

SURGICAL MALPRACTICE LITIGATIONS ARE INEVITABLE OR PREVENTABLE? A QUESTIONNAIRE-BASED STUDY IN EGYPT.

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ABSTRACT

Background: Surgical malpractice in Egypt is one of the leading causes of raising legal claims against physicians, mainly if it results in death. **Objectives:** This study investigated in-depth surgical malpractice among Egyptian physicians. **Methodology:** An online questionnaire was formulated consistent with literature discussing medicolegal aspects of malpractice in surgery. **Results:** Responses were received from 124 physicians in ten Egyptian governorates. Three quarters of participants were males, and the majority (80.6%) were aged less than 40 years. 73.4% of respondents practiced medicine for 15 years or less, 41% were consultants, and 67.7% had master's and doctorate degrees. The respondents' scores regarding knowledge of four malpractice pillars were unsatisfactory (mean = 1.52 ± 0.79), and only 4.7% of the respondents identified all pillars. Nearly two-thirds of participants committed an error during surgical practice. Almost all participants disclosed the error to their patients. 18.5% of participants reported previous malpractice charges, and 9.7% had been convicted of medical malpractice. 58.3% of sentenced participants were between 40 and 50 years and held a master's or doctorate. Three-quarters of convicted participants practiced medicine for 15 years or less. Consultants represented half of the convicted participants of malpractice. The most identified error by participants was operating in a poorly equipped medical facility (60.5%), whereas the commonest identified risk factor was defective medical supplies (66.1%). Death and permanent infirmity were the most mentioned outcomes of errors motivated raising malpractice claims (62.1% and 54%, respectively). 75.8% of the respondents noticed increasing surgical malpractice claims in Egypt. 70.2% of the participants reported that getting compensation was the commonest cause of increased claims. Proper medical recording and increasing awareness of medicolegal issues were the most common solutions recommended by 57.3% and 51.6%, respectively. **Conclusion:** Egyptian physicians involved in invasive procedures risk being accused and charged with malpractice claims. Master's or doctorate degrees holders with clinical practice for 15 years or less were at higher risk of being charged or even convicted of malpractice than others. It is mandatory to increase awareness of healthcare providers engaged in invasive procedures regarding medicolegal issues, including malpractice pillars.

Keywords: Medical malpractice; Surgical malpractice; surgical errors; malpractice claims; Egypt.

INTRODUCTION

Medical Malpractice claims are recently the scope of public concern worldwide. Patients tend to sue healthcare practitioners when medical outcomes are not acceptable. The reasons behind that include the intensified patients' awareness about their rights to financial or even moral compensation in an overloaded health system with inadequate resources (Madea, 2022).

Medical malpractice is professional negligence by medical staff in which the provided

healthcare is less than the accepted standard of medical practice and results in injury or death to the patient. Surgical malpractice is a kind of medical malpractice that is related to surgical interventions. It involves inappropriate surgical care that leads to harm to a patient. Malpractice claims are reported to be higher in surgical specialties (Thiels et al., 2018; Ademe et al., 2022).

Anesthesiologists, surgeons, and nursing staff have always been deeply involved in the safety of

all the patients exposed to any surgery. Anesthesia-related complications may be associated with airway management, drug administration, invasive procedures, blood transfusion mismatch, and equipment mishaps. Thus, errors related to anesthesia could result in permanent injury, brain damage, or even death (Kang et al., 2020).

Regarding surgical procedures, errors might result from poor communication with the patients, inadequate preparation of the patient, poor surgical performance, and wrong decision. In addition, negligence in postoperative follow-up might endanger the patient's life (Soh et al., 2022).

Patient safety is paramount in health care. Patient harm due to adverse events is among the ten leading causes of death and disability worldwide. It is commonly reported that around one out of ten hospitalized patients experience harm, with at least half being preventable (Haugen et al., 2013; Haugen et al., 2019). As a response to the Sustainable Developmental Goals, WHO launched the World Health Organization's (WHO) flagship initiative, "a decade of patient safety 2020-2030" in February 2020 (World Health Organization, 2020).

Egypt is the largest country in the Arab world, considering its population size. Egypt has a deep-rooted healthcare system that serves more than 105 million people, according to estimates by the Central Agency for Public Mobilization and Statistics (CAPMAS) in 2023 (Central Agency for Public Mobilization and Statistics, 2023). Recent Egyptian studies denoted an alarming increase in malpractice claims, emphasizing specialties that included invasive and risky procedures (Mashali et al., 2020; Shehata et al., 2022; Sobh et al., 2022; Nagieb et al., 2023). Thus, the present study has an in-depth look at different aspects of surgical malpractice, including addressing the root causes of increasing litigations and possible solutions in the future.

SUBJECTS AND METHODS

Study design

The present study is a descriptive cross-sectional study.

Research sampling and participants

A convenient sampling technique was used (non-probability sampling). Egyptian anesthesiologists and surgeons of various

specialties and subspecialties from different Egyptian governorates were invited to participate in the present research. The aim of the study was clarified to the participants. They were encouraged to answer an online questionnaire to share their experience regarding ethical and medicolegal aspects of surgical malpractice.

Sample size calculation

The sample size was calculated using the Epi Info-7 program by adjusting power at 80%, confidence level 95.0%, and 92.1% of surveyed participants in similar research cited that malpractice lawsuits had a negative influence on their practice (Dean et al., 2011; Shehata et al., 2022). The minimum estimated sample size was 112 participants; 10% (12 participants) was added to account for non-response and increase the study's power. The total estimated sample size was 124 participants. The following formula was used: $S = Z^2 \times P \times (1-P) / M^2$ Where.

