

Knowledge and Attitude of Medical Students on Forensic AutopsySoundarrajan T.¹, Sanjana Sri N.², Sharvan Kumar P.³, Madhukar S.⁴, Dhaya Shri Bharathi S.⁵¹Assistant Professor, Department of Forensic Medicine & Toxicology, Dhanalakshmi Srinivasan Medical College and Hospital, Tamil Nadu, India^{2,3,4,5} CRMI Department of Forensic Medicine & Toxicology, Dhanalakshmi Srinivasan Medical College and Hospital, Tamil Nadu, India

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Abstract**Background:** The clinical autopsy is a common term used to help in the identification of person's clinical conditions and causes of deaths, however, the autopsy plays a vital role in the justice and jurisprudence. Objective: To determine the knowledge, beliefs and understanding of medical students regarding the autopsy Study Design: Descriptive, cross-sectional study.**Place and Duration of Study:** Dhanalakshmi Srinivasan Medical College and Hospital; 01/06/25-31/08/25.**Methodology:** 350 students from first year to CRMI were recruited based on random sampling method.**Results:** Among 350 students, 100% (n=350) correctly identified determining cause and manner of death as the primary purpose of forensic autopsy. 94% (n=332) knew death due to known chronic illness under hospital care is not an indication, while 4% (n=10) selected death in police custody and 2% (n=8) selected sudden unexpected death. 97.4% (n=341) recognized court order/police requisition as the authorizing document. Knowledge of BNSS 2023 was high: 71% (n=250) identified BNSS as the authority for medico-legal autopsy, 85% (n=296) knew Section 194 governs police inquest, and 88% (n=308) knew Section 196 covers magistrate-ordered exhumation. 89% (n=309) had witnessed ≥ 1 autopsy; of these, 36% (n=127) attended 1–2, 53% (n=184) attended 3–5, and 1% (n=1) attended >5 . Major knowledge sources were textbooks 44% (n=154), practical demonstration 35% (n=124), and lectures 20% (n=71). Regarding benefits, 52% (n=183) cited gaining knowledge about forensic pathology and 46% (n=162) cited understanding legal aspects of medicine. Attitudes were positive: 92.3% (n=323) agreed/strongly agreed autopsies are essential for justice; 90.9% (n=316) agreed/strongly agreed exposure enhances clinical diagnostic skills. Cultural/religious discomfort was low: 47% (n=165) strongly disagreed and 25% (n=87) somewhat disagreed that observing autopsies is uncomfortable. On post-mortem exposure, 40% (n=140) were neutral, 23% (n=82) somewhat comfortable, and 11% (n=40) very comfortable. Only 22.6% (n=79) strongly agreed MBBS training is adequate, while 47% (n=165) somewhat agreed. Misconceptions existed: 57% (n=199) incorrectly stated histopathology is not part of standard forensic autopsy. 95% (n=331) were aware of virtual autopsy. Key learning outcomes reported were understanding cause and manner of death 60% (n=211) and correlating clinical diagnosis with autopsy findings 33% (n=114). 86% (n=302) felt this research improves medical education, patient care, and forensic autopsy guidelines.**Conclusion:** The autopsies and experiences regarding the autopsies was integral part of medical curriculum. The studies of autopsies are helpful to understand the human anatomy and reasons of deaths. The student's perceptions supported the medical autopsies as important part of curriculum and teaching particular anatomy of human subjects.**Keywords:** Knowledge, Attitude, Perceptions, Autopsy.**DOI:** 10.25258/ijcpr.18.5.198This is an Open Access article that uses a funding model which does not charge readers or their institutions for access and distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>) and the Budapest Open Access Initiative (<http://www.budapestopenaccessinitiative.org/read>), which permit unrestricted use, distribution, and reproduction in any medium, provided original work is properly credited.**Introduction**

The autopsy came from a Greek work used in ancient time "AUTOS: oneself" and "Opsis" meaning sight which means "to see for oneself" the autopsy is formally divided into forensic and medico logical clinical and autopsies for academia [1].

