Original Article

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Anaesthesia and Anaesthesiologist: The Perception of Attendees at a Medical College in Rural Haryana

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Abstract

Introduction: Anaesthesia as a specialty is reaching its zenith with multiple sub-specialties, but anaesthesiologist remains obscure personnel behind the drapes due to lack of public perception and knowledge pertaining to their role. The aim is to the study was conducted to assess the perception and knowledge of general public about the role of anaesthesia and the anaesthesiologist. **Subjects and Methods :** A prospective, cross-sectional study, conducted in a 500-bedded, rural medical college over a 3-month period. A total of 172 attendees accompanying their patients for surgical procedures were enrolled and assessed based on preformed, pretested questionnaire in the pre-anaesthetic clinic. The questionnaire contained 30 questions to determine their knowledge and attitude towards anaesthesia and anaesthesia provider. **Results:** Out of total 172 participants, 43.02% % recognized anaesthesiologist as specially trained doctors. Eighty two (47.67%) of the attendees knew that anesthesia is administered by an anesthesiologist but 71.5% were not aware of their role in providing peri-operative care. The attendees apprised of anesthesiologists role in labour analgesia, chronic pain management, intensive care units and emergency resuscitation was Sixty seven (39%), forty nine (28.49%), forty five (26.7%) and twenty six (15.1%) out of 172 respectively. Majority of the attendees (93.6%) were receptive to know more about anaesthesia. **Conclusion**: The awareness regarding role of anaesthesiologist in general public is still low and the perception of people about anaesthesia as an evolved specialty is lacking. This calls for corrective measures to be taken by the anaesthesiology fraternity for propagation of anesthesiology skills via social media and other government aided platforms.

Keywords: Anaesthesia, Perception, Knowledge, Public Awareness.

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Introduction

Anesthesia has emerged as one of the major specialty in modern day medicine and witnessed tremendous development over the last few decades. The scope of Anesthesiology at present is not limited to providing peri-operative patient care and acute pain services, but encompasses a spectrum encompassing critical care medicine, emergency services including resuscitation, chronic pain management, and palliative care. However, the specialty-public bridges that include patient awareness, trust and confidence are not developed in anaesthesia. [1] Therefore the foundation stone of knowledge about anesthesia and work of anesthesiologist in providing peri-operative care is still lacking.

Anesthesiology has been labeled as 'behind the scene' specialty and anaesthesiologist as specialized technicians, putting people to sleep.[2] This attitude towards anaesthesiology reflects the lack of knowledge towards a profession which indeed is a sine qua non in saving lives and has resulted in decreased interest of medical students in anaesthesiology as a future profession. Despite multitude of studies on patients and public perception of anesthesiology, there has been no significant progress in the efforts to highlight this specialty to the general public.[3–8] October 16^{th} is being celebrated every year as Anesthesia Day worldwide and public awareness programmes are organized in the developed as well as developing countries to spread the awareness about the specialty. However, recognition by the public is still limited.[7] Therefore, there is a need of spreading awareness regarding the critical role, an anes-

thesiologist plays, which may not only improve the public-anesthesiologist relationship but also patient care and health care services.

This study was conducted to assess the knowledge and perception of the attendees from rural Haryana about anesthesia and the role of anesthesiologists and to impart knowledge to the accompanying attendees about anesthesia.

Subjects and Methods

This prospective, cross-sectional study was conducted at a rural tertiary teaching hospital over a 3-month period from September 2018 to November 2018. The sample size was calculated using formula:

$N=\left(Z1-\frac{a}{\delta}\right)p\,(1-p)$

N=171.3 ≈ 172

Where, N= sample size

P= assumed prevalence of inadequate knowledge regarding role of anesthesiologist taken as 70%, based on the study by Swinhoe CF. [8]

$\delta = allowable\ error$ (taken as 10%)

Z_{1-a}= 1.96 assuming Confidence coefficient (1-a) of 95%

A total of 172 eligible attendees of 18-65 years of age who consented to participate in the study were enrolled after obtaining the institutional ethical committee approval (Approval no. IEC: BPSGMCW/RC310/18). The participants were recruited using universal sampling method when they presented to the pre-anesthetic clinic accompanying patients posted for surgical procedure. Those who refused to participate or were uncooperative were excluded from the study.

