

Original Research Article

Anaesthesia and anaesthesiologist speciality's knowledge assessment of paramedics in armed forces hospital: a questionnaire study

Amit Kumar Kamewad^{1*}, Shambhu Prasad Sharma¹, Sunny Eapen², Tarun Gupta¹

¹Department of Anaesthesia, Military Hospital, Jaipur, Rajasthan, India

²Medical Branch, HQ South West Command, Jaipur, Rajasthan, India

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*Correspondence:

Dr. Amit Kumar Kamewad,

E-mail: amitkkkk@yahoo.com

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ABSTRACT

Background: Science of anaesthesia has revolutionized from traditional only application of relieving patient from pain induced during surgery to wide spectrum approaches like palliative care, critical care, perioperative care along with pain management. Despite of such critical roles in health care sector there is still a lack of awareness about anaesthesiology and anaesthesiologists. Current investigation was aimed towards assessing the awareness of paramedical staff regarding the role of anaesthesiology.

Methods: Current investigation was a prospective cross-sectional questionnaire-based study conducted on 100 paramedical staff posted in different departments of military hospital Jaipur. All the study participants were interviewed face to face orally by an investigator using the set of questions listed in the questionnaire. Participants responses were documented and statistically represented as percentage.

Results: Current study findings reveal that even though majority of the study participants (91) had experience more than 5 years in the hospital and most of them (>90%) of participants were having educational level of higher secondary or graduation still the role of anaesthesiologist outside operation theatre was poorly known to paramedical staff. It was also observed in current investigation that role of anaesthetist in pain clinic was poorly known to most of the participating paramedical staff.

Conclusions: Providing knowledge about expertise of anaesthesiologist among paramedical staffs by incorporating anaesthesia in the curriculum, in house training programs, use of pamphlets, internet and other easily assessable techniques is highly desirable for spreading awareness of anaesthesia and anaesthetist among paramedical staff, so that patient can avail anaesthesia related services effectively.

Keywords: Anaesthesia, Anaesthesiologist, Paramedical staff, Health care system, Questionnaire, Military hospital

INTRODUCTION

Most common deep seated fear that prevails in patients undergoing surgery irrespective of their age, gender, socio-economic or educational status, is the fear of pain. Anaesthesiology was first demonstrated in 1846 as the science and art of relieving pain that is caused due to or during surgery.^{1,2} Anaesthesia is not only functional during surgery but sometimes is given from premedication time till the time of complete recovery of patients.³ Anaesthesiologists take care of patients by

preventing any untoward event during anaesthesia or surgery and also enable a favorable environment for the operating surgeons.⁴ Despite of the stated crucial role of anaesthesia and anaesthesiologists; anaesthesiology still has always been considered as “behind the scene” science and anaesthesiologists are always considered to play a secondary role of assisting and supporting the surgeon.⁵ Over the last few decades the term anaesthesiology has evolved and has taken a significant leap from traditional speciality restricted to walls of operation theatre. Today anaesthesiology is not only restricted to pain relieving

science but has expanded its applications in areas and departments like casualty, intensive care, pain clinic, labour analgesia, peri-operative care, post-operative pain management, accident and trauma management.⁶⁻⁸