- S = sample size for infinite population
- Z = Z score (1.96)
- P = population proportion (0.921)
- M = Margin of error (0.5)

Study tool

A web-based anonymous self-reported questionnaire was constructed following an in-depth literature review of medicolegal aspects of malpractice in various surgical and anesthetic procedures (Doğan et al., 2020; Kang et al., 2020; Ademe et al., 2022; Hösükler et al., 2022; Madea, 2022; Shehata et al., 2022; Soh et al., 2022). The questionnaire was enriched with the experience of senior forensic medicine consultants managing malpractice lawsuits. Then, the questions were judged by three senior consultants to ensure the content validity of the survey instrument.

The questionnaire included 18 questions in two types: one correct response per question or multiple correct responses per question. The questions had the participants' personal data and knowledge regarding pillars of malpractice litigations. Surgical errors and resultant harm were investigated. Also, causes of increased malpractice claims and improvement opportunities were addressed.

Google form was used to formulate the current questionnaire that was electronically distributed on the medical websites frequently accessed by

Egyptian physicians. In addition, surgeons and anesthesiologists were personally invited to participate in this study and to spread the questionnaire to other physicians. The objectives of the study were mentioned.

Ethical considerations

The study protocol was ethically approved by the Research Ethics Committee of the Faculty of Medicine, Alexandria University (IRB Number: 00012098, FWA Number: 00018699, Serial Protocol Number: 0305330). The questionnaire's submission and completion counted as implied consent to participate in the present research. All the physicians' data was kept confidential.

Statistical analysis of the data

Data were fed to the computer and analyzed using IBM SPSS software package version 25.0. Categorical data were described using numbers and percentages. Quantitative data were described using range (minimum and maximum), mean, standard deviation, and median. Different groups were compared using Monte Carlo, Chi-square, and Mann-Whitney tests. The significance of the obtained results was judged at the 5% level.

RESULTS

The present study included 124 responses from ten Egyptian governorates (Cairo, Giza, Alexandria, Al Qalyubia, Beheira, Menofia, Dakahlia, Mersa Matrouh, Luxor, and Aswan).

Personal and professional data of participants

Table (1) shows that male physicians represented three-quarters (75%) of the participants. The great majority (80.6%) of participants were aged less than 40 years. Nearly three-quarters (73.4%) of participants practiced

Table (1): Personal and professional data of participants (n=124)

| Age (years) | N | % |
|---------------------------|----|------|
| 25- <30 | 22 | 17.7 |
| 30- <40 | 78 | 62.9 |
| 40- <50 | 14 | 11.3 |
| 50- <60 | 8 | 6.5 |
| >60 | 2 | 1.6 |
| Sex | | |
| Female | 31 | 25.0 |
| Male | 93 | 75.0 |
| Experience (years) | | |
| <5 | 26 | 21.0 |
| 5 ≤ 10 | 27 | 21.8 |
| 10 ≤ 15 | 38 | 30.6 |

medicine for 15 years or less.

Regarding the job level, 33% of participants were specialists, 41% were consultants, and the rest were residents. The majority (82.3%) of participants had postgraduate qualifications. Around half (47.6%) of respondents were affiliated with governmental healthcare institutes.

Participants' knowledge of malpractice pillars:

Table (2) revealed that more than half (55.6%) of the participants knew that the well-established causal relationship between the error and the harm was one of the pillars of malpractice claims. Also, almost half (50.8%) of respondents identified the physician's deviation from the standards of care as one of these pillars.

To know how many of the participants had identified the fundamental four pillars correctly, a score from 1 to 4 was assembled. A score of 1 means that the participant chose only one pillar, and those who chose the four pillars were given a score of 4. The respondents' scores ranged from one to four, with a median of 1 and a mean of 1.52 ±0.79. While 61.3% of the participants scored 1, only 4.7% scored 4.

Personal involvement in surgical errors and conviction of medical malpractice

Fig. 1 demonstrates that two-thirds of participants previously committed an error during surgical practice and disclosed errors to their patients. Regarding the legal consequences of malpractice claims among participants, 18.5% reported previous medical malpractice charges, and 9.7 had been convicted of committing malpractice

| | | |
|--|----|------|
| 15 ≤ 20 | 20 | 16.1 |
| >20 | 13 | 10.5 |
| Highest Scientific Degree | | |
| Bachelor | 22 | 17.7 |
| Diploma | 5 | 4.0 |
| Fellowship | 13 | 10.5 |
| Master's degree | 50 | 40.3 |
| Doctorate | 34 | 27.4 |
| Job level | | |
| Resident physician | 32 | 25.8 |
| Specialist | 41 | 33.1 |
| Consultant | 51 | 41.1 |
| Healthcare institute | | |
| Governmental sector | 59 | 47.6 |
| Private Sector | 21 | 16.9 |
| Governmental sector and Private Sector | 44 | 35.5 |

Table (2): Participants' knowledge of malpractice pillars (n=124)

| Pillar(s) of approving medical malpractice claims † | N | % |
|---|-------------------|------|
| A well-established causal relationship between medical error and patient harm | 69 | 55.6 |
| Physician deviates from standards of care | 63 | 50.8 |
| Patient suffers from injury or harm | 31 | 25.0 |
| Physician takes duty of treating patient | 26 | 21.0 |
| Number of pillars (score 1-4) | | |
| 1 | 76 | 61.3 |
| 2 | 37 | 29.8 |
| 3 | 5 | 4.0 |
| 4 | 6 | 4.7 |
| Mean± SD | 1.52 ±0.79 | |
| Median | 1 | |
| Min-max | 1-4 | |