A questionnaire consisting of 30 questions was partially adapted for the attendees instead of the patients from the preoperative questionnaire of Deepa et al [9]. The questionnaire was pretested on 50 attendees, and had a convergence validity with questionnaire of Deepa et al. of r = 0.70. It was divided into different sections to assess the attendee's knowledge and perceptions about anaesthesiology and consisted of demographic profile and educational qualification of the attendees followed by questions to assess their knowledge about the role of an anaesthesiologist and anaesthesia, their fears related to anesthesia, and willingness to know more about the specialty.

The questionnaire was provided in the regional language and English for the best understanding of the participants. An interpreter (a postgraduate student) was provided for help of illiterate or ignorant attendees or those who required help with the questionnaire. The survey was carried out by a team of consultant anesthesiologist and postgraduate resident doctors posted in pre-anaesthetic clinic after obtaining informed written consent.

The data was collected and presented as descriptive statistics using Microsoft Excel at the end of the study. The similar responses to a question were grouped together and expressed as frequency and proportion of total population. Statistical analysis was performed using Pearson's chi square test and statistical significance was set at $P < 0.05$.

Results:

A total of 172 patient's attendees participated in the study with the majority of population (n=137) between 20-50 years of age. 62.79% of the attendees were males. The level of education was low in the rural population with 58% (100) of the attendees educated till tenth standard. [Table 1]

The awareness of the attendees about anaesthesia showed that only 47.67% of the attendees were aware of the fact that anaesthesiologist is the one who administers anaesthesia. [Table 2]

Amongst the attendees exposed to surgery previously, 41.4% thought anaesthesiologist to be a qualified doctor and 44.8% in those not exposed to surgery. However, on comparison of the two groups, the difference was insignificant (P value – 0.743). [Table 3]

Out of 172 attendees, 154 (89.53%) knew about the consent and its legal applicability but only 11.04% of the participants were aware of the risk of anaesthesia involved in a surgical procedure, and such a consent is been taken by an anesthesiologist.

The attendees who were aware of the complications related to anaesthesia were 68(39.53%). Amongst these, the most feared complications pertaining to anaesthesia was inability to wake up after surgery due to anaesthesia (75%), followed by awareness during the surgery (55.68%) and back pain following regional anaesthesia (52.9%, 36).

The source of information of the knowledge related to anaesthesiologist was either prior surgery of self or friends (62%), followed by social media (28%). Moreover, at the completion of questionnaire, majority of the attendees were receptive 161(93.6%) to know more about anaesthesia and anaesthesiologist.

Discussion

This study was conducted on 172 attendees accompanying patients during the preanaesthetic checkup, representing the general public, not associated with anesthesia or awaiting any

Table 1: Demographic data

Age Group	No of Attendees (n=172)	Percentage (%)
<20 years	12	6.97
20 -35 years	65	37.79
36-50 years	72	41.86
51- 65 years	23	13.37
Gender		
Male	108	62.79
Female	64	37.21
Literacy		
Illiterate	23	13.37
5th-10^{th} standard at school	82	47.67
11^{th}-12^{th} standard at school	46	26.74
Undergraduate	17	9.88
Postgraduate	4	2.32

Table 2: Attendee's knowledge about anaesthesia:

S no.	Question		N(%)		
1	Who	Anaesthesiologist	82 (47.67%)		
		Surgeon	51(29.65%)		
		Don't know	39(22.67%)		
			Yes		No / Don't know
2	Is an anaesthesiologist necessary for surgery?		94		80
3	What is the role of anaesthesiologist in OR?				
	(a) Putting the patient to sleep			67 (38.95%)	
	(b) Pain relief during the anaesthesia course			32 (18.60%)	
	(c) Haemodynamic monitoring			14 (8.1%)	
	(d) All of the above			10 (5.8%)	
	(e) No idea			49 (28.49%)	
4	**Role of anaesthesiologist outside OR:**				
	a) In painless child birth?		67(39%)		105(61%)
	b) In emergency resuscitation?		26(15.1%)		146(84.9%)
	c) In ICU treating sick patients?		45(26.7%)		127(73.3%)
	d) In chronic pain		49(28.49%)		123(71.51%)

surgery at the time of survey thereby, yielding more objective results.