In last few decades' science of anaesthesia is tremendously revolutionized, it is no more only restricted to alleviate pain by inducing unconsciousness; but now applicable in wide spectrum areas ranging from palliative care, critical care, perioperative care along with pain management.⁹ Anaesthesiology has also advanced in modern medicine with tremendous change in knowledge and available anaesthetic agents.¹⁰ However till date awareness of anaesthesiology and anaesthesiologist is limited not only in general public and patients but also among paramedical staff.¹¹ It is a misbelieve of majority of patients as well as general public that an anaesthesiologist is an assistant to surgeon who makes patients unconscious during surgery and bring back them to conscious stage after surgery, the comprehensive medical care provided by the anaesthesiologist in between these two events is often unnoticed or not recognized. Anaesthesiologists not only assist in providing a favourable environment to both patients and surgeons during surgery, but they also help in diagnosing and rectifying the medical problems/complications and providing continuous medical care that arise during, before or after the surgery.¹² Anaesthesiologists have specialized set of skills like in-depth knowledge of sedative pharmacology used in pain management, knowledge of analgesics and awareness of perceptual alterations in critically ill or highly anxious/agitated patients.¹³⁻¹⁵ The varied role of anaesthesiologists ranges from preoperative care to identify and rectify the risk factors that may lead to unsafe anaesthesia; intraoperative management for regulating vital organ functions by monitoring blood pressure, heart rate, breathing, body temperature and electrolyte balance; postoperative care for maintaining patients activity level, adequacy of breath, oxygen saturation and blood circulation; pain clinics for pain management; in critical care units for regulating and monitoring clinical physiology, pathology, pharmacology and resuscitation; in cases of trauma and disaster management; for providing obstetric analgesia and anaesthesia to mothers for cesarean sections and for painless normal deliveries (labor analgesia); in burn unit for maintaining airway, circulation, and fluid-electrolyte balance and in basic science and clinical research for continuously improving patient care and safety.¹⁴⁻¹⁹

Despite of such highly diverse and critical roles in health care sector there is still a lack of awareness about anaesthesiology and anaesthesiologists, not only among general public but also amongst the paramedical staff.²⁰ Thus there is a need to educate the general public as well as the paramedical staff by highlighting anaesthesiology as an important and critical medical discipline.

Aim and objectives

The present investigation was conducted with the basic aim of assessing the knowledge regarding anaesthesiologist and anaesthesiology in paramedical staff in military hospital, Jaipur. The primary objective of the current study was to spread awareness and educate the paramedical staff working in an armed force hospital regarding the role of anaesthesiologist and advancement in anaesthesiology for effective medical care of patients.

METHODS

Study design, population and location

Current investigation was a prospective cross-sectional questionnaire-based study conducted on 100 paramedical staff posted in different departments of military hospital Jaipur.

Table 1: Study questionnaire.

Q. no.	Questions
1.	Age
2.	Gender
3.	Educational status
4.	Work experience
5.	Who will assess patient regarding fitness to undergo surgery?
6.	Why is fasting needed before surgery according to you?
7.	Is anaesthesia needed if surgery required?
8.	How is anaesthesia applied?
9.	Is anaesthesia applied to all patients in the same way?
10.	How many different types of anaesthesia you know?
11.	Have you heard about anesthetists?
12.	Is anesthetist, a specialist doctor or one who works under supervision of surgeon?
13.	What anesthetists will do once the patient is anaesthetized?
14.	Do you know that anesthetists are involved in postoperative care?
15.	Do you know that anesthetists are involved in the care of critically ill patients?
16.	Do you know that anesthetists are involved in the care of accident and emergency patients?
17.	Do you know that anesthetist are involved in the conduct of painless deliveries?
18.	Do you know that anesthetists plays important role in the resuscitation of cardiac arrest patient?
19.	Do you know that if any patient in the hospital suddenly becomes serious, anesthetists are immediately called?
20.	Do you know that anesthetists runs pain clinic?
21.	Are you interested to know more about anaesthesia and anesthetists?

Inclusion criteria

Paramedical staff posted in different department of military hospital, Jaipur, who gave their consent were included in the study.

Exclusion criteria

Paramedical staff who were on leave or were not willing to participate and all paramedical staff working in operation theatre were excluded from the study.

Procedure

Informed written consent was taken from all the paramedical staff who participated in the study. All the study participants were interviewed face to face orally by an investigator using the set of questions listed in the questionnaire (Table 1). Questions were designed to capture a demographic profile of staff, qualification, work experience as well as to assess the knowledge of paramedical staff regarding anaesthesia and anaesthesiologist. Participant’s responses for each question were recorded and documented. Collected data were statistically analyzed and represented as percentage of participants representing each predetermined category.

