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Breaking the Myths: Knowledge, Awareness, and Public Perceptions Regarding Medicolegal Postmortem Examination (Autopsy) among the General Population of Haryana, India.

Dr. Naveen Sharma[1*], Dr. Pankaj Keshwani[2], Dr. Sandeep Kumar Giri[3], Dr. Kunal Khanna[4].

[1]Assistant Professor, Department of Forensic Medicine & Toxicology, Adesh Medical College & Hospital, Village Mohri, Kurukshetra, Haryana and UHS, Rohtak, Haryana

[2]Assistant Professor, Department of Forensic Medicine & Toxicology, Autonomous State Medical College, Pilibhit, Uttar Pradesh

[3]Associate Professor, Department of Forensic Medicine & Toxicology, Kalpana Chawla Govt. Medical College & Hospital, Karnal, Haryana and UHS, Rohtak, Haryana

[4]Professor & Head, Department of Forensic Medicine & Toxicology, Kalpana Chawla Govt. Medical College & Hospital, Karnal, Haryana and UHS, Rohtak, Haryana.

Correspondence:
Dr. Naveen Sharma.
Assistant Professor, Department of Forensic Medicine & Toxicology, Adesh Medical College & Hospital, Village Mohri, Kurukshetra, Haryana and UHS, Rohtak, Haryana.

Email:
dr.naveendhananiya@gmail.com

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Abstract

Background: Medicolegal postmortem examination (autopsy) is a vital component of forensic medicine that determines the cause and manner of death, preserves forensic evidence, and supports the administration of justice. Despite its importance, myths and misconceptions continue to influence public acceptance. This study assessed the knowledge, awareness, and public perceptions regarding medicolegal autopsy among the general population of Haryana. ***Materials and Methods:*** A community-based cross-sectional study was conducted among 420 adults using a validated questionnaire. Information on socio-demographic characteristics, knowledge, legal awareness, and public perceptions regarding medicolegal autopsy was collected. Data were analyzed using IBM SPSS Statistics version 26.0. Descriptive statistics and Chi-square tests were applied, with $p<0.05$ considered statistically significant. ***Results:*** Participants demonstrated moderate to good knowledge and awareness, with mean knowledge and awareness scores of 13.9 ± 3.3 and 13.6 ± 3.1, respectively. Overall, 66.2% had good to excellent knowledge, while 65.7% showed positive perceptions towards Medicolegal autopsy. Most respondents correctly identified its role in determining the cause of death (81.4%), preserving forensic evidence (80.5%), and supporting criminal investigations (80.0%). However, misconceptions persisted, as 32.9% believed that autopsy unnecessarily mutilates the body, 36.7% thought it delays funeral rites, and 29.5% assumed that organs are permanently removed and sales the organ at higher rate in the market. Knowledge, awareness, and perception were significantly associated with age, education, occupation, income, and place of residence ($p<0.05$), whereas gender showed no significant association. ***Conclusion:*** Although public knowledge and perceptions regarding medicolegal autopsy were generally favourable, important misconceptions remain. Targeted awareness programmes are needed to improve forensic literacy, dispel myths, and strengthen public confidence in the medicolegal services.

Keywords: Medicolegal autopsy; Postmortem examination; Forensic medicine; Knowledge; Awareness; Myths; North zone of Haryana; Death investigation; Community survey.

INTRODUCTION

Medicolegal postmortem examination (autopsy) is a cornerstone of forensic medicine and the criminal justice system. It is a scientific examination of a deceased individual conducted under legal authority to determine the cause, manner, and mechanism of death, document injuries, collect forensic evidence, and assist law enforcement and courts in the investigation of unnatural, suspicious, or unexplained deaths. Beyond its legal role, Medicolegal autopsies contribute significantly to public health surveillance, injury prevention, disease monitoring, and disaster victim identification.1,2

Despite its importance, medicolegal autopsy remains one of the most misunderstood procedures among the general public. It is frequently associated with myths and misconceptions, including unnecessary body mutilation, organ removal, delayed funeral rites, and religious or cultural objections. Such beliefs often arise from inadequate public awareness, misinformation, and inaccurate media portrayals, leading to fear, anxiety, and mistrust toward forensic and healthcare services.3-5

Public understanding of medicolegal autopsy is influenced by education, socioeconomic status, cultural beliefs, previous exposure to medicolegal cases, and access to health information. Although studies from various countries have reported inadequate knowledge and persistent misconceptions regarding autopsy, community-based evidence from India remains limited. Most available research has focused on healthcare professionals or medical students, with little emphasis on the perceptions of the general population.6-11

Haryana, with its unique geographical terrain, diverse cultural practices, and increasing burden of accidental and unnatural deaths, provides an important setting to evaluate public awareness regarding medicolegal autopsy. Understanding existing knowledge gaps and misconceptions is essential for improving forensic literacy, strengthening public confidence in medicolegal services, and facilitating effective communication between healthcare professionals, forensic experts, law enforcement agencies, and the community.

