

## Awareness of Emergency Department Physicians toward Management of Medicolegal Cases in Egypt

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### ABSTRACT

**Background:** The emergency department physicians' awareness of situations that could have medical-legal repercussions is critical. The patient's right to justice will be infringed if it is not implemented and medical professionals cannot recognize medicolegal cases or neglect to gather forensic evidence.

**Aim:** The aim of the current study is to assess the awareness of Egyptian emergency department physicians in managing medicolegal cases they encountered in the emergency department.

**Subjects and methods:** A self-administered structured questionnaire was created and filled out online by 404 physicians working in emergency departments all over Egyptian private, Ministry of Health, and, university hospitals to assess physicians' way of handling cases that had medicolegal depths.

**Results:** The score of knowledge of documentation, and knowledge of reporting authority were 63% and 36% respectively, the majority of respondents said that they require training programs, particularly during the residency time. Unfortunately, there was a lack of awareness of the availability of a standardized methodology for the handling of medicolegal cases, tools and kits for recording and evidence collecting. Even while several teaching hospitals in Egypt have standardized protocols for the administration of medicolegal matters, doctors were still not fully aware of these standards.

**Conclusion:** The majority of emergency physicians had a passable understanding of the significance of medical records for legal purposes and there was a lack of practice, inadequate training, and a lack of tools and kits for gathering evidence.

**Keywords:** Awareness, Medicolegal, Emergency, Egypt

### BACKGROUND

Medical cases vary widely in terms of type, nature, and approach. A team of professionals is needed in certain instances, while a single department can handle others. This variability highlights the need for physicians to acquire specific knowledge and abilities in order to manage routine medicolegal concerns. As the first point of contact for patients seeking medical attention, the Emergency Department ED (also known as the ER 'Emergency Room') is crucial to the early assessment and management of patients. Additionally, being aware of situations that could have medical-legal repercussions is critical. In order to establish a suitable approach to the reporting of medicolegal cases, such as road traffic accidents, burns, physical, sexual, or battery abuse, poisoning, drowning, alleged suicide, and homicide, specific protocols are adopted [1].

It is possible to describe a medicolegal case as "a case of injury or illness that requires investigation by law-enforcing agencies to fix the responsibility regarding the causation of the injury or illness" [2-4].

The first line of administration in emergency departments is doctors, and one of the most frequent problems they encounter is obtaining forensic evidence. Doctors working in the emergency room can overlook such occurrences. When patients are afraid or embarrassed to explain the facts about their injuries, they often present an incomplete or hazy history [5].

The most frequent mistakes reported in medicolegal reporting of cases were incomplete patient cooperation status recording and poorly defined exterior lesions in the majority of instances [2]. Another factor inhibiting doctors from organizing medicolegal reports was their need for more expertise and reluctance to assume responsibilities [6,7].

This situation emphasizes the necessity of treating every trauma patient in the emergency room as a medicolegal case until otherwise demonstrated. The patient's right to justice will be infringed if it is not implemented and medical professionals cannot recognize medicolegal cases or neglect to gather forensic evidence [8].

As a first step towards proposing a unified set of guidelines on how to handle these cases in order to preserve both patient rights and physicians' rights, the current study, conducted in Egypt, aimed to assess the awareness of Egyptian emergency department physicians in managing medicolegal cases they encountered in the emergency department and compared the results to current international guidelines.

### SUBJECTS AND METHODS

This descriptive cross-sectional exploratory study was conducted from November 2021 to January 2023, on 404 physicians working in Egyptian private, university and Ministry of Health hospitals engaged in the

emergency case setting and dealing with medicolegal cases, whether suspected or confirmed. Medical students and nursing staff were excluded from this study.

**Ethical approval**

**Kasr Al-Ainy Faculty of Medicine, Cairo University Scientific and Ethical Committee gave its approval to this study. All participants gave consents after receiving all information. Participants were guaranteed anonymity and data confidentiality, and participation was entirely voluntary. The participants' identifying information was not gathered, and there were no rewards for answering the questionnaire. The Helsinki Declaration was followed throughout the study's conduct.**

**Study design:**

The emergency department doctors received an electronic copy of a structured questionnaire written in English and hosted on Google Forms. Web-based data submission was permitted. Before being given to the participants, the questionnaire's electronic technological functionality was tested.