†: Categories are not mutually exclusive

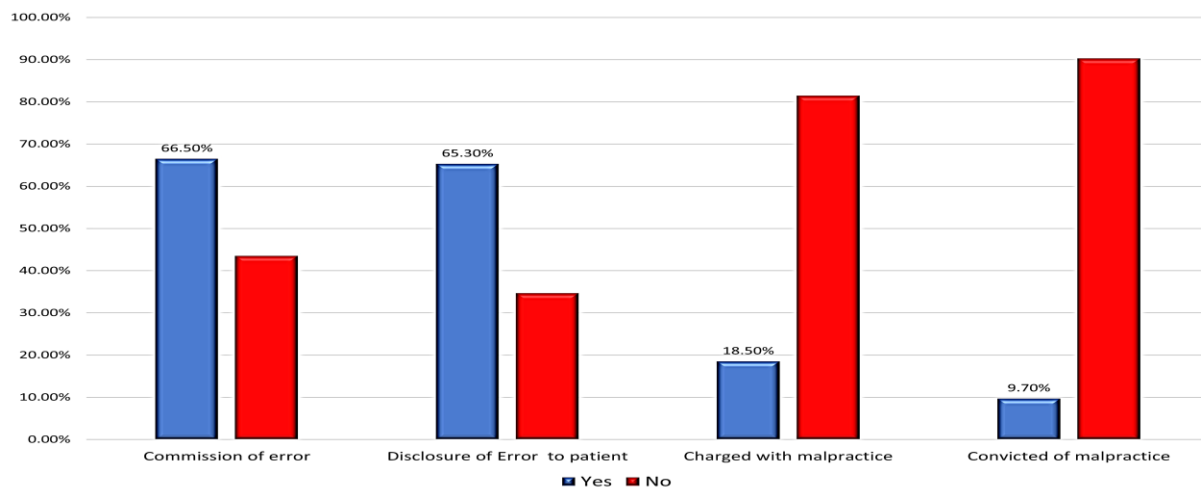


Figure (1): Frequency of committing surgical errors and conviction of medical malpractice according to participants' responses (n=124).

Relation between malpractice claims and personal factors of participants

Fig.2 shows that nearly two-thirds (60.9%) of charged participants with malpractice aged between 40 and 50 years and hold a master’s or doctorate degree. More than three-quarters of charged participants practiced medicine for 15 years or less. Consultants represented 56.5% of participants accused of malpractice.

There were no statistically significant differences between charged and non-charged physicians with malpractice claims regarding their characteristics, including age (p=0.491), experience duration (p=0.621), qualification (p=0.686), and job level (p=0.234).

Fig.3 reveals that 58.3% of convicted participants aged between 40 and 50 years and hold a master’s or doctorate degree. Three-quarters of convicted participants practiced medicine for 15 years or less. Consultants represented half of the participants convicted of

malpractice.

There were no statistically significant differences between convicted and non-convicted physicians in malpractice claims considering their characteristics, including age (p=0.721), experience duration (p=0.885), qualification (p=0.848), and job level (p=0.552).

Fig.2 and fig.3 show that residents constituted 21.7% of charged physicians, whereas they represented 33.3% of convicted participants.

Surgical errors that result in malpractice claims and possible contributing factors

Table (3) shows that 60.5 % of the participants considered the conduction of the operation in a poorly equipped medical facility a common error. Accidental injury to adjacent anatomical structures and engagement of underqualified personnel were mentioned by 49.25% and 37.9% of participants, respectively, as common surgical errors.

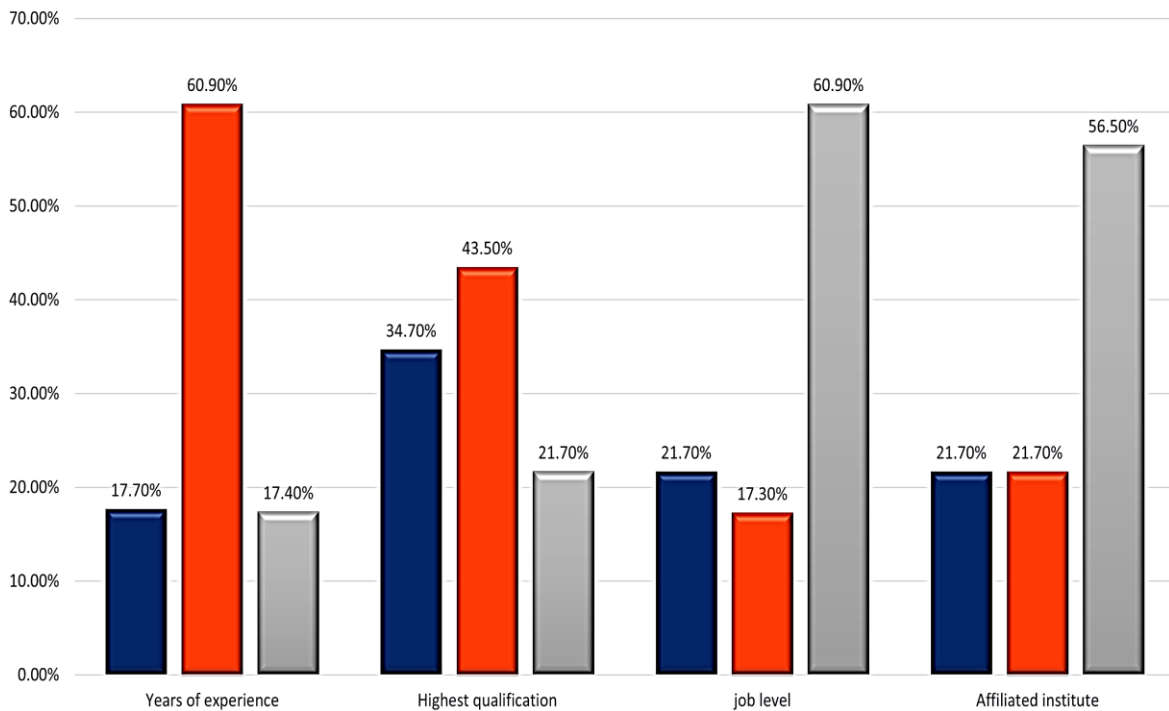


Figure (2): Personal and professional characteristics of participants charged with malpractice claims (n=23).