RESULTS

Demographic details

Results of the current investigation interpreted from collected data revealed that majority of the study

participants (45%) were in age group 31 to 40 years (Figure 1). Demographic data revealed that majority (64%) of study participants were males (Figure 2). Only 37% of study participants were graduates, while 53% were 12th pass and 10% were diploma holders (Figure 3). Out of total 100 candidates only 9% had work experience of upto 5 years; rest 91% had experience more than 5 years (Figure 4) (Table 1).

Participants response to the questionnaire

Majority of the study participants (92%) responded that anesthetist will assess patient fitness for surgery. 32% of the study participants responded that fasting was required before surgery so as to avoid complications. 99% of study participants knew that anesthetist is a specialist doctor. 79% of study participants were aware that anaesthesia can be applied using face mask, injection in back or by upper limb block. All the study participants (100%) knew that anesthetists are involved in post operative care and ICU. 95% of the study participants were aware of the fact that anesthetists are involved in accidents and emergency situations. 87% of the study participants were aware of the fact that anesthetists have important role to play in resuscitation of collapsed patients. Only 71% of study participants knew that anesthetists conduct painless delivery. Approximately only a little more than half of the study participants (52%) were aware of the fact that anesthetists runs pain clinic. Almost all the study participants exhibited their interest in knowing more about anaesthesia and anesthetist.

Table 2: Demographic profile of study participants (n=100).

Parameters	N	%
Age (years)		
21-30	40	40
31-40	45	45
41-50	14	14
>51	01	01
Gender		
Male	64	64
Female	36	36
Education level		
10+2	53	53
Diploma	10	10
Graduate	37	37
Work experience (years)		
1-5	9	9
6-10	36	36
11-20	41	41
>21	14	14

Table 3: Response based distribution of participants.

Questions	Response (% of participants)
Who will assess patient regarding fitness to undergo surgery?	Anesthetist (92)
Why is fasting needed before surgery according to you?	To avoid complications (32)
Is anaesthesia needed if surgery required?	Yes (99)
How is anaesthesia applied?	Using face mask, injection in back or by upper limb block (79)
Have you heard about anesthetists?	Yes (100)
Do you know those anesthetists are involved in postoperative care?	Yes (100)
Do you know that anesthetists are involved in the care of critically ill patients?	Yes (100)
Do you know that anesthetists are involved in the care of accident and emergency patients?	Yes (95)
Do you know that anesthetist are involved in the conduct of painless deliveries?	Yes (71)
Do you know that anesthetists plays important role in the resuscitation of cardiac arrest patient?	Yes (87)
Do you know that if any patient in the hospital suddenly becomes serious, anesthetists are immediately called?	Yes (95)
Do you know that anesthetists runs pain clinic?	Yes (52)
Are you interested to know more about anaesthesia and anesthetists?	Yes (100)

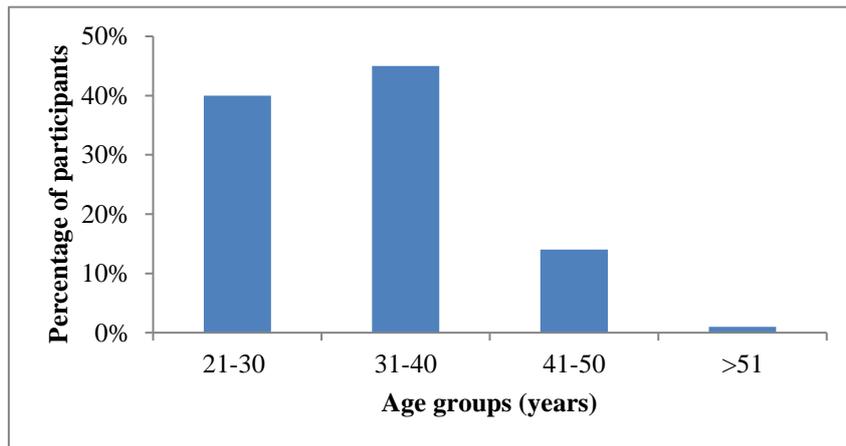


Figure 1: Distribution of study participants according to age groups.