All participants provided electronic informed consent before beginning the questionnaire. The study's goals were explained to the participants. All responses must be filled out for the questionnaire to be successfully submitted. The questionnaire's estimated completion time was given, which was 10 minutes.

The questionnaire inquired questions about participants' expectations and needs as well as demographic and occupational data, the workload in the emergency department, prior medical-legal training, and participants' beliefs and practices regarding notification of medicolegal cases encountered in emergency rooms and emergency departments as well as documentation of those cases. The questionnaire was created using a review of the literature as well as the investigators' expertise and experience.

**Data analysis**

All the collected data were revised for completeness and logical consistency. Pre-coded data were entered on the computer using Microsoft Office Excel Software Program 2019. Pre-coded data were transferred and entered into the Statistical Package for Social Sciences (SPSS) software program, version 26, to be statistically analyzed. For quantitative variables, data were summarized as mean, standard deviation, median,

and interquartile range (IQR). Groups were compared using the Whitney U test. Spearman correlation was done for quantitative variables. The p-value was significant if less than 0.05.

**RESULTS**

At the beginning of this study, an online questionnaire was distributed to physicians attending emergency rooms in hospitals all over Egypt. The total number of participants who completed the questionnaire was 404 participants.

**Table 1** shows the number and percentage of the respondent physicians and their characteristics. 58.4% were male participants, most of them were from Ministry of Health hospitals, and the majority were specialists with more than two years of experience.

**Table 1:** Number and percentage of the respondent physicians and their characteristics.

Variable		Number	%
Gender	Female	168	41.6%
	Male	236	58.4%
Hospital	Ministry of health hospitals	169	41.8%
	Private hospital	90	22.3%
	Teaching hospital	145	35.9%
Professional degree	Intern	51	12.6%
	Residence	128	31.7%
	Specialist	149	36.9%
	Consultant	76	18.8%
Specialty	Emergency	105	26.0%
	Obstetrics and Gynecology	70	17.3%
	Pediatrics	55	13.6%
	Surgery	76	18.8%
	Others	98	24.3%
Experience:	<1 year	49	12.1%
	one year	51	12.6%
	two years	81	20.0%
	more than 2 years	223	55.2%

**Table 2** demonstrates the nature of work in the emergency department; most responders have more than two duty shifts per week. Participants had a various number of cases to deal with, however, more than 50% reported they deal with less than two medicolegal cases per shift.

**Table 2:** The nature of the responders' work in the emergency department

Variable	Count	Number	%
Weekly number of duty shifts:	Once	101	25.0%
	Twice	135	33.4%
	more than 2 shifts	168	41.6%
Number of living cases managed per shift	5	23	5.7%
	5-9	69	17.1%
	10-14	73	18.1%
	15-19	79	19.6%
	20-24	55	13.6%
	25-29	37	9.2%
Number of dead ED cases managed per shift	30 or more	68	16.8%
	<5	288	71.3%
	5-10	82	20.3%
Number of ED cases of medicolegal importance managed per shift (homicidal, accidental, and suicidal)	>10	34	8.4%
	<2	203	50.2%
	2-5	146	36.1%
>5	55	13.6%	

**Table 3** assesses the forensic medicine training of the participants. Most of them had previous forensic medicine education (80.2%) and training in the undergraduate period (67.1%).

**Table 3:** The forensic medicine training of the participants

Variable	Response	Number	%
1. Previous forensic medicine education	Undergraduate	324	80.2%
	Postgraduate	35	8.7%
	Both	45	11.1%
2. Previous forensic medicine training	Undergraduate	271	67.1%
	Postgraduate	18	4.5%
	Both	54	13.4%
	No	61	15.1%
3. Specific training program in writing medico legal report in ED	Yes	109	27.0%
	No	295	73.0%

In **Table 4**, we assessed the knowledge and attitude toward notifying the authority in medicolegal suspicious cases, as well as the attitude and barriers toward notifying the victim's family. Most of the respondents had a good knowledge (82.4%) and attitude (74.3%) toward notifying the authority. However, most of them were not sure about notifying victim relatives (49.5%), and the most common barrier toward that situation was experiencing pressure from victim relatives in previous situations (64.9%).