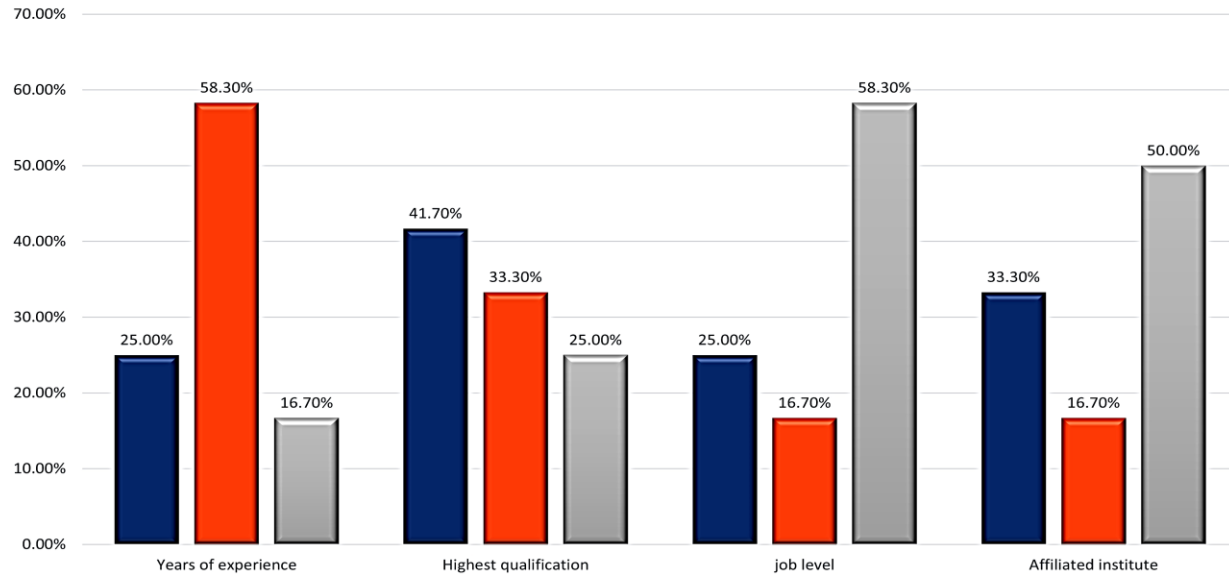


Figure (3): Personal and professional characteristics of participants legally convicted of malpractice claims (n=12).

Regarding risk factors for surgical errors, nearly two-thirds (66.1%) of the participants identified defective medical supplies as a risk factor for surgical errors. High work overload was selected by 61.3% of participants as an error cause. Also, more than half of the participants identified insufficient knowledge/experience and non-adherence to standards of medical practice as contributing factors to surgical errors.

Outcomes of surgical errors that motivate raising claims.

Fig.4 illustrates that patient death was the most common outcome of surgical errors that motivated raising malpractice claims (62.1%), followed by permanent infirmity and disability (54%). Additional surgeries and unnecessary financial burdens were identified by 45.2% as reasons for accusing physicians of malpractice.

Causes of increased surgical malpractice and proposed solutions

In the present study, more than three-

quarters (75.8%) of the respondents noticed an increasing trend of surgical malpractice claims in Egypt, whereas 16.9% of participants denoted a stationary trend.

Table (4) reveals that around two-thirds, (70.2%) of the participants pointed to the tendency of patients to get compensation as the most common cause of increased litigations. At the same time, patients over expectations regarding surgery outcomes and poor doctor-patient communication were identified by 67.7% and 59.7% of respondents, respectively.

Regarding proposed solutions to protect healthcare providers against malpractice claims, proper medical recording was mentioned by 57.3% of the respondents. Also, increasing physicians' awareness considering medicolegal issues and periodic scientific meetings discussing defects in medical care were recommended by 51.6% and 45.2% of participants, respectively.

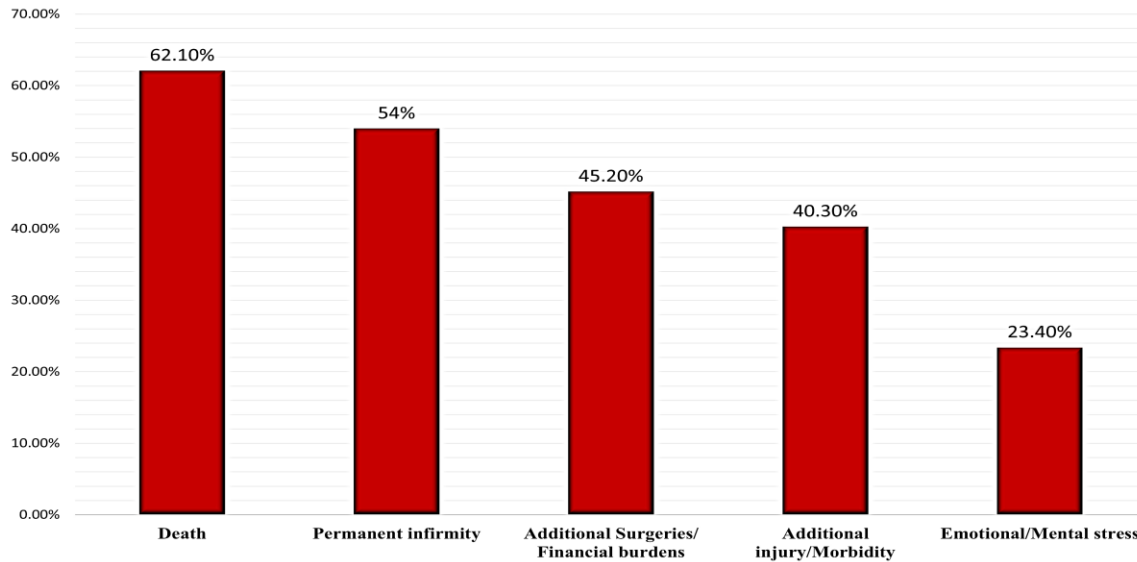


Figure (4): Outcome(s) of surgical errors that motivate raising malpractice claims according to participants’ responses (n=124).

