

A Cross-Sectional Study on Profile and Working Conditions of Mortuary Workers at Victoria Hospital

Fathima fahmi Shirin M¹, Vinod Kumar², Suresh V³, S. Venkata Raghava⁴

¹3rd year PG student, ² 2nd year PG student, ³Professor, ⁴Professor & HOD, Department of Forensic Medicine & Toxicology BMCRI, Bangalore

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Abstract

Mortuary workers play a crucial role in ensuring the respectful, safe and dignified handling of human bodies. But despite of their irreplaceable role, there is prolonged neglect and under recognition of these mortuary staff in our country. It is in fact correct to say that mortuary workers were as important as nurses were to the Forensic Pathologists. The mortuary attendants assist in preparing bodies, specialized dissection and collecting specimens that were pertinent in performing meticulous autopsy techniques. Apart from this they also help in the examination of sexual offenders. These kind of diverse responsibilities makes them an integral part in the medicolegal system in India. There was only a few research done in regard to the mortuary staff. Understanding the work conditions and challenges faced by them will help in improving work environment. This will help in promoting the quality of work they offer and attract more eligible youth to take up this essential, yet risky profession.

Keywords: Mortuary, occupational hazards, autopsy, Forensic Pathologist.

Introduction

Mortuary is an important integral part of every Hospital.⁽²⁾ In the field of health care, duty of a doctor doesn't end in caring the living but in proper disposal and after life care of the dead. Mortuary workers play a crucial role in providing after life care for the deceased. The presence of a mortuary in the vicinity of the hospital can affect the ailing patients who visits the Hospitals due to stigma attached to the procedure of autopsy. The Hospital and the concerned physicians treating the patients wouldn't prefer to highlight the morgue as well. Hence mortuary complex is set

up in an obscure place where the dead bodies were preserved and the autopsies were performed.

For the bereaving relatives of the deceased, the handling and care of dead bodies holds a lot of sentimental values.⁽³⁾ Mortuary staff takes care of the dead body from the moment of its arrival to the point it leaves the hospital.⁽⁴⁾ Their services facilitate to acknowledge the deceased persons place as an individual in the society. Hence an adequately trained mortuary worker is vital in ensuring the dignified, respectful and safe storage, transfer and care of the dead bodies as well as in assisting the

Corresponding Author: Vinod Kumar, 2nd year PG student, Department of Forensic Medicine & Toxicology, Victoria Hospital, BMCRI, Bangalore, Karnataka.

E-mail: fathimafahmishirin@gmail.com

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Forensic Doctors in ensuring justice to the dead when legal issues happens to be involved. In a Country like India where autopsy is done for every unnatural death,⁽⁵⁾ it is important to know and analyze the working conditions and occupation associated hazards including psychological stress faced by mortuary workers, aimed at improving their quality of work and enable them to meet the demands of this unique kind of profession.⁽⁶⁾

Aims & Objectives of the study:

1. To analyse the working conditions, training requirements and occupational Hazards of mortuary staff involved in postmortem Examination.
2. To analyse the psychological impact of occupation over the mortuary workers.

Materials And Methods

Source of data:

Mortuary, Department of Forensic Medicine and Toxicology, Victoria hospital, Bangalore medical college and research institute, Bangalore.

Methods of Collection of Data:

- A. Study design:** Cross-sectional study.
- B. Study period:** 1 Month.
- C. Place of study:** Department of Forensic Medicine and Toxicology, VictoriaHospital, BMCRI.
- D. Sampling Method:** Convenience sampling.
- E. Sample size:** Approximately 10-12 Mortuary workers currently or had been previously employed in the mortuary of our institution

E. Inclusion Criteria:

Mortuary workers willing to give informed consent for participating in the study.

A person who is currently or had been previously employed in the mortuary of our institution.

F. Exclusion Criteria:

Mortuary workers not available at the time of interview.

