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Original Research Article

Mobile Utilization Among Anaesthesia Residents in the Operating Theatre: Findings from an Anonymous Survey

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Abstract:

Mobile technology has improved the communication, collaborative, and educative nature of health care. Smartphones have worthwhile clinical support tools that include taking diagnostic images, recording of procedures, consulting guidelines, and monitoring of patients. Nevertheless, the clinical performance of anaesthesia is compromised by the use of mobile technology for non-medical purposes. Distractions in the OT are a matter of concern, while human error, often associated with distractions, is a prime cause of anaesthesiology complications. This paper analyses an anonymous survey of anaesthesia residents regarding smartphone usage patterns, benefits, and potential risks. The results offer a glimpse into the impact of mobile devices on patient care and clinical practice in the OT. **Aims and objectives: Aim:** The purpose of this study is to assess the usage pattern of mobile phones by anaesthesia residents in the OT. This study will discuss the advantages and the possible risks linked with these gadgets. The **objectives** are, analysing the general usage of mobile phones in clinical and non-clinical activities related to anaesthesia practice, to evaluate the influence of smartphone use on patient safety and clinical performance in the OT, identify and suggest ways and means to improve on the responsible use of mobile devices in anaesthesia practice by proposing policy development and training strategies. **Materials and methods:** Google forms were used to create the anonymous survey which contained eight queries about the mobile phone usage in the OT. The survey was carefully distributed to anaesthesia residents and practitioners in the country with the goal of gathering quality in data. **Results:** The survey revealed that 56 (48.7%) anaesthesiology residents reported to the use of smartphones during clinical interactions, which was mostly for communication and other clinical activities. Although 104 residents (90.4%) knew that patient safety could be at risk, there were distractions such as social media by 57 (49.6%) and stock market by 21 residents (18.3%). Our study found out that 44 (38.3%) of respondents were second-year anaesthesia residents, 36 (31.3%) were third-year residents, and 35 (30.4%) were first-year residents. Among the proposals is the idea of developing appropriate policies on how the gadgets should be used and additional training on the responsible use of the devices while on duty. **Conclusion:** Anaesthesia residents in the OT can benefit greatly from mobile phones, but their use needs to be carefully regulated to protect patient safety and maintain professional standards. The results of this anonymous survey highlight the necessity of a well-rounded strategy that maximizes technology's advantages while reducing its risks.

Residents can use mobile phones ethically and effectively in their vital jobs with the support of clear institutional regulations, education, and awareness.

Key words: Anaesthesia residents, Mobile phone, Operation theatre, Utilisation

Introduction:

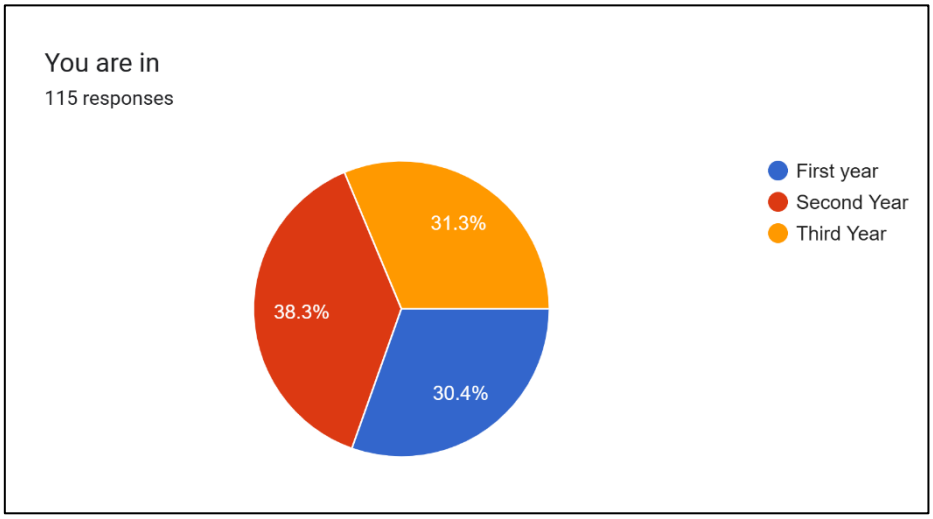
Mobile healthcare has transformed how doctors interact, cooperate, and gather information because of the introduction of mobile technology. Smartphones have merits but are usually associated with demerits because they shift the focus of the users. In most cases, smartphones are used instead of cameras to take appealing diagnostic photos or to record process films for educational purposes such as teaching, communication, and treatment.[1] There are few editorials which explain the negative impact of using a smartphone or a laptop while giving anaesthesia to a patient for a purpose which is not related to medicine, yet many articles have come across regarding the usage of smartphones.[2, 3] Many Anaesthesia residents who are core members of the OT team use handheld devices for various tasks such as communication with other healthcare providers, patient observation, dose calculations, and checking the guidelines. If mobile phones are properly controlled, they have unlimited opportunities in medical education.[4] Most of the problems in anaesthesiology come to existence gradually over a period of time and are mostly attributed to human error. However, the use of mobile phones within the confines of the operating room (OT) has emerged as a matter of urgent concern due to risks of patient safety, constant needs for supervision, and diversion of attention. The objectives of this survey were to evaluate the perceptions of the residents on the pros and cons of phone use during clinical practice. This study seeks to find out the results of an anonymous survey administered to understand the attitudes of anaesthesia residents towards mobile phone use in the OT. Through a questionnaire-based survey, descriptive data regarding the use of smartphones by anaesthesia nursing staff during patient care was collected from different clinical settings. The primary objective of the study was to identify contemporary patterns and habits of mobile phone usage among anaesthesiologists while providing clinical services. Another aim of our research is to establish the roles of smartphones and how they impact patient care. Other research objective is to establish the roles of smartphones and how they impact patient care.