Table (3): Surgical errors that result in malpractice claims and possible contributing factors, mentioned in participants’ responses (n=124)

| Common surgical error(s) that result in malpractice claims † | N | % |
|---|----------|----------|
| Conduction of the operation in a poorly equipped medical facility | 75 | 60.5 |
| Accidental injury to adjacent organ/s | 61 | 49.25 |
| Performance of operation by unspecialized/underqualified physician | 47 | 37.9 |
| Unnecessary surgical intervention | 45 | 36.3 |
| Late surgical intervention | 39 | 31.5 |
| Failure in prediction & management of perioperative complications | 39 | 31.5 |
| Inadequate performance of the procedure | 35 | 28.2 |
| Failure to obtain valid informed consent | 33 | 26.6 |
| Failure to establish diagnosis | 25 | 20.2 |
| Failure to secure airway/maintain oxygenation | 19 | 15.3 |
| Surgery on the wrong site /patient | 17 | 13.7 |
| Failure to guard against hypervolemia and cardiac arrest | 15 | 12.1 |
| Wrong injection of anesthetic/pharmaceutical agent | 13 | 10.5 |
| Leaving surgical instrument/s inside the patient | 7 | 5.63 |
| Possible contributing factor(s) to the occurrence of surgical errors † | N | % |
| Defective medical equipment/supplies | 82 | 66.1 |
| Work overload and fatigue | 76 | 61.3 |
| Defective knowledge or limited experience | 72 | 58.1 |
| No adherence to standards of medical practice | 67 | 54.0 |
| Poor communication with patients | 60 | 48.4 |
| Poor communication between medical staff | 50 | 40.3 |

†: Categories are not mutually exclusive

Table (4): Causes of increased surgical malpractice claims in Egypt and proposed solutions, mentioned in participants' responses (n=124)

| Causes of increased surgical malpractice claims in Egypt † | N | % |
|--|----------|----------|
| Tendency of patients/relatives/lawyers to get compensation | 87 | 70.2 |
| Patients over expectations regarding surgery outcome | 84 | 67.7 |
| Poor doctor-patient communication. | 74 | 59.7 |
| Decreased competency of the healthcare system | 66 | 53.2 |
| Tendency of some healthcare providers to gain more financial profit. | 48 | 38.7 |
| Increased patients' awareness of their rights | 27 | 21.8 |
| Proposed solution(s) to protect healthcare providers against surgical malpractice † | N | % |
| Proper medical recordings | 71 | 57.3 |
| Increase awareness of healthcare providers considering medico legal issues | 64 | 51.6 |
| Periodic scientific meetings discussing morbidity/mortality rates. | 56 | 45.2 |
| Proper communication with patients. | 49 | 39.5 |
| Improve the efficiency of healthcare providers. | 49 | 39.5 |
| Improving infrastructure and medical supplies | 44 | 35.5 |
| Implementation of Medical Insurance | 23 | 18.5 |

†: Categories are not mutually exclusive

DISCUSSION

Worldwide, literature pointed to escalating rates of medical malpractice claims. Invasive procedures are usually associated with higher liabilities of malpractice litigations; thus, WHO reported that unsafe surgical procedures were responsible for one million deaths during or immediately after surgery annually (**Haugen et al., 2019**).

This study investigated different aspects of surgical malpractice in Egypt from physicians' perspectives using a self-administered questionnaire. The survey included 124 participants from ten Egyptian governorates. It was observed that three-quarters of participants were males, which could be explained by their higher participation in interventional healthcare fields.

A great majority of participants (80.6%) were less than 40 years old, and 73.4% of respondents had an experience of 15 years or less. The high participation of younger generations of healthcare practitioners could be explained by their frequent access to websites and social media through which the current questionnaire was distributed (**Zaki and Sobh, 2021**). In addition, they might be confronted with social aggression against doctors and more concerned about being protected against malpractice claims (**Desai and Mitchell, 2020**).

Approximately, three-quarters of the study

participants were consultants and specialists, and the great majority of participants had postgraduate qualifications. The higher scientific degree of our participants positively influences the physicians' willingness to know how to practice safe surgery without being sued for malpractice.

Nearly half of the participants in the current study work solely in governmental healthcare institutions, that includes the Ministry of Health and university hospitals. This could be explained by the fact that governmental healthcare institutes represent the primary sector in the Egyptian healthcare system, where a broad spectrum of surgical interventions are performed (**Fasseeh et al., 2022**).

Participants' knowledge regarding malpractice pillars was assessed. The participants' awareness of malpractice elements was unsatisfactory in the current study. The median knowledge score of the participants was one. In addition, only 4.7% of the participants correctly identified the fundamental four pillars, which agreed with Sobh et al. (2022), who reported that only 3% of Egyptian Obstetricians and Gynecologists identified all elements of malpractice correctly (**Sobh et al., 2022**).

Nearly two-thirds of the current study participants previously committed an error during surgical practice, which agreed with an Egyptian study conducted by **Elrewieny et al. (2022)**, who

reported high percentages of different medical errors (Elrewieny et al., 2022). On the other hand, only 27.9% of the participants in an Ethiopian study declared commission of surgical errors (Ademe et al., 2022).