In our study, 52.27% attendees were unaware of the anaesthesiologist as a doctor. The awareness was comparable in the population regardless of whether they had any prior surgery or not. This could be due to poor level of knowledge of our participants about the health care system, which is similar to the study conducted on the rural population by Singh et al. [7] The finding is also in concurrence with observations made by various previous studies. [9–13] However, a study by Prasad et al showed a higher percentage (75%) of participants who were aware of anesthesiologist as a doctor which may be explained by the urban nature of the study population. [14] Similar results were reported by Braun et al. [15]

In our study, only 47.67% (82) attendees were aware of the personnel administering anesthesia, rest were either unaware or considered surgeons to do that. This could be due to more familiarity of the public with the surgeon. However, our find-

Table 3: Attendees knowledge and perceptionabout Role of Anesthesiologist.

S. No.	Question		Yes (n %)	No/Not Sure (n%)	
	Role of anaesthesiologist in OR				
1.	Did you have any surgery in the past?		78 (45.35%)	94(54.65%)	
a)	**Among attendees exposed to surgery**		78 (45.35%)		
i.	Were you anaesthetised?		62(79.49%)	16(20.51%)	
ii.	What type of anaesthesia were you given?	General	18 (29.03%)		
		Spinal	23 (39.09%)		
		Local	5 (8.06%)		
		Regional Block	6 (9.68%)		
		Don't know	10 (16.13%)		
vii.	Is anaesthesiologist a qualified doctor?		32(41.1%)	46(58.9%)	
viii.	If yes, what do you know how many years of medical training do anaesthesiologists take?		2 (6.25%)	30 (93.75%)	
ix.	Had he/ she visited you before the day of operation?		17 (21.8%)	61 (78.2%)	
x.	Do you know whether he/ she stayed with you throughout the operation?		12 (15.38%)	66 (84.62%)	
b)	**Among attendees exposed to surgery:**				
i.	Will your patient be anaesthetized?		56 (59.57%)		38 (40.43%)
ii.	Do you know different types of	General	32 (34.04.%)		
		Spinal	48 (51.06%)		
		Regional blocks	23(24.47%)		
		Local anaesthesia	10 (10.64%)		
		Don't know	18 (19.15%)		
vii.	Who do you	**Anaesthesiologist**	26 (27.66%)		
		Surgeon	29 (30.85%)		
		Don't know	39 (41.49%)		
x.	Is Anaesthesiologist a qualified doctor?		42(44.68%)	52(55.32%)	
xi.	If yes, do you know how many years of medical training do anaesthesiologists take?		0	42 (100%)	
xii.	When your patient will be anaesthetized, do you think the anaesthesiologist stays with him/her throughout the operation?		21 (22.34%)	73 (77.66%)	

ing is in contrast to the high level of awareness (80%) reported in UK population by Swinhoe and Groves about the role of anesthesiologist and anaesthesia which may be attributable to the higher literacy rate of their population. [8] Naithani et al also implied that a better anesthetist-patient interaction during pre-anaesthetic evaluation shapes their awareness. [13] Moreover, lower literacy rates of our participants and low visibility of the anaesthesiologist in public domain affects public awareness regarding their role in perioperative care.

Role of anaesthesiologist as a perioperative physician is also poorly recognized. This could be due to the meager time spent by an anaethesiologist with the patients starting from the pre-anaesthetic clinic, with no preoperative visits and postoperative visits limited to the recovery room. The maximum time spent by an anesthesiologist with patient is when they are unconscious, thereby lack of recognition by the patient and public at large. The awareness of anaesthesiologist's role in labour analgesia, pain management and critical care is also limited. Similar findings were noted by other investigators and have not shown any improvement over decades. [11–13,16] Here, comparatively higher awareness regarding the role of anaesthesiologist in labour analgesia could be attributed to active knowledge dissemination by maternal-child health programmes.

