a small percentage where most of the students were comfortable on first exposure to autopsy.³ The results of the studies in India were similar to the results of our study in this respect.^{2, 5} This ,when compared to the studies in Malaysia , Sweden , China , South Africa , Nigeria and United Kingdom , shows that most of the students in these countries found autopsy emotionally traumatizing.^{4, 10, 11, 14, 16, 17} These vast geographical differences are note-worthy. Hence, a qualitative assessment for a deeper insight into the emotional status

of the students in our study regarding autopsy is required.

The questionnaire of the study also centered in determining the interest of the students in Forensic Medicine as a profession. It was found that only 7.3% of the students aspire to specialize in this subject while 50.6% students were interested in other specialties. Similar results were seen in the studies conducted in Pakistan, India & Romania.^{1,2,3,5, 9, 12}

Mixed responses were observed regarding the participants view on the suggestions about improvement in autopsy procedure. Most of the students suggested for improvement in hygiene of autopsy room (27.2%) and for respect towards the dead body (28.7%). The suggestion for more respectful atmosphere in the autopsy room and for the dead body was also indicated in the other studies conducted in Pakistan, India & South Africa.^{1,2,3,14,15}

CONCLUSION:

Our study aimed at representing the educational objectives attained by the undergraduate students during autopsy which showed lack of clarity of concepts about autopsy. However, a survey of the opinions of the students in our study vindicates their acknowledgement of the utility of autopsy in medical education, medical practice and the society. Nonetheless, a striking finding was the limitation of the perceptions of these students by religious and cultural barriers which needs to be addressed.

RECOMMENDATIONS:

The results of our study justify the need to increase the number of autopsy sessions which can be done by more frequent visits to authorized institutes and by providing flexible timings for students of the private medical institutes to view autopsy in the future

^{4,11,13,15}. Moreover, a bigger perspective would be to allow the private sector institutions to conduct medico legal autopsy as well. The dire need to expose the students to autopsy cannot be over emphasized because eventually the students of the private medical institutes will also be appointed as CMOs in the future and will be required for the application of their learning in their medical practice.^{4, 9, 13} A more structured training with clear learning outcomes and debriefing before autopsy sessions can remove the religious and cultural barriers.^{4,11,13,14}

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03	Dr Muhammad Aslam	Results interpretation, revising article & final approval