In this study, it was found that nearly all participants who made a surgical error disclosed it to the patient, which is considered satisfactory in relation to other studies (Yassa and Peter, 2018; El Sayed et al., 2021; Ademe et al., 2022; Saleh and Masoud, 2019); these studies reported that almost two-thirds of their participants concealed their medical errors. Motives for non-disclosure were fear of losing their reputation, legal consequences, and disruption of the doctor-patient relationship.

It is essential to consider that disclosing medical errors reinforces honesty and trust between physician and patient. In addition, disclosure is essential to obtain valid consent to correct error-related damages (Mohammadi et al., 2019).

In the current study, only 18.5% of the respondents declared a previous malpractice charge, much less than the percentages of charged physicians in other studies. Garg et al., (2020) and Elrewieny et al., (2022) reported that three-quarters and more than half of their participants respectively confronted with malpractice claims. The relatively small percentage of accusations in the current study might be attributed to almost 100% disclosure of committed surgical errors. Also, it is essential to consider that high percentages of the current study participants hold postgraduate qualifications and had high job levels, denoting their medical competence that decreased their exposure to malpractice litigations.

In this research, half of those accused of medical malpractice had been legally sentenced. This is not surprising as literature investigating the outcomes of malpractice claims reported that most of the litigations ended up with the exclusion of malpractice, and the physician was not found guilty of medical negligence (Peters, 2009; Jena et al., 2012).

The current study analyzed the influence of different personal characteristics of participants on the charging or conviction of malpractice. It was observed that a higher percentage of participants exposed to malpractice claims hold a

master's or doctorate; meanwhile, their experience in clinical practice was 15 years or less. Obtaining postgraduate qualifications and high competency of physicians may push them to deal with complicated cases which may carry poor outcomes and higher possibilities of malpractice claims.

It was noticed that the job level influenced the conviction of malpractice as residents constituted 21.7% of charged physicians, whereas they represented 33.3% of convicted participants, which means that accused residents were more likely to be convicted with malpractice claims due to their relatively limited knowledge and experience.

In the current study, the effects of physicians' characteristics on charging or conviction of malpractice did not reach statistical significance. However, it is essential to consider noticeable clinical differences even in the absence of statistical significance, which could be attributed to a relatively limited sample size (Page, 2014).

Regarding common surgical errors, more than half of the participants mentioned that performing invasive procedures in poorly equipped medical facilities was the most common error that is coinciding with the results of an Egyptian study conducted by El Sayed et al (2021) in Sohag governorate (El Sayed et al., 2021). Accidental injury to adjacent structures was the second most common error; the high prevalence of unintentional surgical traumas was extensively mentioned in the literature (Hösükler et al., 2022; Soh et al., 2022).

The most common risk factors for surgical errors, as reported by participants of this study, were insufficient medical supplies and high work overload. Egypt is a developing country with limited resources and a high population, which explains a relative shortage of medical supplies in healthcare facilities (El Dabbah and Elhadi, 2023). The increased workload on healthcare providers could be partially attributed to the increasing immigration of Egyptian physicians in the last few years (Kabbash et al., 2021). Similar risk factors that stand behind raising malpractice claims were previously reported in an Ethiopian study (Ademe et al., 2022).

In the current study, death and permanent infirmity were medically severe outcomes.

Therefore, they were mentioned by 62.1% and 54% of participants, respectively, as a motive for raising malpractice claims. Similarly, Azab 2013, who investigated malpractice claims in Egyptian Medical Syndicate, reported that grave outcomes were the motive behind high percentages of raised lawsuits (Azab, 2013).

More than three-quarters of the present study respondents stated that the trend of surgical malpractice claims in Egypt is escalating, which agreed with previous studies (Mashali et al., 2020; Shehata et al., 2022). Tendency to get compensation, over expectations regarding surgery outcome, and poor doctor-patient communication were recognized by high percentages of the respondents as the leading causes of such increasing litigations; similar reasons for increased malpractice claims in Egypt were reported by Sobh et al. 2022 (Sobh et al., 2022)

Adequate medical documentation and raising awareness of medicolegal issues were the most identified solutions to protect healthcare providers against claims. Other solutions were also recommended that included periodic scientific meetings discussing defects in medical care, adequate communication with patients, enhanced physician efficiency, enforcement of infrastructures and resources of the healthcare system, and implementation of medical insurance.

CONCLUSIONS & RECOMMENDATIONS

The current study denoted that Egyptian physicians involved in surgical interventions are more likely to be charged with and convicted of malpractice claims. A high percentage of participants reported committing errors similar to that reported in the literature. Interestingly, all participants disclosed their errors to their patients much better than similar studies in other countries. The participants who reported previous malpractice charges and convictions were 18.5% and 9.7%, respectively. Master's or doctorate degrees holders with clinical practice for 15 years or less were at higher risk of being accused or even convicted of malpractice than others. The respondent's knowledge regarding the elements of malpractice claims was unsatisfactory. Thus, there is a necessity for a medicolegal health education program -including malpractice pillars- for healthcare providers engaged in invasive

procedures. Adequate medical documentation and other proposed solutions must be implemented to protect Egyptian physicians against malpractice claims.