Informed written consent is an important binding document between an individual and anaesthesiologist having both medico-legal as well as personal implications. It involves explaining the type of anaesthesia, procedure, its alternatives and the complications thereof. This allays the anxiety of the patient as well as relatives while giving them the freedom to make an informed choice. The level of awareness in our study population pertaining to informed consent for anaesthesia was only 11.03%, even though 89.53% attendees knew they needed to sign some document, presented mostly by surgeon or nursing staff. Similar results were reported by Singh T et al. wherein they found that consent was a paper to be signed as a formality without understanding its medicolegal implications.[17] However, Naithani et al. reported in their study that 34.67% were aware of the consent form and the information provided therein, but only 15.33% had knowledge about risks under anesthesia.[13] The validation of the consent seems to be a universal problem.

Anxiety due to fear of safety during anesthesia and surgery is common in surgical patients. The patients were commonly afraid of not waking up, closely followed by pain during surgery. The study done by Ribeiro CS and Mourao JIB also reported similar findings.[18] Moreover, the attendees in our study also feared backache as one of the most common sequelae following a spinal anaesthesia.[19] This misconception of attributing postoperative backache to anaesthesia in the rural population, instead of their labour oriented lifestyle is due to the chasm created by the communication gap between an anaesthesiologist and public.

The limited interaction between the anaesthesiologist and the patient within the confines of the operation theater is the prime reason for the lack of recognition of the anaesthesiologist in the health-care system and thereby, a poor anaesthesiologist-patient relationship. The importance of which is highlighted by the fact that majority of the attendees who were informed about this profession was either through their interaction with the anaesthesiologist during previous surgery or from friends. However, the overall attitude of the participants regarding anesthesia and role of anesthesiologist was found to be positive with willingness to know more about the specialty and different roles of an anesthesiologist.

Anaesthesia has evolved as a separate specialty but the anaesthesiologist, ever engrossed in keeping the patient safe, has failed to highlight their pivotal role behind the curtain. Whilst he may fulfill many roles outside operating theatre, these roles are very rarely ascribed to them by the patient The general perception of the public regarding anaesthesiologist's varied roles in perioperative period including the resuscitation in emergency services, critical care, management of chronic pain, and palliative care remains limited. Lack of recognition and decreased appreciation by the patient contributes to the frustration of an anesthesiologist.[20] This mandates for initiatives to improve the awareness of anesthesia among the masses, not only for the better recognition of the specialty but also for the improved patient care. The role of anaesthesiologist needs to be publicized through internet, social groups, readily available printed brochures at hospitals, anaesthesiologist led seminars, resuscitation drills for the general public and newer innovative approaches such as applications or games on online stores that may increase the specialty's visibility.

Limitations of the study included a limited sample size and the selection of population from rural areas that may not represent the geographical distribution of population over other areas. It was desirable to have sample population not exposed to surgery or anesthesia but was not possible to enroll population without any prior exposure/information. The understanding of the attendees in responding to the questions asked and expected answers could have affected the results of the study.

However, the selection of rural population should be counted as the strength of study in terms of representation of majority of the general population as 70 % of our population resides in rural areas and thus the target population for interventions for building up relationship with anaesthesiologist should be initiated at this level.

Conclusion

The study reveals the limited awareness in the rural population about anaesthesia and the role of anaesthesiologist in the society. This is not surprising seeing that majority of the time of anaesthesiologist is spent with unconscious patients and the interaction with the patients is limited. The anaesthesiologist needs to be proactive and devote more time towards strengthening the anaesthesiologist-patient relationship. Hence, engaging the patients in the education process in preanaesthetic clinics and the perioperative period can go a long way in allaying their fear and misconceptions about anaesthesia and demonstrate the anaesthesiologist's diverse responsibilities.

References

1. Mathur SK, Dube SK, Jain S. Knowledge about anaesthesia and anaesthesiologist amongst general population in India. Indian J Anaesth. 2009;53(2):179–86.
2. de Oliveira KF, Clivatti J, Munechika M, dos Reis Falcão LF. What do Patients Know about the Work of Anesthesiologists? Braz J Anesthesiol. 2011;61(6):720–727. Available from: https://dx.doi.org/10.1016/s0034-7094(11)70081-2.
3. Gottschalk A, Seelen S, Tivey S, Gottschalk A, Rich G. What do patients know about anesthesiologists? Results of a comparative survey in an U.S., Australian, and German university hospital. J Clinic Anesth. 2013;25(2):85–91. Available from: https://dx.doi.org/10.1016/j.jclinane.2012.06.017.