Methodology

After obtaining the approval and clearance from Institutional Ethics Committee, date: 25/04/2024 , Ref No : BMCRI/EC/16/2024

The consent was taken from the participants of study on the consent form and data was collected as following:

1. Informed consent was taken from the participants
2. Non participatory observation: The direct observation of the day-to-day work and Occupational safety measures used.
3. Interviews: A validated semi structured questionnaire (Annexure-2) used in the study The permission for using the same has been taken from Principal Investigator.⁽⁷⁾

Assessment tools:

1. Semi structured questionnaire(Annexure-2)

ANALYSIS OF DATA

RESULTS:

Table 1: Sociodemographic characters and Occupational Hazards

Variable	Number of responses	Percentage
Gender		
Male	12	100
Female	0	-
Marital status		
Married	9	75
Unmarried	3	25
Educational status		
Till SSLC	7	58
Above or equal SSLC	5	42
Employment status		
Temporary	6	50
Permanent	6	50
Years of experience		
≥5 years	7	58
≤5 years	5	42

Occupational hazards		
Variables	Number	Percentage
Aware of Hepatitis B?	9	75
Aware of Tetanus?	12	100
Tetanus vaccination status	10	83
Hepatitis B vaccination status	0 %	
Do you think your work can predispose you to TB and HIV?		
Yes	7	58
No	5	42
Ever experienced fluid splash on body ?		
Yes	12	100
No	0	
Frequency of splash		
≤3 / month	4	34
≥3 month	8	66
Had you ever inhaled chemicals ?		
Yes	5	42
No	7	58
Health issues faced due to use of chemicals at workplace.		
- Skin irritation	1	8
- Breathing difficulty	3	25
- Eye irritation	10	83
How often do you go for medical checkups ?		
Every yearly	2	17
Every two years	2	17
Never	8	66
Method of disposal of waste in mortuary		
-Dedicated dust bin	12	100
-Wash and reuse	0	0
How often do you use PPE?		
Masks		
Always	0	
Occasional	4	34
Never	8	66
Goggles		
Always	0	0
Occasional	2	17
Never	10	83

Gloves		
Always	12	100
Occasional	-	
Never	-	
Gown		
Always	12	100
Occasional	-	-
Never	-	-
Ever injured in workplace ?		
Yes	12	100
No		
Cause of injury:		
Needle pricks	12	100
Other Sharp instruments	9	75
Falls on damp floor	2	16
Action taken after sustaining injury.		
Reported to authority immediately	0	-
Continued work without reporting		
Reason for not reporting		
-Thought injury was minor	10	83
-Delayed response	2	17
-No response	-	-
Did you first-aid yourself?	12	100

Table 3: Working conditions of mortuary workers

Working Conditions		
What is your current salary		
N= ≤25000	6	50
N = ≤25000	6	50
Do you receive salary regularly?		
Yes	6	50
No	6	50
Were you satisfied with the remuneration ?		
Satisfied	4	34
Dissatisfied	5	41
Feeling ok	3	25
Do you receive incentives other than salary?		

Continue.....

Yes	-	-
No	12	100
Were you able to avail paid leaves ?		
Yes	6	50
No	6	50
How many hours do you work a day ?		
≤ 9 hours	10	83
More than 9 hours	2	17
Were you able to find time for lunch break?		
Yes	0	0
No	12	100
Do you had proper restrooms and washrooms?		
Yes	0	-
No	12	100
How stable do you think your job is?		
Very stable	6	50
Can loose job anytime	3	25
Somewhat stable	3	25
Ever experienced any kind of ill-treatments?		
-Police personnel	5	42
-Other hospital staff	1	8
-Relatives of deceased	6	50
-Doctors	0	

Table 4: Psychological Aspects concerning Mortuary workers

PSYCHOLOGICAL ASPECTS		
Does your family support your career?		
Yes	12	100
No	-	
Do you face any kind of discrimination from society because of your job?		
Yes	10	83
No	2	17
Do you involve in any substance use? if yes		
Alcohol	12	100
Frequency of alcohol intake		
Daily after work	5	42
Occasionally	7	58
Daily During work	0	0
Cigarette smoking	6	50
Do you feel stressed about nature of your job?		