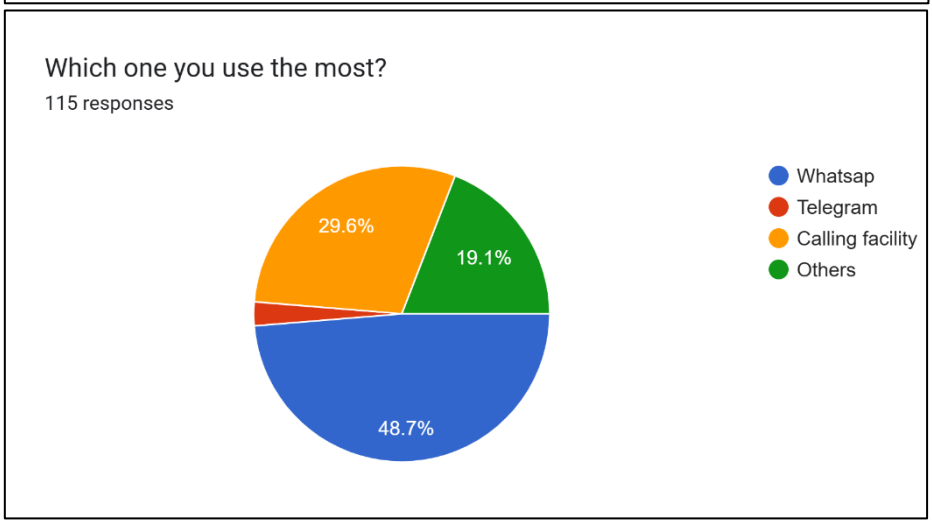
Methodology: Anaesthesia residents from various institutions were sent out an anonymous questionnaire. The survey included eight questions regarding the use of mobile phones while operating. The survey also included some multiple-choice questions in order to collect both quantitate and qualitative information. The survey intended to investigate how often mobile phones are used, the reasons for such use among residents, their understanding of the use of mobile phones and the consequences during care processes, and their general opinions regarding mobile phone use policies in the operating theatre. The questionnaire was prepared with the help of google forms and shared via email and social media networks like WhatsApp to certified practitioners, consultants, and residents of anaesthesia throughout the country. The survey was fully anonymous, and participation was voluntary. Only complete responses were considered in the data analysis.