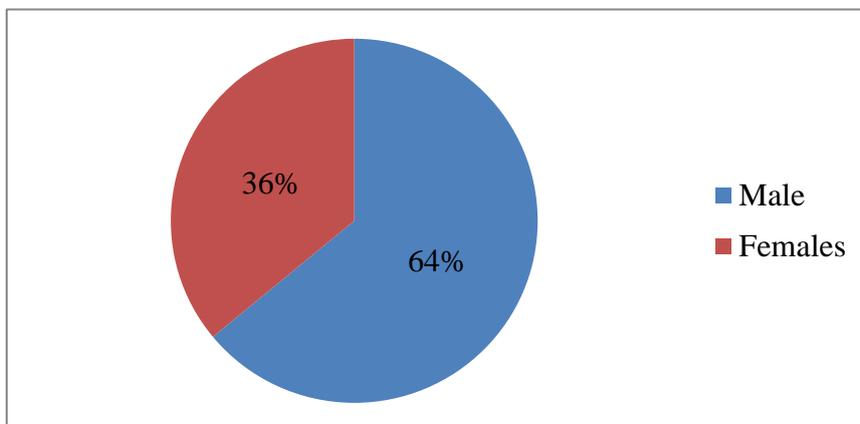


Figure 2: Gender based distribution of study participants.

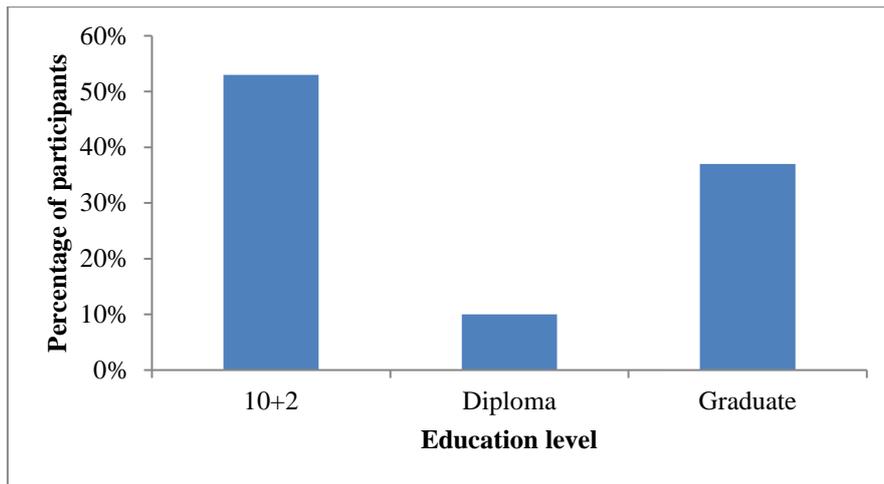


Figure 3: Distribution of study participants according to their educational levels.

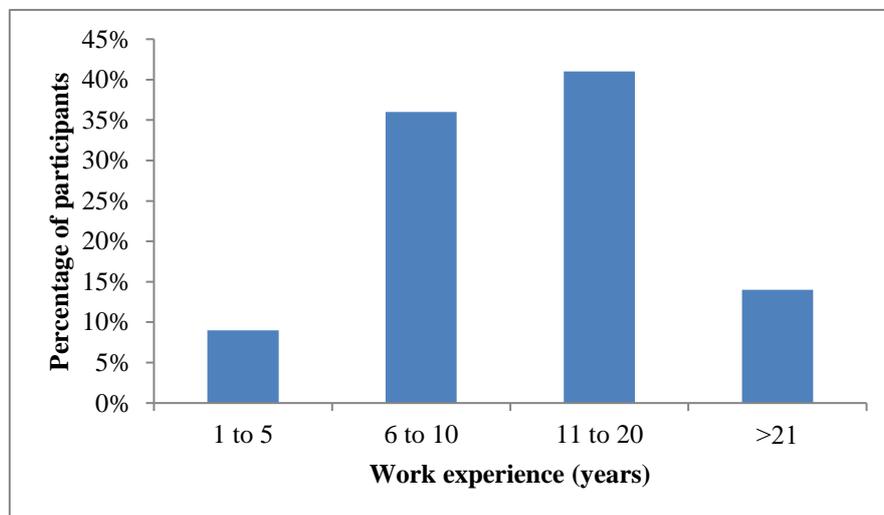


Figure 4: Distribution of study participants according to their total duration of work experiences.

