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Original Article

PERCEPTION OF ANAESTHESIA AND THE ANAESTHETIST AMONG ADULT SURGICAL PATIENTS IN A TERTIARY FACILITY IN NIGERIA.

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ABSTRACT

The scope of anaesthesia has broadened beyond the intraoperative care of surgical patients to include pain management, resuscitation and intensive care. Despite the key role anaesthesia plays in patient management, many misconceptions are still entertained by patients concerning the speciality.

This prospective, descriptive cross-sectional study was carried out at the University of Ilorin Teaching Hospital, Ilorin, to determine the perception of surgical patients concerning the anaesthetist as a specialist and anaesthesia as a speciality. The hospital is a tertiary, multispecialty health institution located in the north central region of Nigeria.

A questionnaire was administered to the patients to assess the patients' demographic data, type of surgery and the knowledge of the patient concerning the existence of the speciality of anaesthesia. The patients knowledge on the qualification of an anaesthetist and the patient's ability to recognise an anaesthetist in a picture were also assessed. Only ASA I and II patients scheduled for surgical procedures under general anaesthesia were recruited into the study.

Sixty-five percent of respondents had no previous knowledge of anaesthesia before the index admission. One hundred and thirty-three (53.3%) respondents were not able to identify the healthcare personnel that would administer anaesthesia for their surgery. Only 40.6% patients realised that an anaesthetist was a medical doctor while 39.6% patients responded that the anaesthetist was a specialist in his field. Perception of anaesthesia was better of respondents who had been educated to tertiary level and those who had previous knowledge of anaesthesia.

We conclude that surgical patients demonstrated inadequate knowledge concerning the field of anaesthesia and the anaesthetist as a specialist.

KEYWORDS: Perception, Anaesthesia, Knowledge, Role

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INTRODUCTION

Anaesthesia has evolved immensely since the first anaesthetic was administered publicly by T.G. Morton in 1846. Intraoperative management has improved tremendously, in step with the improvement in surgery. Anaesthesia is now acknowledged as the leading medical speciality in addressing issues of patient safety Leape L 1994. Without improvement in intraoperative anaesthesia, surgery could not have made the rapid advancement it did. Also, the scope of anaesthesia has broadened to include pain management, resuscitation and intensive care. Despite these developments, public knowledge of the practice of anaesthesia is limited, and the role of the anaesthetist is often unappreciated by patients.

Some of the misconceptions concerning anaesthetic practice are that anaesthetists are doctors (Jathar et al. 2002, Khan et al. 1999, Chew et al. 1998, Hennessy et al. 1993, Deusch et al. 1996), and the anaesthetic team worked under the surgical team (Kindler et al. 2002). Previous anaesthetic experience has not been found to improve patients' perception of anaesthesia (Kindler et al. 2002). This perception was previously found to be poorer in males, older patients and patients in the lower socio-economic groups (Laffey et al. 2000). The poor perception was also more pronounced when the role of the anaesthetist outside the theatre was assessed (Khan et al. 1999).

Several studies conducted in Nigeria have demonstrated patient dissatisfaction with the quality of services provided by doctors from differing specialities (Onotai LO et al. 2012, Babatunde OA et al. 2013, Ademola-Popoola DS et al. 2005). In a study on the appropriate practice of anaesthesia, it was found that one-third of anaesthetists interviewed attached little importance to the work they did by not communicating the same to their patients (Adudu et al. 2011). Only 20% conducted a postoperative visit, and less than 22% discussed the proposed anaesthetic technique with the patient. The authors concluded that the current practice of

anaesthesia has been found wanting in several aspects and advocated better training of anaesthetist (Adudu et al. 2011).

Patients' perception of anaesthesia may have an influence on their attitude towards the anaesthetist because the attitude of medical students towards anaesthesia changed with an increase in the desire to specialise in anaesthesia after their perception of anaesthesia was altered during anaesthesia rotation (Khan et al. 2011). However, several attempts to alter the poor public perception of anaesthesia and the anaesthetist have met with varying degrees of success (Tanser et al. 2000).

The surgical patients' knowledge of the practice of anaesthesia and their attitude to anaesthetists has not been adequately evaluated in Nigeria. This study is to determine the perception of the surgical patient concerning the anaesthetist as a specialist and anaesthesia as a speciality.