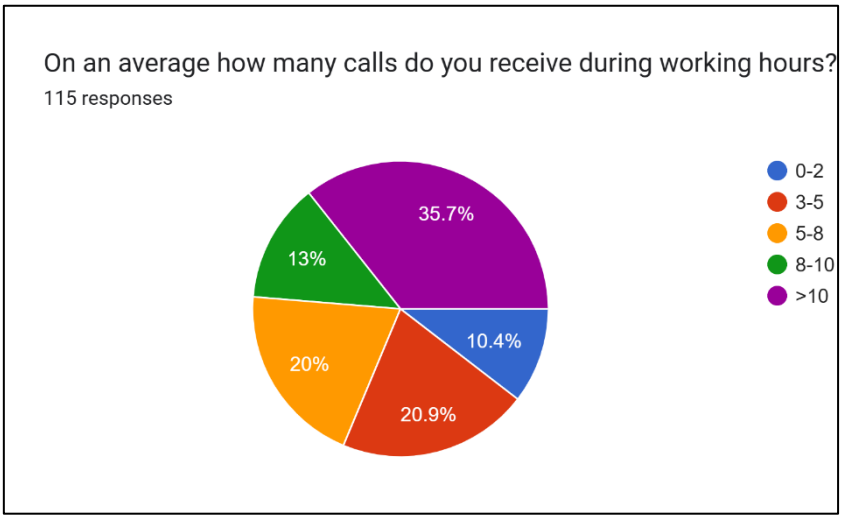
Table 1: Survey Questions

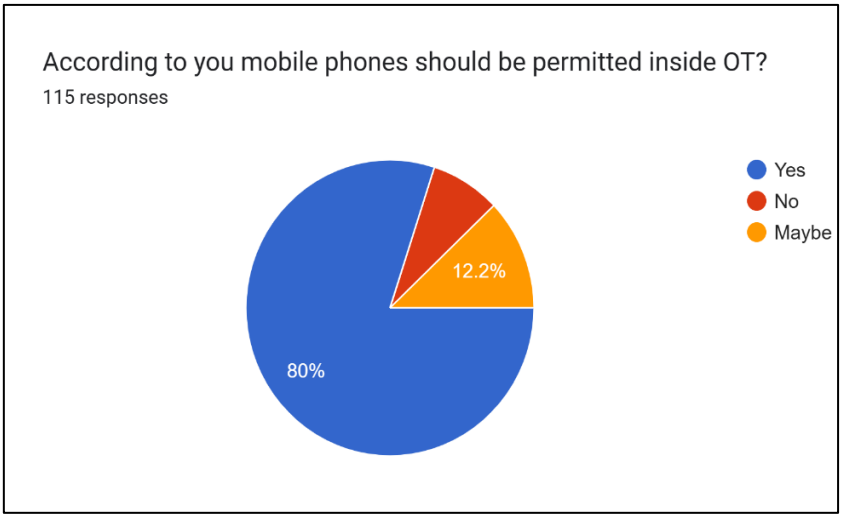
Question	Options	Responses
1. You are in	i) First year	30.4%
	ii) Second year	38.3%
	iii) Third year	31.3%
2. Which one do you use the most?	i) WhatsApp	48.7%
	ii) Telegram	2.6%
	iii) Calling faculty	29.6%
	iv) Others	19.1%
3. On average, how many calls do you receive during working hours?	i) 0-2	10.4%
	ii) 3-5	20.9%
	iii) 5-8	20.0%
	iv) 8-10	13.0%
	v) >10	35.7%
4. On average, how many calls are related to patient care?	i) 0-2	69.6%
	ii) 3-5	-
	iii) 5-8	-
	iv) 8-10	-
	v) >10	-
5. Are you aware that patient care may be affected if you are using mobile continuously?	i) Yes	90.4%
	ii) No	-
	iii) Maybe	-
6. Do you use social media during working hours?	i) Yes	49.6%
	ii) No	50.4%
7. According to you, should mobile phones be permitted inside the OT?	i) Yes	80.0%
	ii) No	-

