

# The effect of applying quality in examining bodies in forensic medicine in Mecca

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## ABSTRACT

This current study aims to know the impact of applying quality standards in examining dead bodies in forensic medicine in Mecca, and the impact of employees applying quality standards at work. The questionnaire was prepared via Google Drive and distributed to all employees of the Forensic Medical Services Center in Mecca (administrators, technicians, and doctors). The questionnaire was distributed to them via the social networking program (WhatsApp), and responses were obtained via email. It concluded that Quality is applied to the examination of corpses at a high rate of up to 80%, and thus the place is considered to be highly compliant with quality standards.

**Keywords:** the effect, of applying quality, in examining bodies, in forensic medicine in Mecca.

## 1. INTRODUCTION

An autopsy <sup>(1)(2)</sup> (in English: Autopsy)<sup>(3)</sup>, also called a forensic autopsy or post-mortem examination, is a medical procedure that contains of a awarechecking of a corpse to define the reason and method of death and to reform any disease or injury that may have happen to the body. The operation is usually complete by a doctor specializing in pathology. Autopsies are performed either for legal aim or medical causes. For example, a forensic autopsy may be performed when death occurred due to a criminal reason, while a clinical or academic autopsy may be performed to locate the medical reasons of death. Autopsies are also performed in cases of death of unknown cause, or for research and educational aims. Autopsies can be categorized into cases in which an external examination is enough, to cases that request an autopsy and internal examinations. Usually, the autopsy is performed after the approval of the relatives. After performing the internal dissection, the body is reshaped by dressmaker it again. The first autopsies were performed in order to set the cause of death, in the early third millennium BC, despite the belief of many ancient societies that any mutilation that occurs to people's bodies block them from entering the afterlife <sup>(4)</sup>(as was the case with the ancient Egyptians who were removing Internal organs through small incisions in the body <sup>(4)</sup>). Two of the most famous Greek annotators were eraseratus and Herophilus of Caledonia, who lived in Alexandria in the 8th century BC 3 (in 1). But in general, autopsy was unusual in ancient Greece. (2/) In the year 44 BC, an autopsy was performed on the body of Julius Caesar after he was killed by his rival senators. The report indicated that the second stab wound was the cause of his death <sup>(6)</sup>. Around 150 BC, the ancient Romans established clear legal standards for the practice of autopsies <sup>(4)</sup>. Autopsy is an important factor in clinical medicine because it helps in identifying medical error and in the continuous improvement of medicine. One study that focused on cases of myocardial infarction (heart attack) as a cause of death proved that errors, negligence, and negligence occur. That is, a large number of why attributed to myocardial dysfunction (MIS) were not, and vice versa. One systematic review of autopsy studies showed that about 25% of the diagnosis was wrong. However, this percentage will lower over time, as the study predicts that contemporary institutions in the United States will err in the major diagnostic outcome by a percentage ranging from 8.4% to 24.4% of cases. A high percentage of the analysis showed that nearly a third of death certificates were incorrect, and that half of the autopsies showed untruereasonings about the source of death. Also, it is believed that more than one-fifth of unexpected findings can only be diagnosed histologically, i.e. by biopsy or autopsy, and that approximately one-quarter of unexpected findings, i.e. 5% of all findings, are major findings and can only be diagnosed by Tissue diagnosis. One study found that "the autopsy detected diagnostic errors in 171 reason, including 21 cases of cancer, 12 cases of stroke, 11 cases of heart disease, 10 pulmonary emboli, and

9 endocarditis, in addition to other issues" <sup>(5)</sup>. There are three materkinds of autopsies <sup>(6)</sup>: Anatomical forensics or forensic autopsy demand to find the purpose and way of death and define the identity of the deceased. It is generally carried out as determined by law, especially in reason of death due to violence, sudden suspicious deaths, and source of death without medical help or during surgical operations <sup>(6)</sup>. Clinical autopsy performed to diagnose a specific illness or for medical research purposes. It aims to identify, clarify, or emphasize a medical diagnosis of diseases that cause death that are still unknown or ambiguous <sup>(6)</sup>. Academic dissections performed by anatomy students for the purpose of study only.