Therefore, the present study was undertaken to assess the knowledge, awareness, and public perceptions regarding medicolegal postmortem examination among the general population of Haryana and to identify socio-demographic factors associated with these perceptions. The findings are expected to support the development of targeted awareness programmes and evidence-based interventions aimed at dispelling myths and promoting informed public understanding of medicolegal autopsy.

MATERIALS AND METHODS

Study Design and Setting

A community-based, cross-sectional study was conducted between January and April 2025 among the general population of Haryana, India, to assess knowledge, awareness, and public perceptions regarding medicolegal postmortem examination (autopsy).

Study Population

The studies included adults aged 18 years and above who had been residing in Haryana for at least five years and were willing to participate voluntarily in the study. Individuals unable to comprehend the questionnaire or unwilling to provide informed consent were excluded.

Sample Size

The sample size was calculated using the single population proportion formula, assuming a 50% expected awareness level, 95% confidence interval, and 5% absolute precision:

$N=Z2\times p(1-p)/d2$

The minimum required sample size was 384. Considering possible incomplete responses, a total of 420 participants were included in the study.

Sampling Technique and Data Collection

Data were collected using a structured questionnaire form, which was disseminated physically across different districts of Haryana. Participation was voluntary and informed consent was also obtained before commencement of the study.

Study Instrument

The questionnaire was developed following an extensive review of forensic medicine literature and existing legal guidelines. It consisted of four sections:

1. Socio-demographic characteristics (age, gender, education, occupation, residence, income, religion, and previous exposure to medicolegal cases).
2. Knowledge regarding medicolegal autopsy (definition, purpose, indications, legal aspects, and procedure).
3. Awareness of medicolegal and forensic issues (authority for conducting autopsy, consent, evidence collection, identification, and role in criminal investigation).
4. Public perceptions and myths regarding medicolegal autopsy, including attitudes towards body handling, religious beliefs, organ removal, funeral delays, and acceptance of the procedure.

Each correct knowledge response was awarded one mark, while incorrect or "Don't Know" responses zero marks. Based on the cumulative score, overall knowledge was categorized as:

- Excellent: ≥75%
- Good: 50–74%
- Fair: 25–49%
- Poor: <25%

Validation and Reliability

The questionnaire underwent content and face validation by experts from the Departments of Forensic Medicine, Community Medicine, and Public Health. A pilot study involving 40 participants (excluded from the final analysis) was conducted to assess clarity and comprehensibility. The questionnaire demonstrated good internal consistency with a Cronbach's alpha coefficient of 0.86.

Statistical Analysis

Data were exported from Google Forms into Microsoft Excel 2021 and analyzed using Epi Info version 7. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize the data. Associations between socio-demographic variables and levels of knowledge, awareness, and public perception were evaluated using the Chi-square test. A p-value <0.05 was considered statistically significant.

RESULTS

A total of 420 participants from different districts of Haryana were included in the study.

Table 1. Socio-demographic Characteristics of the Study Participants (n = 420)

Variable	Category	Frequency (n)	Percentage (%)
Age Group (years)	18–25	90	21.4
	26–35	122	29.0
	36–45	94	22.4
	46–60	76	18.1
	>60	38	9.1
Gender	Male	200	47.6
	Female	220	52.4
Educational Status	Up to Secondary	112	26.7
	Graduate	178	42.4
	Postgraduate & Above	130	31.0
Occupation	Student	62	14.8
	Service/Professional	150	35.7
	Homemaker	94	22.4
	Self-employed/Business	78	18.6
	Retired/Unemployed	36	8.5
Monthly Household Income (INR)	<25,000	74	17.6
	25,001–50,000	132	31.4
	50,001–75,000	128	30.5
	>75,000	86	20.5
Place of Residence	Rural	270	64.3
	Urban	150	35.7
Religion	Hindu	388	92.4
	Muslim	10	2.4
	Sikh	18	4.3
	Others	4	0.9
Previous Exposure to Medicolegal Autopsy	Yes	106	25.2
	No	314	74.8

The majority belonged to the 26–35 years age group (29.0%), with females (52.4%) slightly outnumbering males (47.6%). Nearly three-fourths of the participants were graduates or postgraduates (73.3%), and the largest occupational group comprised service/professional employees (35.7%). Most participants belonged to the middle-income category (25,001–75,000 INR; 61.9%), resided in rural areas (64.3%), and had no previous exposure to medicolegal autopsy (74.8%).

Table 2. Knowledge Regarding Medicolegal Postmortem Examination (Autopsy) Among the General Population of Haryana (n = 420)

Q. No.	Question	Options (Correct Answer in Bold)	Correct n (%)
1	A medicolegal postmortem examination is primarily performed to	a) Preserve the body b) **Determine the cause of death** c) Organ donation d) Religious rituals	342 (81.4)
2	Medicolegal autopsy is usually conducted in cases of	a) Natural death only b) **Sudden, suspicious or unnatural deaths** c) Old age deaths d) All hospital deaths	324 (77.1)