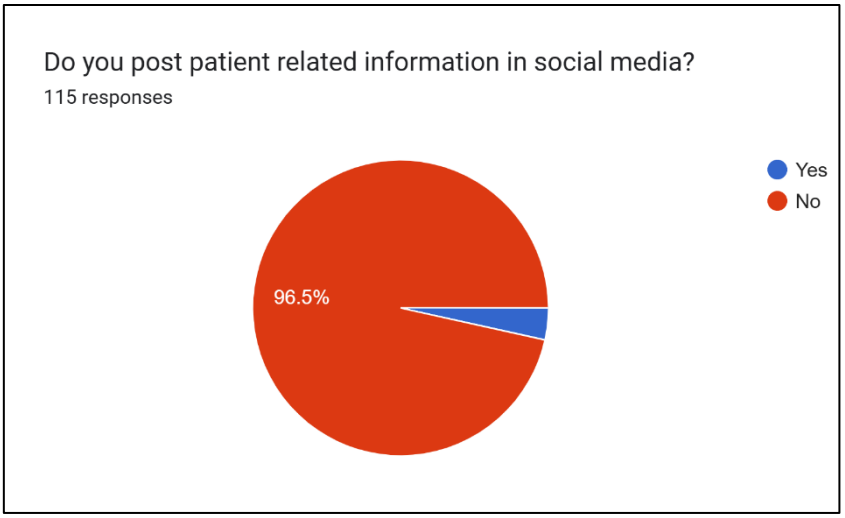
	iii) Maybe	-
8. Do you invest in the stock market?	i) Yes	18.3%
	ii) No	81.7%

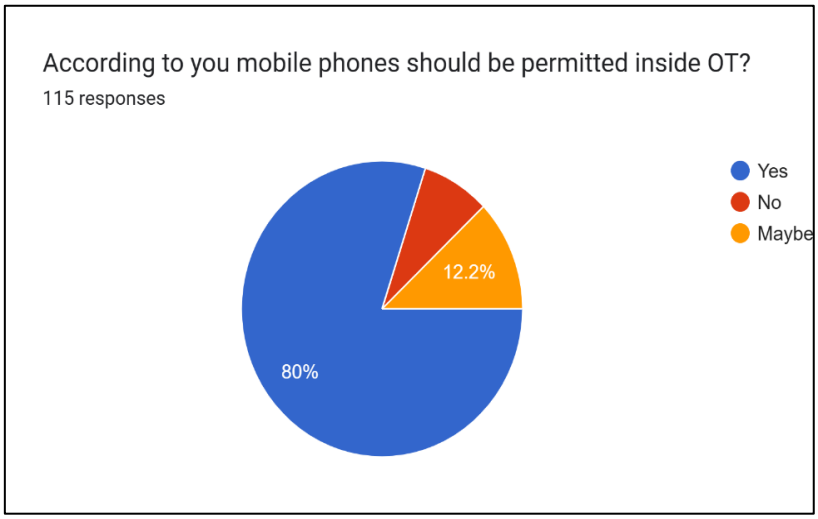


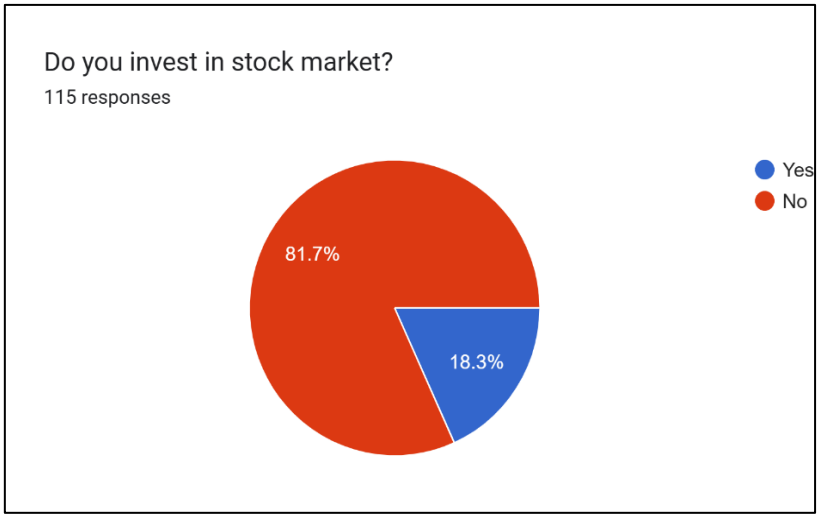



On an average how many calls do you receive during working hours?
115 responses
35.7%
13%
10.4%
20%
20.9%
0-2
3-5
5-8
8-10
>10


According to you mobile phones should be permitted inside OT?
115 responses
12.2%
80%
Yes
No
Maybe


Do you post patient related information in social media?
115 responses
96.5%
Yes
No





Result:

The survey underscores the dual nature of cell phone use in the operating theatre (OT). On the positive side, mobile technology enhances learning, communication, and clinical decision-making. However, its uncontrolled use poses risks to patient safety by causing distractions and potential professional misconduct. Our study found out that 44 (38.3%) of respondents were second-year anaesthesia residents, 36(31.3%) were third-year residents, and 35 (30.4%) were first-year residents. For the Smartphone Usage: 56 (48.7%) residents reported using smartphones during the care of anesthetized patients. Among these, 34 residents (29.6%) used smartphones to communicate with faculty, 22 residents (19.1%)for Others that constitute educational access and apps, and 3 residents (2.6%) for Telegram. Call Frequencies noted during working hours were 41(35.7%) of residents received more than 10 calls, 24 (20.9%) received 3–5 calls, 23 residents (20%) received 5–8 calls, 15 residents (13%) received 8–10 calls, and 12 residents (10.4%) received 0–2 calls. Notably, only 80 (69.6%) of calls were directly related to patient care. 103 (90.4%) of respondents reported that they were aware of the potential risks of mobile phone use on patient safety. Though 57 (49.6%) admitted to using social media frequently, a majority that is 110 residents (95.6%) said they never shared patient-related content online. On the other hand, 21residents (18.3%) reported that they traded in the

stock market during work hours, thus heightening the potential for distractions. Even though the risks exist, 92 (80%) of the respondents felt that cell phone use at work should be permitted.

Discussion:

Smartphones are increasingly seen as a vital tool for healthcare delivery,[6,7] due to the significant advancements in technology over the past ten years, both for personal and professional use.[5] The majority of participants in clinical settings use cellphones for both personal and professional purposes, according to previous studies conducted since 2015 on healthcare workers, including nurses and students.[7, 8] Our study is conducted as a survey with the help of questionnaire among the anaesthesia residents to check regarding the usage of mobile phones during OT hours. In our study we noticed that most residents using smart phone is from second year with 38.3% and most commonly used for calling faculty by 34 residents (29.6%) and secondly by 22 residents (19.1%) voted others which constitute for educational articles and apps and 80 residents (69.6%) documented that most of the daily usage was for the patient care related. These results align with previous research. Sally Moore et al in 2014 in her study the use of smartphone in clinical practices found that most of the nurses and doctors use their smartphones for patient care related usage.[9]

The consistency of the results demonstrates how smartphones may improve medical coordination, communication, and access to clinical data. It implies that cellphones are generally acknowledged as useful instruments in the medical field, improving the effectiveness and connectedness of healthcare professionals for activities ranging from communicating to obtaining vital medical data. The negative impacts of smartphone use, particularly distractions, are increasingly being recognized, as are the pervasive effects on social interactions and daily routines.[10] Our study also noticed 49.6 % use social media during OT hours but have never shared any confidential or patient related details.

The findings suggest that the OT needs to foster a culture of responsible mobile phone use. Institutions can address these in the following ways by establishing comprehensive guidelines for mobile phone use and provide regular instruction on the proper and efficient use of mobile phones. By putting these adjustments into practice, the OT can lessen distractions while still ensuring patient safety and professional responsibility. Patel et al in his study concluded that it is important that medical schools, professional associations, and health care organizations set an agenda to promote the adequate use of smartphones because a significant proportion of clinicians are using these devices.[11]

The results of our research are quite positive: a significant number of participants did not respond to emails or texts during patient rounds, and they did not miss any vital clinical information due to smartphone distractions. These results suggest that medical staff may be effectively managing their smartphone usage in this specific context while attending to patients in order to reduce interruptions and focus on essential clinical responsibilities. This study highlights the complexity of mobile phone use in the operating room, offering important insights into their benefits, drawbacks, and the necessity for regulations to ensure best practices.

Conclusion:

The tools employed in anaesthesia residency have received a new addition that might be paving the way to improving the services provided, the mobile phone. However, the use of mobile phones by anaesthesia residents in the OT must still be regulated to maintain an expected professional standard that would protect the patients. Anonymous surveys give a clearer picture of requirements as needing a middle ground between the two extremes of technology; it should be both efficient and less risky. Such policies must be bundled with education and awareness so that the residents are able to take full advantage of this resource while being honest and fulfilling their obligations.

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