**Table 4:** The knowledge and attitude of responders.

Variable	Response	Number	%
1. In case of criminal suspicion of living or dead victims, do you actually notify the police authority immediately through official procedure?	Yes	300	74.3%
	No	64	15.8%
	Don't know	40	9.9%
2. Do you think that in these criminal suspicion cases, notification to the police authority is an essential legal procedure and has its legal responsibility?	Yes	333	82.4%
	No	22	5.4%
	Don't know	49	12.1%
3. In the same context, do you notify the relative about your suspicion prior to police notification?	Yes	129	31.9%
	No	75	18.6%
	Don't know	200	49.5%
4. Did you experience any sort of pressure/stress preventing you from disclosure of a criminal suspicion?	Yes	262	64.9%
	No	142	35.1%
	Depend on different situation	0	0.0%
5. What are the sources of stress/pressure, if any	Fear of legal consequences	71	27.1%
	Job Distress	29	11.1%
	Person in charge	28	10.7%
	Personal belief	14	5.3%
	Religious cause	7	2.7%
Victims' relatives	113	43.1%	

**Table 5** assesses the knowledge of medicolegal documentation and the availability of medicolegal unified protocol, medicolegal documentation kits in different hospitals in Egypt, and the medicolegal responsibilities through the whole documentation process. Most of the responders had good knowledge and awareness of the importance of photographic documentation (64.1%) and consent-taking before evidence collection (56.4%). Unfortunately, there was a lack of knowledge about the presence of a unified protocol for the management of abused cases in 52.2% and about other medicolegal cases in 58.7% of responders, also, 64.6% reported a lack of photographic documentation equipment and 57.2% reported lack of kits for collection of medicolegal evidence. On the other hand, 57.2% reported having any training program in evidence collection in emergency departments or having any training for photographic documentation of medicolegal cases (75%).

**Table 5:** The Knowledge of responders of medicolegal documentation.

Variable	Response	Number	%
1. Is there a unified protocol about management of sexual abuse and physical abuse cases at the workplace	Yes	108	26.7%
	No	211	52.2%
	Don't know	85	21.0%
2. Do you think that photography by ED medical staff can have a role or useful in managing physical and sexual assault victims before referral to forensic medicine doctors?	Yes	259	64.1%
	No	64	15.8%
	Don't know	81	20.0%
3. Do you think that photographic documentation could protect the ED medical staff from remote legal consequences?	Yes	271	67.1%
	No	46	11.4%
	Don't know	87	21.5%
4. The workplace provide instruments (camera) and requirements for photographic documentation	Yes	84	20.8%
	No	261	64.6%
	Don't know	59	14.6%
5. Do you have any training for photographic documentation of medicolegal cases?	Yes	101	25.0%
	No	303	75.0%
	Don't know	0	0.0%
6. Do you practice photographic documentation for any of medicolegal cases?	Yes	148	36.6%
	No	256	63.4%
	Don't know	0	0.0%
7. Did you explain and take an informed consent from the victim or relatives before photographic documentation in these cases?	Yes	228	56.4%
	No	176	43.6%
	Don't know	0	0.0%
8. Does your workplace provide a specified protocol about collecting evidence from a medicolegal case (clothes, swabs, bullet, remnants of foreign bodies, etc.)?	Yes	82	20.3%
	No	237	58.7%
	Don't know	85	21.0%
9. Does your workplace provide sexual assault kits for evidence collection until referral to forensic medical centers?	Yes	76	18.8%
	No	231	57.2%
	Don't know	97	24.0%
10. Did you have any training program in evidence collection in emergency departments?	Yes	112	27.7%
	No	292	72.3%
	Don't know	0	0.0%
11. Does your workplace provide a well-organized chain of custody for evidence collection until delivery to police authority?	Yes	82	20.3%
	No	205	50.7%
	Don't know	117	29.0%
12. Do you provide proper documentation for each medicolegal case including (full description of wound, measurement, timing of injury and photography)?	Yes	186	46.0%
	No	94	23.3%
	Don't know	124	30.7%

**Figure 1** shows the attitude towards legal responsibility of the participants. Although about 62% of the responders were aware of the importance of medicolegal reports issued from the ED, about 45% of them were expecting major legal consequences and penalties for medicolegal reports in courts. Most responders were unsatisfied with the current overall medical approach to medicolegal cases (64.6%), and they reported that they need training programs (88.1%), especially in the residency period (**Figure 2**).