## 2. MATERIAL AND METHODS

The study began in (the city of Mecca in the Kingdom of Saudi Arabia), and the study ended with writing the data collection in April 2024. The researcher used descriptive analysis, an approach that uses quantitative or qualitative description of the social phenomenon (The effect of applying quality in examining bodies in forensic medicine in Mecca) The independent variable (percentage of forensic examinations of corpses annually) and the dependent variable (percentage of forensic examinations of corpses per month). This type of study is characterized by analysis, reason, objectivity, and reality. It is also concerned with individuals and societies, as it studies the variables and their impact on the health of the individual, society, and the consumer, and the spread of diseases and their relationship. For demographic variables such as age, gender, nationality, and marital status. Status and occupation<sup>(7)</sup>, and use the Excel 2010 Office suite pie chart to sort the results <sup>(8)</sup>. The questionnaire is a wonderful and useful tool for collecting a huge amount of data, the questionnaire was only answered electronically, it consists of ten questions, all of which are closed-ended.

## 3. RESULTS AND DISCUSSION

The percentage of approval to participate in the questionnaire was 100%, and the average age of participants from the ages of 25-34 years was 17.4%, and from the ages of 35-44 years it was 47.8%, and from the ages of 45-55 years it was 34.8%, and their gender, the percentage of males was 82.6% and the percentage of females. 17.4%, all of whom are Saudi men and women, 100%. As for their educational status, it was: a health college diploma. 50%, secondary school 16.7%, university 29.2%, and none of them held a master's degree, 0%, and a doctorate, 4.1%. Their professions were as follows: administrators, 16.7%, and male and female technicians, 83.3%. As for the questionnaire questions, they were as follows: The first question: Is there an approved guide on how to examine bodies in forensic medicine? Yes 83.3%, No 4.2%, and I don't know 12.5%. The second question: Are sterilizers and disinfectants used before and after the forensic examination of bodies is completed? Yes, 87.5%, No, 8.3%, and I don't know, 4.2%. Question three: Is the body examined in its normal state in the forensic morgue? Yes, 95.8%, No, 4.2%, and I do not know, 0%. fourth question: The examination of the body is carried out in the forensic morgue by the specialized forensic doctor? Yes, 100%. Question five: Does the specialized forensic doctor examine the body, dissect it, and take samples in cooperation with the forensic technician and the specialized laboratory technician? Yes 95.8%, No 0%, and I do not know 4.2%. Sixth question: Is there an approved job description for the forensic physician and specialized forensic technician? Yes 87.5%, No 0%, and I do not know 12.5%. Seventh question: Are there samples sent to the Forensic Evidence Department by Forensic Medicine? Yes 100%. Question eight: Are there all the medical supplies (gloves, face mask, head cover, etc.) for all health personnel workers (the forensic doctor and the specialist technician) to help them perform their work with ease? Same as the previous answer (100%). Ninth question: Is there an approved forensic guide for examining bodies by the Ministry? Yes, 79.2%, No, 0%, and I don't know, 20.8%. Question ten: Is there a system for forensic infection control by the Ministry? Yes 83.3%, No 0%, and I don't know 16.7%. (table.no.1)(table.no.2)

**Table 1:** the percentage of males and females in a questionnaire

male	female
82.6%	17.4%

**Table 2:** The effect of applying quality in examining bodies in forensic medicine in Mecca according to participates

The effect of applying quality in examining bodies in forensic medicine in Mecca	Yes	No	I don't know
Is there an approved guide on how to examine bodies in forensic medicine?	83.3%	4.2%	12.5%
Are sterilizers and disinfectants used before and after the forensic examination of bodies is completed?	87.5%	8.3%	4.2%
Is there an approved forensic guide for examining bodies by the Ministry?	79.2%	0%	20.8%

Is there a system for forensic infection control by the Ministry?	83.3%	0%	16.7%
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#### 4. CONCLUSION

There is an approved guide for how to examine bodies in forensic medicine, with a rate of 83.3%. Sterilizers and disinfectants are used before and after the forensic examination of the bodies is completed, at a rate of 87.5%. There is a legitimate guide approved for examining corpses by the Ministry, at a rate of 79.2%. There is also a system to combat legitimate infections at the Ministry, with a rate of 83.3%.

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