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REFERENCES

- Ademe, Y., Deneke, A. and Bekele, A., (2022).** Malpractice awareness among surgeons and surgical trainees in Ethiopia. *Ethiopian Journal of Health Sciences*, 32, 117-126.
- Azab, S.M.S., (2013).** Claims of malpractice investigated by the committee of medical ethics, egyptian medical syndicate, cairo. *Egyptian Journal of Forensic Sciences*, 3, 104-111.
- Central Agency for Public Mobilization and Statistics (CAPMAS), 2023.** Current population in Egypt [Online]. Available at: (<https://www.capmas.gov.eg/>) (Accessed june 2023)
- Dean, A., Arner, T., Sunki, G., Friedman, R., Lantinga, M., Sangam, S., et al., (2011).** Epi info™, a database and statistics program for public health professionals: CDC, Atlanta, GA, USA. [Online]. Available at: www.cdc.gov/epiinfo.
- Desai, D.G. and Mitchell, J.P., (2020).** Physician social media abuse: What would you do? *The Health Care Manager*, 39, 12-17.
- Doğan, M.B., Yükseloğlu, E.H., Doğan, M. and Uğraş, S.D., (2020).** The evaluation of medical malpractice claims: Creating a standard approach model using the delphi method. *Journal of Forensic and Legal Medicine*, 71, 101932.
- El Dabbah, N.A. and Elhadi, Y.A.M., (2023).** High levels of burnout among health professionals treating covid-19 patients in two Nile basin countries with limited resources. *Scientific Reports*, 13, 6455.
- El Sayed, R., Mohammed, N. and Radwan, R., (2021).** Is it better to disclose or conceal medical error when occur? An indicative study from Sohag governorate physicians. *Ain Shams Journal of Forensic Medicine and Clinical Toxicology*, 37, 116-127.
- Elrewieny., N.M., Khattab., A.M.T. and Mohammed., H.S., (2022).** Knowledge and

- experiences of physicians about medical malpractice. *Egyptian Journal of Forensic Sciences and Applied Toxicology*, 22, 139-150.
- Fasseeh, A., ElEzbawy, B., Adly, W., ElShahawy, R., George, M., Abaza, S., et al., (2022).** Healthcare financing in Egypt: A systematic literature review. *Journal of the Egyptian Public Health Association*, 97, 1.
- Garg, K., Sharma, R., Raheja, A., Tandon, V., Katiyar, V., Dash, C., et al., (2020).** Perceptions of Indian neurosurgeons about medicolegal issues and malpractice suits. *Neurosurgical Focus*, 49(5), E10.
- Haugen, A.S., Sjøfteland, E., Eide, G.E., Sevdalis, N., Vincent, C.A., Nortvedt, M.W., et al., (2013).** Impact of the world health organization's surgical safety checklist on safety culture in the operating theatre: A controlled intervention study. *British Journal of Anaesthesia*, 110, 807-15.
- Haugen, A.S., Sevdalis, N. and Sjøfteland, E., (2019).** Impact of the world health organization surgical safety checklist on patient safety. *Anesthesiology*, 131, 420-425.
- Hösükler, E., Üzün, İ. and Hösükler, B., (2022).** Evaluation of medical malpractice claims in thoracic surgery. *Ulus Travma Acil Cerrahi Derg*, 28, 1109-1114.
- Jena, A.B., Chandra, A., Lakdawalla, D. and Seabury, S., (2012).** Outcomes of medical malpractice litigation against US physicians. *Archives of Internal Medicine*, 172, 892-894.
- Kabbash, I., El-Sallamy, R., Zayed, H., Alkhyate, I., Omar, A. and Abdo, S., (2021).** The brain drain: Why medical students and young physicians want to leave Egypt. *Eastern Mediterranean Health Journal*, 27, 1102-1108.
- Kang, F.G., Kendall, M.C., Kang, J.S., Malgieri, C.J. and De Oliveira, G.S., (2020).** Medical malpractice lawsuits involving anesthesiology residents: An analysis of the national westlaw database. *The Journal of Education in Perioperative Medicine*, 22, E650.
- Madea, B. (2022).** Medical malpractice. In: Madea, B. (ed.) *Handbook of forensic medicine*. 2nd ed. United Kingdom: Wiley.
- Mashali, A., Omar, T., Salama, N., Badr El Dine, F. and Mohamed, O., (2020).** A descriptive study of alleged medical malpractice claims in Alexandria, Egypt. How far is it helpful?. *Annals of Clinical and Analytical Medicine*, 11, 248-254.
- Mohammadi, M., Larijani, B., Tabatabaei, S.M., Nedjat, S., Yunesian, M. and Nayeri, F.S., (2019).** A study of the validity and reliability of the questionnaire entitled "physicians' approach to and disclosure of medical errors and the related ethical issues". *Journal of Medical Ethics and History of Medicine*, 12.
- Nagieb, M.M., El-Gallad, G.A., Ghaleb, S.S. and Saleh, A.R., (2023).** Medico legal aspects of medical malpractice dead cases in Cairo and Giza governorates from 2014-2015. *Egyptian Journal of Forensic Sciences*, 13, 1-6.
- Page, P., (2014).** Beyond statistical significance: Clinical interpretation of rehabilitation research literature. *International Journal of Sports Physical Therapy*, 9, 726-36.
- Peters, P.G., (2009).** Twenty years of evidence on the outcomes of malpractice claims. *Clinical Orthopaedics and Related Research*, 467, 352-7.
- Saleh, A.A. and Masoud, M., (2019).** Comparative Study Of Knowledge And Practice Towards Medical Ethics Among Physicians Of Fayoum University Hospital And Fayoum General Hospital, EGYPT. *The Egyptian Journal of Forensic Sciences and Applied Toxicology*, 19(2), 29-41.
- Shehata, S.A., Kamhawy, G.A., Farghaly, R.M., Mostafa, E.M.A., Galal, R.F. and Ismail, R.A., (2022).** Malpractice liability and defensive medicine in anesthesia: Egyptian anesthesiologists' perspectives. *Egyptian Journal of Anaesthesia*, 38, 505-513.
- Sobh, Z.K., Oraby, E.H.A. and Abdelaziz, S.A.M., (2022).** Experience of obstetricians and gynecologists in the management of medicolegal cases in Egypt. *BMC Women's Health*, 22, 544.
- Soh, I.Y., Money, S.R., Huber, T.S., Coleman, D.M., Sheahan, M.G., Morrissey, N.J., et al., (2022).** Malpractice allegations against