3	A medicolegal autopsy is performed by a	a) General physician b) Surgeon c) **Forensic medicine specialist** d) Nurse	298 (71.0)
4	The main purpose of medicolegal autopsy is to	a) Delay funeral b) **Assist legal investigation and determine cause of death** c) Remove organs d) Issue death certificate	336 (80.0)
5	During autopsy, forensic experts may collect	a) **Blood, viscera and tissue samples** b) Clothes only c) Bones only d) Hair only	286 (68.1)
6	Medicolegal autopsy helps in identifying	a) **Unknown bodies** b) Living persons c) Blood donors d) Hospital staff	318 (75.7)
7	Autopsy findings can be used as evidence in	a) Schools b) Insurance only c) **Courts of law** d) Banks	330 (78.6)
8	Fingerprints, DNA and dental records help in	a) Disease treatment b) **Identification of deceased persons** c) Organ transplantation d) Vaccination	302 (71.9)
9	Medicolegal autopsy is useful in detecting	a) **Poisoning and internal injuries** b) Diabetes only c) Hypertension d) Cataract	314 (74.8)
10	A medicolegal autopsy is mandatory in many cases of	a) Fever deaths b) **Road traffic accidents and suspicious deaths** c) Cancer deaths d) Old age	320 (76.2)
11	A postmortem examination is performed on	a) Living patients b) **Deceased individuals** c) Pregnant women d) Newborns only	386 (91.9)
12	Medicolegal autopsy helps estimate	a) Height only b) **Time since death** c) Blood group only d) Vision	272 (64.8)
13	Internal organs are examined mainly to	a) Remove them permanently b) **Identify disease or injury causing death** c) Sell organs d) Preserve them	294 (70.0)
14	All organs removed during routine autopsy are	a) Kept permanently b) Donated automatically c) **Usually replaced before handing over the body** d) Destroyed	210 (50.0)
15	The external examination during autopsy helps identify	a) **Injuries, scars and external marks** b) Blood sugar c) Eye colour only d) Hair growth	300 (71.4)
16	Medicolegal autopsy contributes to	a) **Public health surveillance and injury prevention** b) Farming c) Banking d) Education only	248 (59.0)
17	Which authority usually requests a medicolegal autopsy?	a) Family members only b) **Police/Magistrate under legal provisions** c) Neighbours d) Village head	266 (63.3)
18	Histopathological and toxicological examination may be required to	a) Delay report b) **Confirm disease or poisoning** c) Preserve organs d) Identify relatives	274 (65.2)
19	Medicolegal autopsy findings help determine	a) Property ownership b) **Cause and manner of death** c) Occupation d) Religion	318 (75.7)
20	Medicolegal autopsy plays an important role in	a) **Justice delivery and criminal investigation** b) Passport verification c) School admission d) Census	336 (80.0)

Overall knowledge regarding medicolegal postmortem examination was moderate to good, with participants demonstrating satisfactory understanding of its purpose and legal significance. More than three-fourths correctly recognized that autopsies help determine the cause of death (81.4%), assist criminal investigations (80.0%), and serve as evidence in courts (78.6%). However, important knowledge gaps persisted regarding replacement of organs after autopsy (50.0%), the public health role of autopsy (59.0%), and the legal authority responsible for ordering medicolegal autopsies (63.3%), indicating the need for greater public education on forensic medicine and medicolegal procedures.

Table 3. Awareness Regarding Legal and Procedural Aspects of Medicolegal Postmortem Examination Among the General Population of Haryana (n = 420)

Q. No.	Question	Options (Correct Answer in Bold)	Correct n (%)
1	Medicolegal autopsy is generally performed only after authorization by	a) Family members b) **Police/Magistrate as per law** c) Village Panchayat d) Hospital attendant	286 (68.1)
2	Consent from relatives is generally required for medicolegal autopsy in legally mandated cases	a) **No** b) Yes c) Sometimes only d) Don't know	234 (55.7)
3	The body is respectfully handed over to the family after completion of the autopsy	a) **Yes** b) No c) Only after court permission d) Don't know	326 (77.6)
4	Medicolegal autopsy helps preserve evidence required for criminal investigation	a) **Yes** b) No c) Only in murder cases d) Don't know	338 (80.5)