Forensic or medico-legal autopsy is a special type of autopsy performed as a part of inquest (legal investigation into cause of death) and carried out in unnatural deaths or deaths occurring in mysterious or suspicious circumstances. A clinical or hospital

autopsy is the final step in the identification of a person's illness or cause of death. Contribution of clinical autopsy to medical field extends beyond confirmation of the ante mortem diagnosis. The value of autopsy has been proven in its elucidation of the cause of death, clinical quality control, medical auditing and in medical education [2]. It plays a crucial role in finding out the cause and the time of death, possible medico-legal issues surrounding death, providing data on disease and injury and also aiding in administration of justice.

Doctors with poor knowledge in autopsy may result in injustice [3] In India, according to the curriculum of the Medical Council of India, a medical student should witness a minimum number of medico legal autopsies in the second year so that they can observe and interpret various findings [4] The forensic is a medicine in accordance to law. The undergraduate's personal knowledge and perception plays a role in the teaching and understanding of autopsy examination. The knowledge and understanding of autopsy among students is prime objective of forensic medicines. [5] Various reasons given for the decline in autopsy-based teaching include insufficient hospital autopsies, competing departmental duties and limited curriculum time [8]. It is obvious that knowledge of autopsy will broaden the students' mind and enhance a more accurate diagnosis during the subsequent years of their

clinical practice as doctors. The knowledge and attitude of medical students and interns towards medico-legal autopsy is a significant factor that influences the quality of autopsy reports. This study aims to determine the knowledge, beliefs, and understanding of medical students regarding the autopsy as part of forensic medicines and toxicology, the education and improvement of humanity for clinical approaches in case of determination of death cases.

Materials and Methods

To assess the knowledge and attitude of medical student, a study was conducted in Dhanalakshmi srinivasan medical college and hospital,

Siruvachur, Perambalur. Medical students, who refused to participate or were not available on the day of data collection, were excluded from the study. Questionnaires were prepared, after going through literature and consulting other faculty members of the department. Questionnaire contains several questions relating to the autopsy practice, the knowledge of the procedure and attitude and perception towards postmortem examination.

The questionnaires were distributed to the students. A total of 350 students participated in the study. Result was represented in frequency in tabular form.

Results of the study:

Table 1:

1.	What is the primary purpose of forensic autopsy?	Determining cause and manner of death	350; 100%
		Preserving organs for donation	0%
		Studying anatomy for teaching	0%
		Testing new surgical technique	0%
2.	Which is not an indication for forensic autopsy?	Death in police custody	10;4%
		Sudden unexpected death	8;2%
		Death due to known chronic illness under hospital care	332;94%
		Death following a RTA	0%
3.	Which legal document authorizes a forensic autopsy?	Consent from next of kin	4;1.1%
		Court order or police requisition	341;97.4%
		Hospital administration approval	2;0.6%
		Verbal approval from a doctor	3;0.9%
4.(a)	Have you ever witnessed a forensic autopsy?	Yes	309;89%
		No	41;11%
4.(b)	If yes, how many autopsies?	1-2	127;36%
		3-5	184;53%
		>5	1;1%
		0	38;10%
5.	What is the source of your knowledge about forensic autopsies?	Textbook	154;44%
		Lectures	71;20%
		Social media	1;1%

		Practical demonstration	124;35%
6.	Under which authority is medicolegal autopsies conducted in India?	BNS	62;18%
		BNSS	250;71%
		Evidence act	21;6%
		Indian constitution	17;5%
7.	Under which section on BNSS 2023 is police inquest conducted in India	Sec 194	296;85%
		Sec196	38;11%
		Sec 304	12;3%
		Sec 53	4;1%
8.	Under which section of BNSS can a magistrate order exhumation	Sec 194	14;4%
		Sec 196	308;88%
		Sec 198	22;6%
		Sec 197	6;2%
9.	What do you think is the most significant benefit of attending a forensic autopsy?	Developing surgical skills	5;2%
		Understanding the legal aspects of medicine	162;46%
		Gaining knowledge about forensic pathology	183;52%
		Other:	0%
10.	Forensic autopsies are essential for justice in criminal case	Strongly agree	290;83%
		Somewhat agree	33;9%
		Somewhat disagree	4;1%
		Strongly disagree	17;5%
		Neutral	6;2%
11.	Performing or observing autopsies is uncomfortable due to cultural and religious belief	Strongly agree	12;3%
		Somewhat agree	47;13%
		Somewhat disagree	87;25%
		Strongly disagree	165;47%
		Neutral	39;11%
12.	The sight of dead body or post-mortem makes me	Very uncomfortable	1;1%
		Somewhat uncomfortable	87;25%
		Somewhat comfortable	82;23%
		Very comfortable	40;11%
		Neutral	140;40%
13.	Exposure to autopsies can enhance clinical diagnostic skills	Strongly agree	205;59%
		Somewhat agree	111;32%
		Somewhat disagree	3;10%
		Strongly disagree	134%;
		Neutral	18;5%
14.	The MBBS curriculum currently provides adequate training in forensic autopsy	Strongly agree	79;23%
		Somewhat agree	165;47%
		Somewhat disagree	40;11%
		Strongly disagree	14;4%
		Neutral	52;15%
15.	HPE is not a part of standard forensic autopsy.	True	199;57%
		False	151;43%