Yes	1	8
No	11	92
Were you able to manage work and family life ?		
Yes	10	83
No	2	17
How do you solve problems that arise among the worker?		
Approach authority for solution	4	34
Solve among each other	8	66

Among the 12 respondents, all were males which highlights the gender disparity. While three (25%) of them were unmarried, the rest nine (75%) were married. Seven (58%) of them had educational qualification till SSLC(10th standard), five (42%) of them were educated more than SSLC .50 %were temporary workers who work on a contract basis, while the rest 50% were permanent government employees. None of them had received any formal training prior to their joining of work. All the respondents had revealed that they learnt the post-mortem procedures by observing their senior workers and assisting them. Seven (58 %) had more than five years of experience as a mortuary worker.

The susceptible diseases that they were aware of include Hepatitis B (75%), Tetanus (100%), Tuberculosis and HIV (58%). Among them only 83% were vaccinated against tetanus. No worker has received vaccination for Hepatitis B. Among them eight (66%) workers didn't know that hepatitis B could be contracted through body fluids.

Among work place hazards, all of the twelve respondents reported that they had experienced fluid splash during their work, it happens more than three times per month as per four (34%) workers. According to them, it occurred while shifting the bodies as well as while opening the body cavities while conducting post-mortem examination. Five (42%) workers stated that they had accidentally inhaled chemicals which mostly included formalin used for embalming. Of the respondents one (8 %) has experienced skin irritation, three (25 %) had breathing difficulties, ten (83%) experienced eye irritation. The common chemicals involved include latex from gloves, formalin, hydrogen peroxide etc.

Only two (16 %) respondents had admitted that they did yearly medical check up. Among the

personal protective equipments, gloves and gowns were used by all the twelve (100 % respondents), goggles were used by two (17 %) of the workers only while doing autopsy of Covid cases. It was revealed and observed that there were dedicated colour coded dustbins for the proper waste management.

Needle prick injuries were sustained by all the respondents, out of which 75 % of them had sustained non severe injuries with other sharp autopsy instruments used for autopsy like Knife, Suturing needle etc.

The mortuary workers reported that they didn't reported the incidents of injuries to the concerned authorities, because they perceived that the injuries were only minor and had performed first aids by themselves.

During the interview it was also found that only the permanent workers received their salary regularly and only four of the respondents (34 %) were satisfied with the salary that they received. Only the permanent mortuary staff had felt they feel their career is stable. Six (50 %) of the respondents revealed that they had been illtreated by the relatives of the deceased whereas five (42%) had felt that they were treated badly by police personnels. Only the six (50%) respondents who were permanent employees could avail paid leaves.

There was no proper restrooms or washrooms available for the workers and there is no proper lunch break or tea break hours for them to had food regularly. While it was noted that family of the respondents had shown full support for their career, they had faced discriminations as well as snobbish comments and remarks from the members of society.

The respondents admitted that they consume alcohol. Five (42 %) of the respondents consume alcohol on a daily basis while the rest of the seven (58 %) respondents only drink occasionally. While asking about the work related stress, only one reported that he feels stressed about the workload, nevertheless all the twelve workers had clarified that they were completely at ease while handling the dead bodies. Ten workers (83 %) told that they were able to maintain a healthy balance between work life and family life. This finding is in contrary to that observed by Rose AL, Atkey SK, Goldberg JO⁽⁸⁾ in which it

was impossible for the workers to find any additional source of income due to continuous duty hours. The 83% workers reported that they prefer to resolve the issues among themselves, if not solved then only they bring it to the notice of higher authorities of the department.