5	Samples collected during autopsy may be sent for toxicological examination	a) **Yes** b) No c) Only for accidents d) Don't know	302 (71.9)
6	DNA samples collected during autopsy can help identify unknown bodies	a) **Yes** b) No c) Only in foreign countries d) Don't know	318 (75.7)
7	Medicolegal autopsy can establish the probable cause of death	a) **Yes** b) No c) Only sometimes d) Don't know	350 (83.3)
8	Autopsy findings may influence the outcome of court proceedings	a) **Yes** b) No c) Rarely d) Don't know	332 (79.0)
9	Poisoning can be confirmed through laboratory examination of viscera collected during autopsy	a) **Yes** b) No c) Only by blood test d) Don't know	292 (69.5)
10	Medicolegal autopsy is useful in identifying victims during disasters	a) **Yes** b) No c) Only by police d) Don't know	296 (70.5)
11	External injuries alone are sufficient to determine the exact cause of death	a) Yes b) **No** c) Sometimes d) Don't know	266 (63.3)
12	Internal examination is often necessary to detect hidden injuries and diseases	a) **Yes** b) No c) Rarely d) Don't know	312 (74.3)
13	Medicolegal autopsy reports are considered important medico-legal documents	a) **Yes** b) No c) Only for insurance d) Don't know	320 (76.2)
14	Every hospital death requires a medicolegal autopsy	a) Yes b) **No** c) Only government hospitals d) Don't know	248 (59.0)
15	Forensic experts follow standard legal and scientific procedures during autopsy	a) **Yes** b) No c) Sometimes d) Don't know	304 (72.4)
16	Medicolegal autopsy may help detect medical negligence in selected cases	a) **Yes** b) No c) Only private hospitals d) Don't know	278 (66.2)
17	The identity of an unknown deceased person can be established using forensic techniques	a) **Yes** b) No c) Rarely d) Don't know	314 (74.8)
18	Autopsy findings also contribute to public health research and mortality statistics	a) **Yes** b) No c) Don't know	238 (56.7)
19	Medicolegal autopsy helps differentiate natural from unnatural deaths	a) **Yes** b) No c) Sometimes d) Don't know	334 (79.5)
20	Public awareness regarding medicolegal autopsy is important for reducing myths and misconceptions	a) **Yes** b) No c) Don't know	364 (86.7)

Participants demonstrated moderate awareness regarding the legal and procedural aspects of medicolegal autopsy. Most respondents recognized that autopsies help determine the cause of death (83.3%), preserve forensic evidence (80.5%), differentiate natural from unnatural deaths (79.5%), and contribute to judicial proceedings (79.0%). However, awareness was comparatively lower regarding the legal requirement for family consent (55.7%), the public health role of autopsy (56.7%), and the fact that not all hospital deaths require medicolegal autopsy (59.0%), highlighting persistent gaps in legal and procedural understanding among the general population.

Table 4. Public Perceptions and Myths Regarding Medicolegal Postmortem Examination Among the General Population of Haryana (n = 420)

Q. No.	Statement (Perception/Myth)	Agree n (%)	Neutral n (%)	Disagree n (%)
1	Medicolegal autopsy is essential for determining the true cause of death.	342 (81.4)	48 (11.4)	30 (7.2)
2	Autopsy unnecessarily mutilates the body.	138 (32.9)	84 (20.0)	198 (47.1)
3	Internal organs are permanently removed during every autopsy.	124 (29.5)	102 (24.3)	194 (46.2)
4	Autopsy causes a major delay in funeral and last rites.	154 (36.7)	92 (21.9)	174 (41.4)
5	Medicolegal autopsy is performed only in murder cases.	112 (26.7)	64 (15.2)	244 (58.1)
6	Religious beliefs prohibit medicolegal autopsy.	88 (21.0)	96 (22.9)	236 (56.1)
7	Autopsy should be performed whenever legally required, irrespective of personal beliefs.	304 (72.4)	68 (16.2)	48 (11.4)
8	I trust forensic experts to conduct autopsies respectfully and professionally.	292 (69.5)	78 (18.6)	50 (11.9)
9	Medicolegal autopsy helps ensure justice for victims and their families.	326 (77.6)	58 (13.8)	36 (8.6)
10	Media and movies often create misconceptions regarding autopsy.	286 (68.1)	82 (19.5)	52 (12.4)

11	Organ misuse commonly occurs during medicolegal autopsy.	96 (22.9)	122 (29.0)	202 (48.1)
12	Public awareness programmes can reduce myths regarding autopsy.	348 (82.9)	46 (11.0)	26 (6.1)
13	Medicolegal autopsy is an important part of the criminal justice system.	334 (79.5)	52 (12.4)	34 (8.1)
14	Families should receive proper counselling before and after medicolegal autopsy.	352 (83.8)	42 (10.0)	26 (6.2)
15	Schools and colleges should educate students about medicolegal autopsy.	324 (77.1)	60 (14.3)	36 (8.6)
16	I would cooperate with authorities if medicolegal autopsy is legally required in my family.	286 (68.1)	74 (17.6)	60 (14.3)
17	Medicolegal autopsy improves transparency in death investigation.	312 (74.3)	68 (16.2)	40 (9.5)
18	More public awareness campaigns on forensic medicine are needed in Haryana.	356 (84.8)	40 (9.5)	24 (5.7)
19	I would like to know more about medicolegal autopsy through community awareness programmes.	338 (80.5)	52 (12.4)	30 (7.1)
20	Overall, medicolegal autopsy is beneficial for society and public health.	330 (78.6)	56 (13.3)	34 (8.1)

Overall, participants exhibited a positive perception toward medicolegal postmortem examination despite the persistence of several misconceptions. More than three-fourths acknowledged that autopsy is important for determining the true cause of death (81.4%), ensuring justice (77.6%), and improving transparency in death investigations (74.3%). A large majority also supported family counselling (83.8%), public awareness programmes (84.8%), and forensic education in schools and colleges (77.1%). Nevertheless, misconceptions persisted, with 32.9% believing that autopsy unnecessarily mutilates the body, 36.7% perceiving that it significantly delays funeral rites, and 29.5% assuming that organs are permanently removed during every autopsy, indicating the continued need for targeted public education and myth-dispelling initiatives.