MATERIALS AND METHODS

The study was a prospective, descriptive, cross-sectional study carried out at the University of Ilorin Teaching Hospital from April to September 2015 after Institutional Review Board approval. Our hospital is a tertiary health institution located in the north central region of Nigeria. On average, one thousand and six hundred elective surgical procedures are carried out annually. Consecutive consenting patients (ASA I and II) scheduled for elective surgical procedures under general anaesthesia who satisfied criteria for recruitment were entered into the study. Exclusion criteria were patients' refusal to participate in the study, age under 15 years, American Society of Anesthesiologist's (ASA) class over II and inability to understand due to a language barrier or psychiatric illness.

After the routine pre-operative assessment had been performed on the patient by an anaesthetist who was not involved in the conduct of the study, a questionnaire consisting of fifteen questions in two sections was administered to the patient by a

registrar in the Department of Anaesthesia. The first section consisted of six questions on the patients' demographic data and type of surgery. The second section had nine closed-ended questions to assess the knowledge of the patient concerning the existence of the speciality of anaesthesia, the qualification of an anaesthetist and the patient's ability to recognise an anaesthetist in a picture.

The questionnaires were administered by two resident doctors in the Department of Anaesthesia, who had been specifically trained to administer the questionnaire. The questionnaires were verbally administered in person by the patients' bedside. The patients had the option of not answering any question they were not comfortable with, and they were permitted to withdraw from the interview at any time if they so wished.

Sample size determination

Using the Fisher's formula and 19.2% as the proportion of the target population estimated to have a particular characteristic, the sample size was calculated to be 230.

Data Analysis

Results generated from this study were expressed as frequencies or proportions of total, means and standard deviations. Tests of significance were analysed with Student's t-test for means. Chi-square test was used for categorical variables using the computer, software package: SPSS version 16.0. A p-value of less than 0.05 was considered statistically significant.

RESULTS

Demographic data

Two hundred and fifty patients were enrolled in the study conducted over a six-month period; one hundred and thirty-one were female (52.4%) while one hundred and nineteen were males (47.6%). The mean age of the participants was 42.77 with a range of 18-78years. The males had a mean age of

43.14 (range 18-70) while the females had a mean age of 42.43 (18-78). One hundred and four (41.6%) patients had tertiary education, while one hundred and forty-six were not educated to tertiary level (Table 1).

Table 1: Demographic information

VARIABLE	FEMALE	MALE	TOTAL
NONE	14	18	32 (12.9%)
PRIMARY	25	22	47 (18.8%)
SECONDARY	35	32	67 (26.7%)
TERTIARY	57	47	104 (41.6%)
TOTAL	131	119	250

Chi 1.21, p-value 0.75

Seventy (28.0%) of the patients underwent general surgical procedures, 52 (20.8%) had obstetric, and gynaecological procedures, 50 (20.0%) had orthopaedic procedures, 38 (15.2%) had plastic surgical procedures, 35 (14.0%) had urologic procedures while 5 (2%) had otorhinolaryngologic procedures. None of the patients had previous operations.

Patients' knowledge about the anaesthetist as a specialist

One hundred and thirty-three (53.3%) respondents were not able to identify the healthcare personnel that would administer anaesthesia for their surgery. While 94 (37.6%) and 7 (2.8%) identified the surgeon and the nurse respectively as the healthcare personnel that would administer anaesthesia, 32 (12.8%) responded that they do not know who would administer anaesthesia for their surgery.

Only 101 (40.6%) patients realised that an anaesthetist was a medical doctor, while 149 (59.4%) patients could not correctly identify the anaesthetist as a doctor. Eight (3%) patients responded that the anaesthetist was a technician, while 5 (2%) patients responded that the anaesthetist was a nurse. One hundred and thirty-six (54.5%) patients did not know who the anaesthetist was. Ninety-nine (39.6%) patients

responded that the anaesthetist was a specialist in his field.