16.	Virtual autopsy is a new form of post-mortem examination.	Yes	331;95%
		No	11;3%
		Don't know	8;2%
17.	What do you think is the most valuable learning outcome from attending an autopsy?	Understanding cause and manner of death	211;60%
		Correlating clinical diagnosis with autopsy findings	114;33%
		Gain insight into human anatomy and pathology	25;7%
		Other:	
18.	What do you think is the value of this research topic ?	Improving medical education and training	30;9%
		Enhancing patient care and safety	7;2%
		Informing policy and guidelines for forensic autopsy practices	11;3%
		All the above	302;86%

Results

This cross-sectional study evaluated knowledge and attitude toward forensic autopsy among 350 medical students at Dhanalakshmi Srinivasan Medical College, Perambalur. All participants correctly identified (100%) identified determining cause and manner of death as the primary purpose of forensic autopsy. 94% correctly recognized that death due to known chronic illness is not an indication. Knowledge of BNSS 2023 was high: 71% identified BNSS as the authority for medicolegal autopsy, 85% knew Sec 194 governs police inquest, and 88% knew Sec 196 covers magistrate-ordered exhumation. 89% had witnessed ≥ 1 autopsy, with 53% attending 3-5 cases.

Attitudes were positive: 92% agreed autopsies are essential for justice and 91% felt they enhance clinical skills. Cultural/religious discomfort was low, with 47% strongly disagreeing.

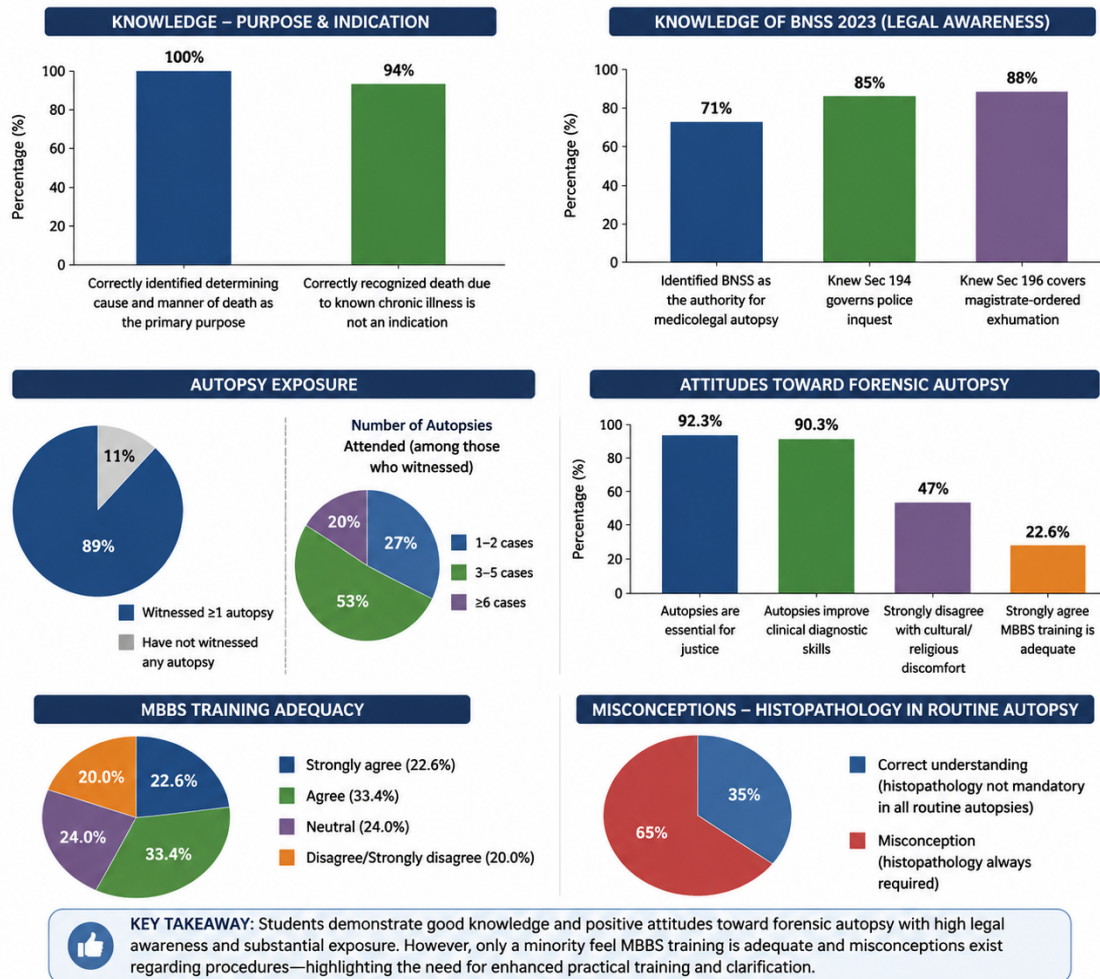
Only 23% strongly agreed that current MBBS training is adequate. Autopsy exposure was substantial, with 88.3% having witnessed ≥ 1 case. Attitudes were largely positive: 92.3% considered autopsies essential for justice and 90.3% believed they improve clinical diagnostic skills, while cultural discomfort was minimal. However, only 22.6% strongly felt MBBS training was adequate, and misconceptions existed regarding histopathology in routine autopsy. The findings indicate effective curriculum delivery and legal awareness but highlight the need for enhanced practical training and clarification of autopsy procedures to strengthen forensic competency among undergraduates.