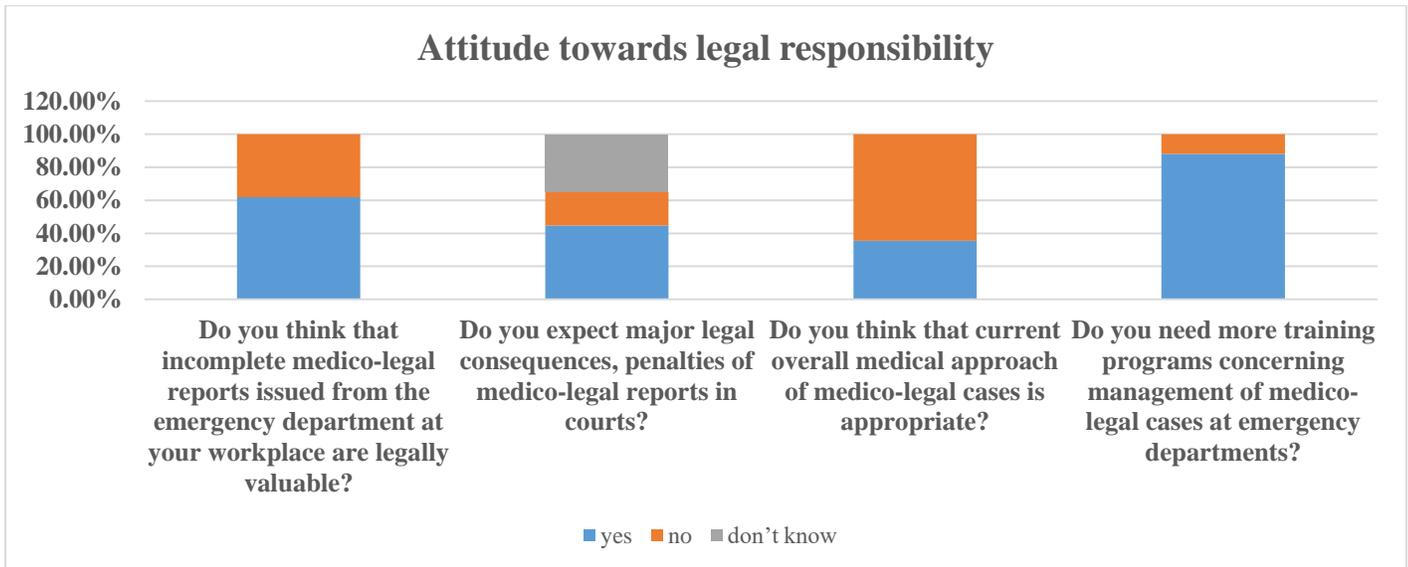


Figure 1: The attitude towards legal responsibility of the participants

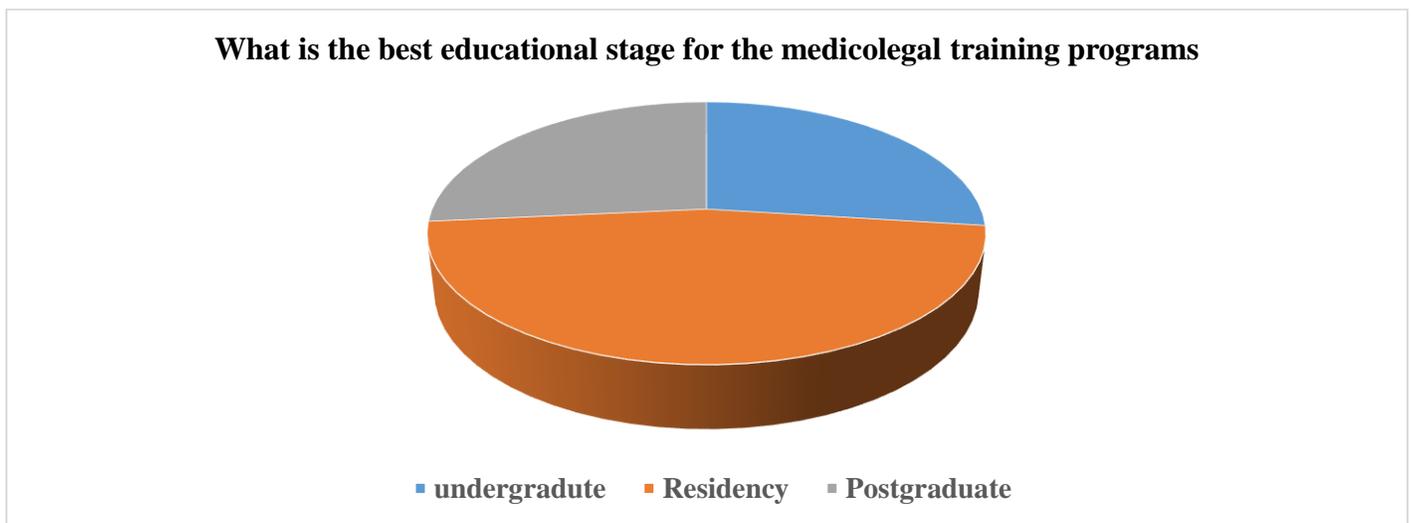


Figure 2: participants' opinion about the best medicolegal training period.

Table 6 shows the score of knowledge of documentation, knowledge of reporting authority, and attitude, which was 63%, 36%, and 47% respectively.

Table 6: Knowledge and attitude scores.

	Mean	Standard Deviation	Median	Percentile 25	Percentile 75
Knowledge towards authority score	1.89	0.94	2.00	1.00	3.00
Knowledge towards authority score%	63	31	67	33	100
Knowledge towards documentation score	4.30	3.52	4.00	2.00	6.00
Knowledge towards documentation score%	36	29	33	17	50
Attitude score	1.42	1.08	1.00	1.00	2.00
Attitude score %	47	36	33	33	67

Table 7 shows the relation between socio-demographic variations and knowledge and attitude scores; we found that there was a statistically significant relation between knowledge of documentation and most of the variants (hospital type, specialty, professional degree, years of experience, number of dead cases managed per duty shift and number of duty shifts) and also there was a significant relation between attitude and professional degree and number of dead cases managed per duty shift.