Table 2: Patients' knowledge about the anaesthetist as a specialist

VARIABLE	GENDER		PREVIOUS KNOWLEDGE		EDUCATION	
	MALE	FEMALE	PRESENT	ABSENT	TERTIARY	OTHERS
WHO ADMINISTERS ANAESTHESIA (%)	62(47.3)	54(45.4)	79(90.8)	37(22.7)	67 (64.4)	49 (33.6)
WHO IS AN ANAESTHETIST (%)	49(37.4)	51(42.9)	72(82.8)	29(17.8)	67(64.4)	34 (23.3)
IS HE A SPECIALIST (%)	43(32.8)	54(45.4)	79(90.8)	20(12.3)	69(66.4)	29(19.9)
RECOGNIZING PICTURE OF ANAESTHETIST (%)	41 (31.3)	47 (39.5)	72 (82.8)	17 (10.4)	62 (59.6)	47 (32.2)
AVERAGE % CORRECT ANSWERS	37.2	43.3	86.8	15.8	63.7	27.3
S.D	7.2	2.8	4.6	5.6	2.9	6.7
t		1.5		19.6		10
p-value	0.18 not sign		<0.00001 significant		<0.0001 significant	

Eighty-nine (35.6%) patients could recognise an anaesthetist in a picture while 116 (46.4%) recognised other theatre staff in a picture (fig 1).

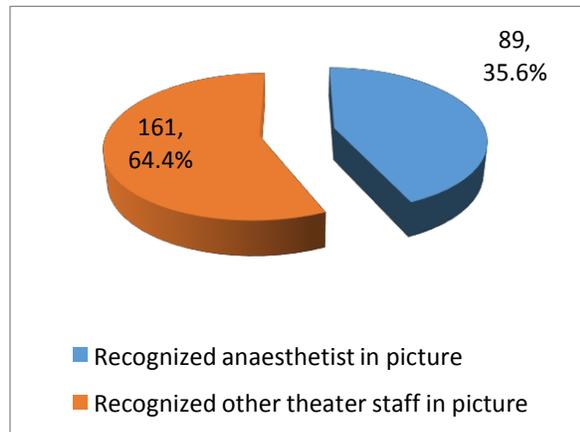


Fig 1: Respondents who recognised theatre staff in a picture

One hundred and sixty-three (65.2%) patients had no previous knowledge of anaesthesia.

A Two-sample t-test showed that there was no significant difference in patient's perception of the anaesthetist between male and female respondents (p = 0.18 at 95% CI, Table 2).

However, previous knowledge of anaesthesia and education to tertiary level significantly affected patient perception of the anaesthetist (p < 0.00001 and p = 0.00001 respectively at 95% CI, Table 1)

Patients' knowledge about the role of the anaesthetist

Only 59 (23.6%) patients knew that the anaesthetist was present throughout the duration of their surgery while 191 (76.4%) patients were not aware of this. Thirty (11.9%) patients responded that the anaesthetist cared for several patients at the same time, 5 (2%) responded that he left the theatre after the commencement of surgery while 156 (62.4%) patients did not know the location of the anaesthetist during their surgery (fig 2).

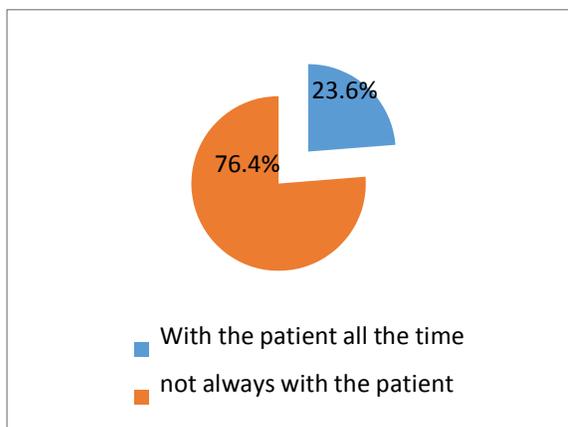


Fig 2: Location of the anaesthetist

One hundred and nineteen (47.5%) patients knew that the anaesthetist was either solely (16.8%) or partly (30.8%) responsible for their care during surgery. While 20 (7.9%) patients responded that the surgeon cared for them during surgery, 7 (3%) patients responded it was the nurse. 94 (37.6%) patients did not know who cared for them during their surgery (fig 3).

DISCUSSION

This study demonstrated poor knowledge of the speciality of anaesthesia among surgical patients in north-central Nigeria as 65.2% of respondents had no previous knowledge of anaesthesia before their current admission. This is despite the fact that 41.6% of the respondents had been educated up to tertiary level. Also, 53.3% of participants in the study did not know who administered anaesthesia to them during their surgery. This was surprising as all the patients were admitted to undergo surgical procedures after several weeks of preparation at our surgical out-patients' clinic. This shows that while the surgeons were preparing them for the surgical procedures, insufficient information was provided concerning the patients' need for anaesthesia. It has been shown that surgeons underestimate the patients' preoperative need for information on various issues including anaesthesia (Morra et al. 2009).