Table 5. Overall Knowledge, Awareness, and Public Perception Scores Regarding Medicolegal Postmortem Examination Among the General Population of Haryana (n = 420)

Category	Score Range	Knowledge n (%)	Awareness n (%)	Public Perception n (%)
Excellent / Positive	≥75%	104 (24.8)	98 (23.3)	276 (65.7)
Good	50–74%	174 (41.4)	182 (43.3)	96 (22.9)
Fair / Neutral	25–49%	100 (23.8)	98 (23.3)	32 (7.6)
Poor / Negative	<25%	42 (10.0)	42 (10.0)	16 (3.8)
Mean ± SD (out of 20)	—	**13.9 ± 3.3**	**13.6 ± 3.1**	**15.2 ± 3.4**

Overall, participants demonstrated moderate to good knowledge and awareness regarding medicolegal postmortem examination. Approximately 66.2% exhibited good to excellent knowledge, while 66.6% showed good to excellent awareness of its legal and procedural aspects. Public perception was largely favorable, with 65.7% demonstrating a positive attitude towards medicolegal autopsy and only 3.8% expressing negative perceptions. The mean scores for knowledge (13.9 ± 3.3), awareness (13.6 ± 3.1), and public perception (15.2 ± 3.4) indicate satisfactory overall understanding; however, the presence of nearly one-third of participants with fair or poor scores highlights the need for targeted community awareness initiatives to improve forensic literacy and dispel persistent misconceptions.

Table 6. Association Between Socio-demographic Variables and Overall Knowledge Regarding Medicolegal Postmortem Examination Among the General Population of Haryana (n = 420)

Variable	Category	Excellent n (%)	Good n (%)	Fair n (%)	Poor n (%)	χ^2 Value	p-value
Age Group (years)	18–25 (n=90)	12 (13.3)	30 (33.3)	32 (35.6)	16 (17.8)	13.42	0.009*
	26–35 (n=122)	30 (24.6)	54 (44.3)	28 (23.0)	10 (8.1)		
	36–45 (n=94)	28 (29.8)	40 (42.6)	20 (21.3)	6 (6.3)		
	46–60 (n=76)	22 (28.9)	30 (39.5)	18 (23.7)	6 (7.9)		
	>60 (n=38)	12 (31.6)	20 (52.6)	4 (10.5)	2 (5.3)		
Gender	Male (n=200)	46 (23.0)	84 (42.0)	50 (25.0)	20 (10.0)	1.84	0.607

	Female (n=220)	58 (26.4)	90 (40.9)	50 (22.7)	22 (10.0)		
Educational Status	Up to Secondary (n=112)	10 (8.9)	34 (30.4)	42 (37.5)	26 (23.2)	31.68	<0.001*
	Graduate (n=178)	40 (22.5)	82 (46.1)	42 (23.6)	14 (7.8)		
	Postgraduate & Above (n=130)	54 (41.5)	58 (44.6)	16 (12.3)	2 (1.6)		
Occupation	Student (n=62)	8 (12.9)	22 (35.5)	22 (35.5)	10 (16.1)	19.24	0.004*
	Service/Professional (n=150)	48 (32.0)	64 (42.7)	28 (18.6)	10 (6.7)		
	Homemaker (n=94)	18 (19.1)	40 (42.6)	28 (29.8)	8 (8.5)		
	Self-employed (n=78)	22 (28.2)	30 (38.5)	20 (25.6)	6 (7.7)		
	Retired/Unemployed (n=36)	8 (22.2)	18 (50.0)	2 (5.6)	8 (22.2)		
Monthly Household Income (INR)	<25,000 (n=74)	8 (10.8)	24 (32.4)	28 (37.8)	14 (19.0)	15.86	0.011*
	25,001–50,000 (n=132)	26 (19.7)	58 (43.9)	34 (25.8)	14 (10.6)		
	50,001–75,000 (n=128)	34 (26.6)	56 (43.8)	30 (23.4)	8 (6.2)		
	>75,000 (n=86)	36 (41.9)	36 (41.9)	8 (9.3)	6 (6.9)		
Place of Residence	Rural (n=270)	56 (20.7)	108 (40.0)	76 (28.2)	30 (11.1)	5.62	0.036*
	Urban (n=150)	48 (32.0)	66 (44.0)	24 (16.0)	12 (8.0)		

***** Significant at p <0.05; Highly Significant at p <0.001; NS = Not Significant

Overall knowledge regarding medicolegal postmortem examination was significantly associated with age (p=0.009), educational status (p<0.001), occupation (p=0.004), monthly household income (p=0.011), and place of residence (p=0.036). Participants who were postgraduates, service/professionals, urban residents, and those belonging to higher-income groups demonstrated significantly better knowledge than their counterparts. Gender was not significantly associated with knowledge levels (p=0.607). These findings suggest that educational attainment and socioeconomic factors play a pivotal role in shaping public understanding of medicolegal autopsy.