**Table 7:** Relation between socio-demographics, carrier status, and knowledge, attitude scores.

		Knowledge towards authority score						Knowledge towards documentation score						Attitude score					
		Mean	Standard Deviation	Median	Percentile 25	Percentile 75	p-value	Mean	Standard Deviation	Median	Percentile 25	Percentile 75	P-value	Mean	Standard Deviation	Median	Percentile 25	Percentile 75	p-value
Gender	Male	1.88	0.89	2.00	2.00	2.00	0.548	4.28	3.45	4.00	2.00	5.00	0.882	1.42	1.08	1.00	1.00	2.00	0.994
	Female	1.89	1.01	2.00	1.00	3.00		4.33	3.63	4.00	2.00	7.00		1.42	1.08	1.00	1.00	2.00	
Hospital	Ministry of Health Hospitals	1.79	1.02	2.00	1.00	3.00	0.397	3.28	3.10	3.00	1.00	5.00	<0.001	1.45	1.07	1.00	1.00	2.00	0.575
	Private hospital	1.94	0.85	2.00	2.00	2.00		4.90	3.62	4.00	2.00	8.00		1.46	1.10	1.00	1.00	2.00	
	Teaching hospital	1.97	0.93	2.00	2.00	3.00		5.24	3.67	4.00	3.00	7.00		1.31	1.05	1.00	0.00	2.00	
2. Professional degree	Intern	1.59	1.12	2.00	1.00	3.00	0.038	3.59	3.93	2.00	0.00	7.00	<0.001	1.25	1.07	1.00	0.00	2.00	0.043
	Residence	1.79	0.95	2.00	1.50	2.00		3.70	3.32	3.00	1.00	5.00		1.30	1.10	1.00	0.00	2.00	
	Specialist	1.99	0.91	2.00	2.00	3.00		4.40	3.47	4.00	2.00	6.00		1.61	1.03	2.00	1.00	2.00	
	Consultant	2.04	0.79	2.00	2.00	3.00		5.61	3.36	5.00	3.00	8.00		1.36	1.09	1.00	0.00	2.00	
3. Specialty	Emergency	1.96	0.92	2.00	2.00	3.00	0.187	4.71	3.92	4.00	2.00	7.00	<0.001	1.29	1.17	1.00	0.00	2.00	0.443
	Obstetrics and Gynecology	2.04	0.95	2.00	2.00	3.00		5.74	3.80	5.00	3.00	8.00		1.43	1.03	1.00	1.00	2.00	
	Pediatrics	1.89	0.96	2.00	1.00	3.00		3.71	3.38	3.00	0.00	5.00		1.58	1.07	1.00	1.00	3.00	
	Surgery	1.78	0.97	2.00	1.00	2.00		3.57	3.01	3.50	1.00	4.50		1.50	1.03	1.00	1.00	2.00	
	Others	1.78	0.91	2.00	1.00	2.00		3.72	2.98	3.00	2.00	5.00		1.41	1.05	1.00	0.00	2.00	
4. Experience:	<1 year	1.53	1.06	2.00	1.00	2.00	0.002	3.88	4.23	2.00	0.00	7.00	0.009	1.35	1.22	1.00	0.00	3.00	0.301
	one year	1.88	0.97	2.00	2.00	3.00		3.57	3.18	3.00	1.00	5.00		1.18	0.93	1.00	1.00	2.00	