DISCUSSION

Paramedical staffs are the vital part and are considered to be the cornerstone and more precisely the backbone of any health care system. Paramedical staff stays with the patients for maximum duration of hours and they listen and address patients queries either independently or with aid from suitable medical staff, so paramedical staff are believed to deliver care. Paramedical staffs are involved with patients right from their entry, admission, OPD consultation, bedside care; till patients discharge.²¹ Hence, it is mandatory that paramedical staff should have proper and sufficient knowledge about different specialties, ailments, methods of patient assessment and consultation with respective specialist.

Paramedical staffs are expected to be vigilant enough to take the correct action during time of emergencies. Role of anesthetists is very crucial in pain clinic, labor

analgesia, intensive care units (ICU) and in specific in pre and post operative conditions.⁵⁻⁹ Thus it is vital that all the paramedical staff should be aware of the role and functionality of anaesthesia and anesthetists who are consultants and administrators of sub-specialties of anesthesiology. Anesthetists are expected to be available round the clock in the institutional setup for delivering emergency care. Paramedical staff especially the staff nurse should know about the role of anesthetist as they are involved in the emergency care of a patient. If the paramedical staff knows that when in emergency situations it is the appropriate or correct time to ask for assistance from anesthetist than critical time can be saved before the emergency care is delivered and ultimately better outcomes may be expected.

It has been observed and reported in published literature that not all paramedical staff are aware of anaesthesia and anesthetist. Hiremath et al conducted the survey on 105 participants and found that majority of 90.28% of

respondents felt that anaesthesia was necessary only for surgery and only 40.80% knew that it was given by anesthesiologists.²² Hiremath et al reported that only 18.38% of paramedical staff respondents knew that besides anesthetizing, anesthesiologists monitor the vital signs till the completion of surgery, whereas only 5.60%, 9.11% and 3.8% of respondents were aware of their role in ICU, labor analgesia and pain clinic respectively.²² Hiremath et al also reported that only 22.81% patients had knowledge about anaesthesia risks given in consent form.²² In contrast to the study by Hiremath et al, higher number of participants in current study were aware about the fact that anesthetist have the role in ICU whereas a significantly low number of participants of current study knew that anesthetist has the role in labor analgesia and pain clinic. Bhattarai et al in their study observed that out of 120 paramedical staff who were interviewed, only 49.20 of the participants knew that anaesthesia is a different specialty, 72.5% responded that anaesthesiologist work differently in the theatre whereas 70% knew anaesthesiologist were involved in postoperative period.²³ In contrast in current study only 40% of participants knew that anesthetists were involved in post-operative care.

Limitations

Relative small sample size which was not adequate to make concrete recommendations was the limitation of the current study.

CONCLUSION

The role of anaesthesiologists inside and out of the operation theatre is poorly known to various paramedical staff. The presence of anaesthesiologists right from the corridor of the hospital till the emergency room is very crucial for better outcomes specifically in emergency, accidental, traumatic conditions and in surgical operations. In current scenario every hospital has an anaesthesiologist associated to emergency medicine department. Current study findings reveal that the role of anaesthesiologist outside operation theatre is poorly known to paramedical staff. Thus it was concluded from current investigational findings that providing knowledge about expertise of anesthesiologist among paramedical staffs by incorporating few chapters regarding anaesthesia in the curriculum, in house training programs, use of pamphlets and internet is highly desirable for spreading awareness of anesthesiology (anaesthesia and anesthetist) among paramedical staff, so that patient can avail anaesthesia related services effectively.

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