Table 7. Association Between Socio-demographic Variables and Awareness Regarding Legal and Procedural Aspects of Medicolegal Postmortem Examination Among the General Population of Haryana (n = 420)

Variable	Category	Excellent n (%)	Good n (%)	Fair n (%)	Poor n (%)	χ^2 Value	p-value
Age Group (years)	18–25 (n=90)	10 (11.1)	34 (37.8)	30 (33.3)	16 (17.8)	12.76	0.012*
	26–35 (n=122)	28 (23.0)	56 (45.9)	28 (23.0)	10 (8.1)		
	36–45 (n=94)	26 (27.7)	42 (44.7)	20 (21.3)	6 (6.3)		
	46–60 (n=76)	22 (28.9)	32 (42.1)	16 (21.1)	6 (7.9)		
	>60 (n=38)	12 (31.6)	18 (47.4)	6 (15.8)	2 (5.2)		
Gender	Male (n=200)	44 (22.0)	88 (44.0)	46 (23.0)	22 (11.0)	2.08	0.556
	Female (n=220)	54 (24.5)	94 (42.7)	52 (23.6)	20 (9.2)		

Educational Status	Up to Secondary (n=112)	8 (7.1)	38 (33.9)	42 (37.5)	24 (21.5)	29.84	<0.001*
	Graduate (n=178)	36 (20.2)	84 (47.2)	44 (24.7)	14 (7.9)		
	Postgraduate & Above (n=130)	54 (41.5)	60 (46.2)	14 (10.8)	2 (1.5)		
Occupation	Student (n=62)	8 (12.9)	24 (38.7)	20 (32.3)	10 (16.1)	17.96	0.007*
	Service/Professional (n=150)	46 (30.7)	68 (45.3)	26 (17.3)	10 (6.7)		
	Homemaker (n=94)	18 (19.1)	40 (42.6)	28 (29.8)	8 (8.5)		
	Self-employed (n=78)	18 (23.1)	34 (43.6)	20 (25.6)	6 (7.7)		
	Retired/Unemployed (n=36)	8 (22.2)	16 (44.4)	4 (11.1)	8 (22.3)		
Monthly Household Income (INR)	<25,000 (n=74)	8 (10.8)	26 (35.1)	26 (35.1)	14 (19.0)	14.28	0.018*
	25,001–50,000 (n=132)	22 (16.7)	60 (45.5)	36 (27.3)	14 (10.5)		
	50,001–75,000 (n=128)	30 (23.4)	58 (45.3)	30 (23.4)	10 (7.9)		
	>75,000 (n=86)	38 (44.2)	38 (44.2)	6 (7.0)	4 (4.6)		
Place of Residence	Rural (n=270)	50 (18.5)	114 (42.2)	74 (27.4)	32 (11.9)	6.74	0.031*
	Urban (n=150)	48 (32.0)	68 (45.3)	24 (16.0)	10 (6.7)		

***** Significant at p <0.05; Highly Significant at p <0.001; NS = Not Significant

Awareness regarding the legal and procedural aspects of medicolegal postmortem examination was significantly associated with age (p=0.012), educational status (p<0.001), occupation (p=0.007), monthly household income (p=0.018), and place of residence (p=0.031). Participants with higher educational qualifications, professional occupations, urban residence, and higher household income demonstrated significantly better awareness of medicolegal procedures and legal provisions. Gender was not significantly associated with awareness levels (p=0.556), indicating comparable understanding among male and female participants. These findings emphasize the influence of education and socioeconomic status on awareness regarding medicolegal autopsy.

Table 8. Association Between Socio-demographic Variables and Public Perceptions Regarding Medicolegal Postmortem Examination Among the General Population of Haryana (n = 420)

Variable	Category	Positive n (%)	Neutral n (%)	Negative n (%)	χ^2 Value	p-value
Age Group (years)	18–25 (n=90)	50 (55.6)	24 (26.7)	16 (17.7)	11.82	0.019*
	26–35 (n=122)	82 (67.2)	28 (23.0)	12 (9.8)		
	36–45 (n=94)	68 (72.3)	20 (21.3)	6 (6.4)		
	46–60 (n=76)	54 (71.1)	16 (21.1)	6 (7.8)		
	>60 (n=38)	22 (57.9)	8 (21.1)	8 (21.0)		
Gender	Male (n=200)	128 (64.0)	48 (24.0)	24 (12.0)	1.46	0.481
	Female (n=220)	148 (67.3)	48 (21.8)	24 (10.9)		
Educational Status	Up to Secondary (n=112)	54 (48.2)	34 (30.4)	24 (21.4)	28.46	<0.001*
	Graduate (n=178)	116 (65.2)	46 (25.8)	16 (9.0)		
	Postgraduate & Above (n=130)	106 (81.5)	16 (12.3)	8 (6.2)		
Occupation	Student (n=62)	34 (54.8)	18 (29.0)	10 (16.2)	17.54	0.008*
	Service/Professional (n=150)	114 (76.0)	26 (17.3)	10 (6.7)		
	Homemaker (n=94)	60 (63.8)	24 (25.5)	10 (10.7)		
	Self-employed (n=78)	50 (64.1)	20 (25.6)	8 (10.3)		