Interestingly, all respondents had been exposed to pre-anaesthetic review before the questionnaire was administered, yet, many of them were not aware that the anaesthetist was a doctor and had a general poor perception of anaesthesia. This suggests that the pre-operative anaesthesia review did not educate the patients about the role of anaesthesia and the anaesthetist in their perioperative care. This supports the findings of an earlier study suggesting that deficiencies in anaesthetist's proficiency and lapses in duties may be becoming frequent, necessitating changes in the anaesthesia training curriculum (Kindler CH et al. 2002). Therefore, more emphasis should be placed on the provision of relevant anaesthesia information during the preoperative review, and other modes of information dissemination should be assessed.

Undoubtedly, the anaesthetist plays a very important role both within and outside the operating theatre. Novel surgical procedures have been possible because of the advancement in anaesthesia that has improved the quality and safety of the process of anaesthesia. However, public perception of the role of the anaesthetist

does not reflect this. This may have resulted because the role of the anaesthetist may have been ascribed to others. Thirty-seven percent of respondents felt the surgeon was responsible for administering anaesthesia. This may be because many surgeries in Nigeria, especially in private hospitals and public hospitals offering secondary health care are carried out under ketamine anaesthesia administered by the surgeon or a nurse without an anaesthetist present. Most anaesthetists are employed in the tertiary health centres. Therefore, many surgical patients may not have encountered an anaesthetist previously.

When the respondents became aware of the anaesthetist as a separate health personnel, more than half (59.4%) of the surgical patients interviewed responded that the anaesthetist was not likely to be a doctor while 60.4% felt he was not a specialist. In a similar study in Ibadan, south-west Nigeria, 50% of the respondents felt the anaesthetist was not a medical doctor (Eyelade OR et al. 2010).

As expected, patients with previous knowledge of anaesthesia before the current admission had a more accurate perception of the anaesthetist as a specialist. Also, patients who were educated to tertiary level had a better perception of the anaesthetist as a specialist. Therefore, public enlightenment programmes designed to educate the public on the role of the anaesthetist may help in improving the perception of anaesthetists among our patients. However, there was no statistically discernable difference in the perception of the anaesthetist between males and females.

The poor perception of the anaesthetist is however not extended to other members of the perioperative team. While only 89 (35.6%) respondents recognised the anaesthetist in a picture showing medical personnel in an operating suite, 161 (64.4%) recognised the surgeon and the perioperative nurse. Patients seem to be more familiar with other health personnel involved in surgical operations than with the anaesthetist. Respondents who had been educated to tertiary level and those with previous knowledge of

anaesthesia before the index admission had a better perception of anaesthesia and the anaesthetist. Therefore, it is expected that as the general level of education in the country improves, the perception of the anaesthetists will also improve.

This poor perception of the anaesthetist could also reflect on the value the surgical patient places on the anaesthetist. Only 16.8% of surgical patients ascribed responsibility for their intraoperative well-being to the anaesthetist, while 30.8% felt he was responsible for their well-being only as a member of the perioperative team. A majority of the respondents (76.4%) reported that the anaesthetist was no longer with them after induction of anaesthesia believing that his responsibilities were over following induction of anaesthesia. It remains to be seen if this limited role ascribed to the anaesthetist would reflect negatively on what the surgical patient is willing to pay for anaesthesia services.

The poor knowledge concerning anaesthesia and the anaesthetist may be due to the limited availability of physician anaesthetists in Nigeria as well as other countries in the West African region. In Nigeria, the ratio of anaesthetists to the population had been put at 1:295,000 (Foulkes-Crabbe DJO 1995). As a result of this, anaesthetists spend most of their time in the operating theatre with limited opportunity to interact with patients outside the operating suites.

Apart from its impact on surgical patients, poor perception of anaesthesia may negatively influence the desire of medical students and young doctors to specialise in the field of anaesthesia. It has been found that medical students' perception of a speciality affects their career choice (SelvaOlid et al. 2012, Tanser et al. 2000). Their career choice can, however, be influenced if their perception about the speciality is altered (Laffey et al. 2000).

In conclusion, surgical patients demonstrated inadequate knowledge concerning the field of anaesthesia and the anaesthetist as a specialist.

Limitations of the study

This study is hospital based. A community-based study is needed to further assess the perceptions of the general public to the speciality of anaesthesia and the anaesthetist.

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