	two years	1.69	1.00	2.00	1.00	2.00		3.72	3.19	3.00	1.00	6.00		1.44	1.08	1.00	1.00	2.00	
	more than 2 years	2.04	0.85	2.00	2.00	3.00		4.77	3.50	4.00	2.00	7.00		1.48	1.07	1.00	1.00	2.00	
5. Weekly number of duty shifts:	Once	2.06	0.85	2.00	2.00	3.00	<0.001	5.44	3.60	4.00	3.00	8.00	<0.001	1.46	1.20	1.00	0.00	3.00	0.286
	Twice	2.04	0.94	2.00	2.00	3.00		4.36	3.66	4.00	1.00	6.00		1.51	0.98	1.00	1.00	2.00	
	More than 2 shifts	1.66	0.95	2.00	1.00	2.00		3.57	3.18	3.00	1.00	5.00		1.33	1.07	1.00	0.00	2.00	
6. Number of living cases managed per shift	5	2.17	0.72	2.00	2.00	3.00	0.182	6.13	3.83	6.00	2.00	9.00	0.007	1.74	1.21	1.00	1.00	3.00	0.064
	5-9	2.03	0.92	2.00	2.00	3.00		5.20	3.64	4.00	2.00	8.00		1.25	1.16	1.00	0.00	2.00	
	10-14	1.66	0.96	2.00	1.00	2.00		3.56	3.30	3.00	1.00	5.00		1.33	1.03	1.00	1.00	2.00	
	15-19	1.86	0.98	2.00	1.00	3.00		3.77	3.06	4.00	2.00	5.00		1.22	1.06	1.00	0.00	2.00	
	20-24	1.82	1.00	2.00	1.00	3.00		4.09	3.92	3.00	0.00	6.00		1.56	1.07	2.00	1.00	2.00	
	25-29	1.92	1.12	2.00	1.00	3.00		3.89	3.84	3.00	0.00	6.00		1.68	1.00	2.00	1.00	3.00	
	30 or more	1.96	0.76	2.00	2.00	2.00		4.56	3.23	4.00	2.00	5.50		1.57	1.01	1.00	1.00	2.00	
7. Number of dead ED cases managed per shift	<5	1.90	0.91	2.00	2.00	2.00	0.73	3.94	3.26	3.00	2.00	5.00	<0.001	1.33	1.05	1.00	0.00	2.00	0.019
	5-10	1.79	1.06	2.00	1.00	3.00		4.51	3.94	4.00	0.00	7.00		1.61	1.14	2.00	1.00	3.00	
	>10	1.97	0.94	2.00	1.00	3.00		6.85	3.65	6.50	4.00	10.00		1.76	1.02	2.00	1.00	3.00	

**Table 8** shows a moderate positive correlation between knowledge of documentation and knowledge of reporting authority. Also, there was a mild positive correlation between attitude score and knowledge of reporting authority. Another moderate positive correlation between attitude score and knowledge of documentation was detected.

**Table 8:** Correlation between knowledge of documentation and knowledge of reporting authority as well as the attitude score.