	Retired/Unemployed (n=36)	18 (50.0)	8 (22.2)	10 (27.8)		
Monthly Household Income (INR)	<25,000 (n=74)	40 (54.1)	20 (27.0)	14 (18.9)	15.18	0.010*
	25,001–50,000 (n=132)	82 (62.1)	34 (25.8)	16 (12.1)		
	50,001–75,000 (n=128)	90 (70.3)	28 (21.9)	10 (7.8)		
	>75,000 (n=86)	64 (74.4)	14 (16.3)	8 (9.3)		
Place of Residence	Rural (n=270)	164 (60.7)	70 (25.9)	36 (13.4)	7.08	0.029*
	Urban (n=150)	112 (74.7)	26 (17.3)	12 (8.0)		

***** Significant at p <0.05; Highly Significant at p <0.001; NS = Not Significant

Public perception towards medicolegal postmortem examination was significantly associated with age (p=0.019), educational status (p<0.001), occupation (p=0.008), monthly household income (p=0.010), and place of residence (p=0.029). Participants with higher educational qualifications, professional occupations, higher household income, and urban residence demonstrated significantly more positive perceptions towards medicolegal autopsy. Gender showed no significant association with public perception (p=0.481). Overall, these findings indicate that education and socioeconomic status are key determinants of public acceptance and positive attitudes toward medicolegal postmortem examination.

DISCUSSION

The present study provides a comprehensive assessment of the knowledge, awareness, and public perceptions regarding medicolegal postmortem examination among the general population of Haryana. The findings demonstrate that although the majority of participants possessed moderate to good knowledge and generally positive perceptions towards medicolegal autopsy, important misconceptions and deficiencies in legal and procedural understanding continue to exist. These findings emphasize that while the concept of autopsy is familiar to many individuals, comprehensive forensic literacy remains inadequate among the general public.

Overall, approximately two-thirds of the participants demonstrated good to excellent knowledge regarding medicolegal autopsy. Most respondents correctly recognized that medicolegal postmortem examination is performed to determine the cause of death, assist criminal investigations, and provide scientific evidence for judicial proceedings. These findings suggest an encouraging level of awareness regarding the primary objectives of medicolegal autopsy, which may be attributed to increasing educational attainment, wider access to healthcare information, and growing exposure through electronic and social media. Similar observations have been reported in studies, where respondents exhibited satisfactory understanding of the general purpose of autopsy but demonstrated limited knowledge regarding its procedural and legal aspects.8,9 Although direct comparisons with Indian community-based studies remain difficult due to the paucity of published literature, the present findings indicate that public understanding in Haryana is gradually improving but remains incomplete.10-13

Despite satisfactory overall knowledge, several important misconceptions persisted. Only half of the respondents were aware that organs examined during routine medicolegal autopsy are generally replaced before the body is handed over to the relatives, while awareness regarding the contribution of autopsy to public health surveillance and epidemiological research was comparatively lower. Similarly, understanding of the legal authority responsible for ordering medicolegal autopsy remained suboptimal. These findings indicate that the public possesses greater awareness regarding the purpose of autopsy than its scientific methodology and legal framework. Such misconceptions may contribute to fear, anxiety, and resistance among bereaved families during medicolegal investigations and highlight the need for better public education regarding standard forensic practices.7-9

Awareness regarding the legal and procedural aspects of medicolegal autopsy also showed a similar trend. Most participants correctly recognized that autopsy findings contribute to criminal investigations, establish the cause of death, preserve forensic evidence, and assist courts of law. However, awareness regarding statutory provisions and consent requirements remained relatively poor, with a considerable proportion of respondents incorrectly believing that family consent is mandatory before every medicolegal autopsy. Under Indian legal provisions, medicolegal autopsies are performed under statutory authority in specified circumstances and generally do not require consent from relatives.14 This lack of awareness may partly explain the misunderstanding and occasional conflict observed between investigating authorities and family members during medicolegal procedures. Increasing public knowledge regarding the legal framework governing medicolegal autopsy could therefore improve cooperation and strengthen public confidence in forensic services.

One of the most significant findings of the present study was the persistence of myths surrounding medicolegal autopsy. Nearly one-third of the participants believed that autopsy unnecessarily mutilates the body, more than one-third perceived that it substantially delays funeral rites, and approximately one-third assumed that internal organs are permanently removed during every autopsy. Similar misconceptions have been documented internationally, where concerns regarding body

disfigurement, organ retention, religious beliefs, and delayed burial continue to influence public acceptance of autopsy. These misconceptions are often reinforced through hearsay, cultural traditions, sensationalized media portrayals, and limited interaction with forensic medicine professionals. Addressing these myths through scientifically accurate community education is therefore essential for improving public acceptance of medicolegal procedures.11-13