4. Leite F, da Silva LM, Biancolin SE, Dias A, Castiglia YMM. Patient perceptions about anesthesia and anesthesiologists before and after surgical procedures. Sao Paulo Med J. 2011;129(4):224–229. Available from: https://dx.doi.org/10.1590/s1516-31802011000400005.
5. Irwin MG, Fung SKY, Tivey S. Patients' knowledge of and attitudes towards anaesthesia and anaesthetists in Hong Kong. Hong Kong Med J. 1998;4(1):16– 22.
6. Khan FA, Hassan S, Zaidi A. Patients view of the anaesthetist in a developing country. J Pak Med Assoc. 1999;49(1):4–7.
7. Singh PM, Kumar A, Trikha A. Rural perspective about anesthesia and anesthesiologist: A cross-sectional study. J Anaesthesiol Clin Pharmacol. 2013;29(2):228–228. Available from: https://dx.doi.org/10.4103/0970-9185.111729.
8. Swinhoe CF, Groves ER. Patients'knowledge of anaesthetic practice and the rôle of anaesthetists. Anaesthesia. 1994;49(2):165–166. Available from: https://dx.doi.org/10.1111/j.1365-2044.1994.tb03380.x.
9. Jathar D, Shinde VS, Patel RD, Naik LD. A Study Of Patients Perception About Knowledge Of Anaesthesia And Anaesthesiologist. Indian J Anaesth. 2002;46(1):26–30.
10. Singh PM, Kumar A, Trikha A. Rural perspective about anesthesia and anesthesiologist: A cross-sectional study. J Anaesthesiol Clin Pharmacol. 2013;29(2):228–228. Available from: https://dx.doi.org/10.4103/0970-9185.111729.
11. Marulasiddappa V, Nethra HN. A survey on awareness about the role of anesthesia and anesthesiologists among the patients undergoing surgeries in a tertiary care teaching women and children hospital. Anesth Essays Res. 2017;11(1):144–144. Available from: https://dx.doi.org/10.4103/0259-1162.186595.
12. Uma BR, Hanji AS. Anaesthesia and Anaesthesiologists: How Famous are We among the General Population?" - A Survey. J ClinDiagn Res. 2013;7:2898–900. Available from: https://doi.org/10.7860/jcdr/2013/7084.3788.
13. Naithani U, Purohit D, Bajaj P. Public awareness about anaesthesia and anaesthesiologist: A survey. Indian J Anaesth. 2007;51(5):420–426.
14. Prasad CG, Suresh G. A survey on public awareness about the role of anesthesiologists. Ain -Shams J Anaesthesiol. 2014;7:456–465.
15. Braun AR, Leslie K, Morgan C, Bugler S. Patients' Knowledge of the Qualifications and Roles of Anaesthetists. Anaesth Intens Care. 2007;35:570–574. Available from: https://dx.doi.org/10.1177/0310057x0703500417.
16. Gurunathan U, Jacob R. The public's perception of anaesthesiologists-Indian attitudes. Indian J Anaesth. 2004;48:456–60.
17. Singh T, Sharma S, Banerjee B, Garg S. Knowledge regarding anesthesiologist and anesthesiology among patients and attendants attending a rural hospital of New Delhi. J Educ Health Promot. 2018;7(1):12–12. Available from: https://dx.doi.org/10.4103/jehp.jehp_52_17.
18. Ribeiro CS, Mourao JI. Anaesthesiologist: the patient's perception. Braz J Anesthesiol. 2015;65(6):497–503. Available from: https://doi.org/10.1016/j.bjane.2014.05.014.
19. Khara BN, Rupera KB, Gondalia KR, Kamat HV. Knowledge about Anesthesia and Perception about Anesthesiologists among Patients at a Rural Tertiary Care Hospital: A Cross Sectional Survey. Natl J Med Res. 2013;3(4):371–374.
20. Jenkins K, Wong D. A survey of professional satisfaction among Canadian anesthesiologists. Can J Anesth. 2001;48(7):637–645. Available from: https://dx.doi.org/10.1007/bf03016196.

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