-
- vascular surgeons: Prevalence, risk factors, and impact on surgeon wellness. *Journal of Vascular Surgery*, 75, 680-686.
- Thiels, C.A., Choudhry, A.J., Ray-Zack, M.D., Lindor, R.A., Bergquist, J.R., Habermann, E.B., et al., (2018).** Medical malpractice lawsuits involving surgical residents. *JAMA Surgery*, 153, 8-13.
- World Health Organization.** 2020. Patient safety [Online]. WHO. Available at: <https://www.who.int/news-room/facts-in-pictures/detail/patient-safety> [Accessed 2023].
- Yassa, H.A. and Peter, A.F., (2018).** Medical error disclosure can rescue malpractice litigation. *Arab Journal of Forensic Sciences & Forensic Medicine*, 1, 859-868.
- Zaki, M.K. and Sobh, Z.K., (2021).** Knowledge, attitude, and practice of forensic practitioners during covid-19 pandemic in arab countries. *Legal Medicine*, 52, 101903.

الملخص العربي

دعاوى سوء الممارسة الجراحية أمر لا مفر منه أم يمكن تجنبه؟ دراسة مبنية على الاستبيان في مصر

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خلفية البحث: يُعد سوء الممارسة الجراحية في مصر أحد الأسباب الرئيسية لرفع دعاوى قانونية ضد الأطباء، خاصة إذا كان قد أدى إلى الوفاة. **الأهداف:** يهدف البحث إلى دراسة مستفيضة لجوانب سوء الممارسة الجراحية بين الأطباء المصريين. **المنهجية:** تمت الدراسة من خلال إعداد استبيان يتوافق مع المراجع والدراسات السابقة التي تناقش الجوانب الطبية القانونية لسوء الممارسة في الإجراءات الجراحية. **النتائج:** استجاب للبحث 124 طبيباً في عشر محافظات مصرية مختلفة. شكّل الأطباء الذكور ثلاثة أرباع المستجيبين (75%)، وكانت غالبية الأطباء (80.6%) أقل من 40 عاماً. مارس ما يقرب من ثلاثة أرباع (73.4%) الأطباء المشاركين المهنة لمدة 15 عاماً أو أقل. مثل الاستشاريون 41%، والحاصلون على درجتَي الماجستير والدكتوراه 67.7% من المشاركين. لم تكن درجات الأطباء المستجيبين مرضية فيما يتعلق بمعرفة أركان المسؤولية الطبية (متوسط الدرجات = 1.52 ± 0.79)، وحدد 4.7% فقط من المستجيبين جميع الأركان. أقر ما يقرب من ثلثي المشاركين أنهم قد ارتكبوا خطأ جراحياً، وقد أفصح جميع المشاركين تقريباً عن ارتكاب الخطأ لمرضاهم. تم اتهام 18.5% من المشاركين بسوء الممارسة الجراحية، وأدين 9.7% من المشاركين بسوء الممارسة الطبية. تراوحت أعمار 58.3% من الأطباء المشاركين ممن أدينوا سابقاً ما بين 40 و50 عاماً وهم من حاملي درجة الماجستير أو الدكتوراه بينما مارس ثلاثة أرباعهم الطب لمدة 15 عاماً أو أقل ويعتبر نصفهم من الخبراء الاستشاريين. إنه وعلى الرغم من الاختلافات الواضحة بين الخصائص الشخصية للمشاركين المدانين وغير المدانين، إلا أن الفرق لم يكن ذو دلالة إحصائية. اعتبر الأطباء المشاركون أن الخطأ الأكثر شيوعاً الذي يؤدي للمساءلة القانونية هو العمل في منشأة طبية سيئة التجهيز (60.5%)، في حين أنهم اعتبروا أن الإمدادات الطبية المعيبة (66.1%) هي أكثر العوامل المساعدة لحدوث الأخطاء الجراحية. وفقاً لوجهة نظر الأطباء المشاركين فإن الوفاة وحدث عاهة مستديمة هما أكثر الأسباب التي تدفع المرضى إلى رفع دعاوى سوء الممارسة ضد الأطباء (62.1% و54% على التوالي). لاحظ 75.8% من الأطباء المستجيبين تزايد دعاوى سوء الممارسة الجراحية في مصر. أفاد 70.2% من المشاركين أن رغبة المرضى في الحصول على تعويض هو أكثر أسباب زيادة الدعاوى ضد الأطباء. وجدير بالذكر، فإن التسجيل الطبي الدقيق وزيادة الوعي بالمسائل الطبية القانونية يُعدا من أكثر الحلول التي أوصى بها الأطباء المشاركون (57.3% و51.6% على التوالي). **الخلاصة:** يواجه الأطباء المصريون المعنيون بالإجراءات الجراحية خطراً دائماً باتهامهم بسوء الممارسة الطبية. ولوحظ أن حملة الماجستير أو الدكتوراه الذين مارسوا المهنة لمدة 15 عاماً أو أقل هم أكثر الأطباء عرضةً للاتهام أو الإدانة بسوء الممارسة أكثر من غيرهم. لذلك فإنه، من الضروري زيادة وعي مقدمي الرعاية الصحية وخاصة المعنيين بالإجراءات الجراحية فيما يتعلق كما ينبغي الاهتمام بالتوثيق الطبي الدقيق وغيره من التدابير اللازمة لحماية الجوانب الطبية القانونية، بما في ذلك أركان المسؤولية الطبية الأطباء من ادعاءات سوء الممارسة الطبية.