Despite these misconceptions, participants generally exhibited positive attitudes towards medicolegal autopsy. Nearly two-thirds demonstrated positive perceptions, and the majority acknowledged that medicolegal autopsy plays an important role in determining the true cause of death, ensuring justice, maintaining transparency in death investigations, and supporting the criminal justice system. Most respondents also supported public awareness programmes, counselling of bereaved families, and inclusion of forensic medicine awareness in educational institutions. These findings are encouraging, suggesting that although misconceptions persist, the public remains receptive to scientifically accurate information and recognizes the societal importance of medicolegal autopsy. Similar positive attitudes have been reported in awareness studies conducted among the general population in several countries, where respondents expressed willingness to support educational initiatives aimed at improving understanding of forensic medicine.5,6,9,15

The present study further demonstrated that educational status emerged as the strongest predictor of knowledge, awareness, and public perception. Participants with postgraduate education consistently demonstrated significantly higher levels of understanding and more positive attitudes than those with lower educational qualifications. Similar associations have been reported in numerous public health studies, where higher educational attainment is closely linked with improved health literacy, greater access to reliable information, and enhanced scientific understanding.6,9,10 Occupation and household income also showed significant associations, with service professionals and higher-income groups exhibiting superior knowledge and awareness. These findings suggest that socioeconomic empowerment plays an important role in shaping public understanding of medicolegal procedures and acceptance of forensic practices.7.9

Urban participants demonstrated significantly better knowledge, awareness, and positive perceptions compared with rural residents. This difference is likely attributable to improved educational opportunities, greater access to tertiary healthcare facilities, wider exposure to digital media, and better availability of health information in urban settings. Considering that a large proportion of Haryana's population resides in rural and geographically remote areas, targeted awareness programmes should prioritize rural communities through primary healthcare institutions, community health workers, educational institutions, and local media platforms. Such interventions may substantially reduce existing disparities in forensic literacy across different population groups.

Interestingly, gender was not significantly associated with knowledge, awareness, or public perception regarding medicolegal autopsy. Male and female participants demonstrated comparable levels of understanding across all study domains, indicating that educational attainment and socioeconomic status exert a greater influence on forensic literacy than gender alone. Similar observations have been reported in several public awareness studies where gender differences disappeared after adjustment for education and occupation.6,7,11 This finding suggests that awareness programmes should be designed for the general community rather than targeting one gender specifically.

The findings of the present study have important implications for forensic medicine, public health, and policy. Improving community awareness regarding medicolegal autopsy has the potential to reduce misconceptions, strengthen public trust in forensic services, facilitate communication between healthcare professionals and bereaved families, and improve cooperation during legally mandated death investigations. Public education initiatives should specifically address misconceptions related to body mutilation, organ removal, consent requirements, and funeral delays while emphasizing the scientific, legal, and humanitarian importance of medicolegal autopsy. Community awareness campaigns, digital health education, school- and college-based forensic literacy programmes, and collaboration between forensic departments, healthcare institutions, law enforcement agencies, and media organizations may significantly enhance public understanding and acceptance of medicolegal postmortem examination. Such evidence-based interventions will not only improve forensic literacy but also strengthen the interface between forensic medicine, public health, and the administration of justice.

Strengths and Limitations

The present study is among the few community-based investigations from India assessing knowledge, awareness, myths, and public perceptions regarding medicolegal postmortem examination among the general population. Its strengths include a relatively large sample size, representation from diverse socio-demographic groups across Haryana, use of a validated and reliable questionnaire, and comprehensive assessment of multiple domains related to medicolegal autopsy. The online survey facilitated wide community participation while minimizing interviewer bias. However, the study has certain limitations. Being a cross-sectional, self-reported online survey, causal relationships cannot be established, and the findings may be influenced by recall, reporting, and social desirability biases. Individuals without internet access or adequate digital

literacy may have been underrepresented, thereby limiting the generalizability of the findings to the entire population of Haryana.

CONCLUSION

The present study demonstrates that the general population of Haryana possesses moderate to good knowledge and awareness regarding medicolegal postmortem examination, with an overall positive perception of its role in determining the cause of death and supporting the administration of justice. Nevertheless, important misconceptions regarding body mutilation, organ removal, consent requirements, and procedural aspects continue to persist, resulting in significant knowledge gaps. Educational status, occupation, income, and place of residence were important determinants of knowledge and public perception, while gender showed no significant influence. The findings highlight the need to strengthen forensic literacy among the general population to improve acceptance of medicolegal autopsy and foster greater public confidence in forensic medicine and the criminal justice system.

Recommendations

Based on the study findings, comprehensive public awareness initiatives should be undertaken to improve understanding of the scientific, legal, and public health importance of medicolegal postmortem examination. Community-based education campaigns, digital media initiatives, and information, education, and communication (IEC) activities should focus on dispelling common myths related to body disfigurement, organ removal, funeral delays, and consent requirements. Basic concepts of forensic medicine and medicolegal autopsy may be incorporated into school, college, and community health education programmes to enhance forensic literacy. Healthcare professionals, forensic experts, and law enforcement agencies should provide appropriate counselling to bereaved families during medicolegal investigations to improve transparency and public trust. Future multicentric studies involving larger and more diverse populations, including qualitative assessments, are recommended to better understand sociocultural factors influencing public perceptions and acceptance of medicolegal autopsy.

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