		Knowledge towards authority score	Knowledge towards documentation score	Attitude score
knowledge towards authority	r		0.388	0.307
	p value		<0.001	<0.001
knowledge towards documentation	r	0.388		0.342
	p value	<0.001		<0.001
Attitude score	r	0.237	0.342	
	p value	<0.001	<0.001	

**DISCUSSION**

This research was cross-sectional and conducted online. The poll was given out to emergency room doctors from all specializations and hospitals of all stripes (teaching, public, and private institutions) throughout Egypt. According to the study, the results for documentation knowledge, reporting authority knowledge, and attitude knowledge were 63%, 36%, and 47%, respectively. Our findings were higher than those of an Indian study [9] that found that just 6.4% of doctors had sufficient knowledge of documentation.

The majority of the respondents had already studied and trained in forensic medicine throughout their undergraduate years. However, the majority of respondents said that they require training programs, particularly during residency time, because they are dissatisfied with the existing general medical approach to medicolegal problems. The earlier findings may have been explained by the requirement for forensic training at Egyptian medical schools, but it may be necessary to prepare doctors for similar situations throughout their residency.

Our findings were consistent with those of **Zaki et al.** [10], whose research revealed that the majority of doctors had received forensic training, most commonly as students (86.9%). However, the majority of them lacked education in either drafting medicolegal reports in emergency departments (86.9%) or forensic medicine (89.1%). In a prior survey conducted in a teaching

hospital in Ghana, it was found that 42.4% of respondents had received some kind of training, but the majority, 53.5%, had not. 52.5% of respondents thought the training was insufficient, nevertheless [11].

Because there are police officers in every teaching and public hospital in Egypt, the majority of those who responded had good awareness of and attitudes towards alerting the authorities. However, the majority of them are uncertain about informing victim family, and the most frequent roadblock to doing so is having previously encountered victim relatives' pressure. According to a survey conducted in Saudi Arabia [1], 84.7% of respondents will alert the authority in the event of medical-legally dubious instances. The same outcomes were also shown by the **Zaki et al.** [10]

study. The majority of respondents are well-informed on the value of photographic documentation and the necessity of obtaining consent before gathering evidence. Unfortunately, there is a lack of awareness of the availability of a standardized methodology for the handling of medicolegal cases, as well as tools and kits for recording and evidence collecting. Even while several teaching hospitals in Egypt have standardized protocols for the administration of medicolegal matters, doctors are still not fully aware of these standards. The fact that the majority of the participants came from public hospitals may also help to explain these results. On the other hand, the availability of tools and kits for keeping records and gathering medical evidence in Egypt depends on the funding of the organizations, such as the teaching hospital or the Ministry of Health.

Our findings were consistent with those of **Alabdulqader et al.** [1], who found that 60% of respondents were unaware of the existence of a standardized protocol for the administration of medicolegal cases. Our findings, however, differed from those of **Zaki et al.** [10] because, in their study, 76.6% of doctors were aware that their workplace had a uniform protocol for the administration of medicolegal matters.

About 45% of respondents expected significant legal repercussions and punishments for medicolegal reports in courts, and 62% of respondents were aware of the significance of medicolegal reports generated by the ED. This outcome might be a reflection of ambiguity surrounding the accuracy of medical report writing. This was consistent with a prior study [12], which revealed that the majority of respondents believed that inadequate Medicolegal reports reports could have legal repercussions. Additionally, a prior survey revealed that 29.4% of respondents did not know the standards on how to fill out the medicolegal report, and 42.4% of respondents were unsure of the proper manner to create a medicolegal report.

In medicolegal proceedings, medical records and formal reports from the ED are crucial. Investigators rely heavily on forensic findings made by emergency department doctors. Inaccurate information causes delays in legal proceedings and results in false findings that could result in the loss of victims' rights [10].

Most of the variations (hospital type, specialization, professional degree, years of experience, number of dead patients managed per duty shift, and number of duty shifts) had a statistically significant relationship with documentation knowledge. Additionally, there was a strong correlation between professional degree, attitude, and the number of dead cases handled throughout a duty shift. The findings of related studies [10, 13,14,15] provided evidence in favor of this.

## CONCLUSION AND RECOMMENDATION

This study revealed that the majority of emergency physicians had a passable understanding of the significance of medical records for legal purposes. Regarding medicolegal cases, there was, nevertheless, a lack of practice and inadequate training. Another issue facing emergency physicians is a lack of tools and kits for gathering evidence. We recommend that a single protocol be used in the emergency rooms of all hospitals, whether teaching, public, or private. All physicians, especially those who work with medicolegal cases, must complete training programs.

### Declaration of interests:

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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