Discussion

On an average 15 autopsies were conducted daily in Victoria Hospital mortuary. This workload makes the herculean task of managing large number of dead bodies at cold storage, shifting to autopsy room, performing PM examination etc. more difficult. However, this study envisages to analyse the working conditions, training requirements and occupational Hazards of mortuary staff involved in postmortem Examination. Also to analyse the psychological impact of occupation over the mortuary workers.

The mortuary is place with a heavy load of deadly micro organisms⁽⁹⁾

On contemplating the data related to the Demographics and Work Environment, we found it to be a male predominant workforce, which is consistent with the findings of Akinyemi et al. (2020)⁽¹⁰⁾ where 95.1% of the participants were male. The educational status in our data shows that a significant portion of the workforce has education till SSLC, while the findings of Akinyemi et al. (2020), shows that 35% had no formal education. Regarding awareness of occupational hazards, our data shows high awareness of tetanus but low awareness of hepatitis B vaccination status, contrasting with Akinyemi et al. (2020), where awareness of hepatitis B was higher. Injuries in the workplace, especially needle pricks, were prevalent in our data, consistent with the findings of Desai et al. (2022). Use of personal protective equipment (PPE) varies, with gloves and gowns being used always by 100% of respondents, which is a positive finding compared to inconsistent use reported by Desai et al. (2022).⁽⁵⁾

On analysing the Psychological Aspects our data indicates a high prevalence of alcohol use among mortuary staff, consistent with the finding of Uditia Srivastava et al. (2022), which attributed this to stress coping mechanisms. Stress levels seem relatively low in our data, with only 8% reporting feeling stressed

about the nature of their job, which contrasts with Mridula and K Ganesh's (2016) findings where monotony and long working hours were stressors. (6)As far as Health Risks and Safety Measures were concerned, exposure to chemicals and biological risks, as well as inadequate use of PPE, were highlighted in our data, which aligns with the findings of Desai et al. (2022).Lack of proper psychological training and support systems for coping with stressors were consistent with Uditia Srivastava et al.'s (2022) findings.(5)

In summary, while some aspects like injury prevalence and PPE usage show positive findings compared to other studies, there were still significant concerns regarding occupational hazards, psychological support, and consistent use of safety measures. This study is aimed at understanding the demands and requirements needed for this particular job by keeping in mind the fact that the mortuary sector including funeral homes is a neglected area in regard to study of occupational factors as well as stressors effecting its employees (11).Addressing these issues through improved training, support systems, and adherence to safety protocols could enhance the overall well-being and safety of mortuary workers.

Conclusion

The study revealed that mortuary workers were vulnerable to numerous hazards associated with their occupation. Factors such as limited education, inadequate training, and a lack of awareness significantly contribute to their exposure to avoidable mishaps. Addressing these underlying issues through targeted training programs and awareness campaigns is essential for improving workplace safety. Workers demonstrate a lack of seriousness regarding the risk of infection while handling the bodies of individuals with known cases of HIV and TB. This attitude further increases their susceptibility to contracting diseases. Additionally, they often administer first aid for injuries considering them to be minor without fully recognizing the potential severity of such wounds. Postmortem rooms were found to pose significant hazards, including the storage of dangerous chemicals without proper labelling in open racks. Safely storing these chemicals in secure locations can reduce the risk of unintended exposure and spills.

Mortuary staff who were hesitant to wear goggles and masks need to be educated on the importance of these protective measures, and authorities should emphasize consistent usage. The absence of designated washrooms or areas for changing clothes during extended shifts significantly affects workers' well-being and productivity. A case was observed during the study, where a respondent was abruptly removed from his job without prior notice, exacerbates concerns about their job stability. Improving salaries of contractual workers performing the same duties as permanent workers is crucial for ensuring equal pay. Educating workers engaged in substance use on a daily basis is essential, as it can impact workplace safety and physical health. Additionally, fostering a culture of open communication and understanding among concerned authorities can encourage workers to seek help for the various unique challenges they face, ultimately promoting overall well-being within the mortuary environment.

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Conflict of Interest: None to declare

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