Discussion

The autopsy is instrumental in accurately establishing the cause and manner of death hence it plays a crucial role in acquiring medical knowledge, and has been an important part of medical education for centuries. But autopsy has been nearly squeezed out of the regular medical curriculum in order to accommodate increasing amount of modern medicine education. This tendency has drawn much attention and is worrisome for both medical educators and medical students. Autopsies allow students to grasp pathology in clinical contexts also. There are many factors that affects learning and they are beyond the control of educators, such as prior life experience, cultural or religious beliefs, and psychological predispositions. However, an awareness and management of these factors should be advantageous if the attitudes of future practitioners are to be influenced.

The results of present study indicate that medical students had sufficient knowledge about the procedures and had positive attitude towards observing the autopsies. In present study majority of the students were aware of the situations where medico- legal autopsy and preservation of viscera is mandatory. In this study we found that nearly 70% students are interested to actively participate in performing autopsies which is in concordance to the finding of Ravi this indicate that students believe in learning by active participation in performing autopsies rather only standing and watching as mute spectators. There was a lack of interest of medical students in choosing forensic medicine as a branch of specialization and most common reason was interest towards other branch of specialty similar finding was also reported in a study conducted in Pune by Ravi [7].

Knowledge and Attitude Toward Forensic Autopsy Among 350 Medical Students



Conclusion:

Overall, this study supports the views that medical students should be encouraged and facilitated to watch more autopsies and their practical training of autopsies should be more effective. Unpleasant aspects of an autopsy demonstration should be kept to a minimum to encourage participation that might be useful to modify students’ opinions before they graduate. The studies of autopsies are helpful to understand the human anatomy and reasons of deaths. The study suggests the autopsy teaching and demonstration imparts in good learning for medical students. The students’ perceptions supported the medical autopsies as important part of curriculum and teaching particular anatomy of human subjects. It will also help them to conduct autopsies in a better way once they complete the graduation and posted in hospitals and primary health centres. Medical students at DSMCH demonstrate strong foundational knowledge, high autopsy exposure, and positive attitudes toward forensic autopsy, reflecting effective NMC curriculum

implementation and BNSS 2023 updates. Gaps exist in understanding histopathology’s role and perceived adequacy of training, indicating a need for enhanced practical demonstration and case-based teaching to improve autopsy competency.

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