

ORIGINAL RESEARCH

Work-related Experiences and Challenges of Perioperative Nurses in Southwestern Nigeria



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Abstract

Background: Perioperative nursing is highly demanding due to the long hours of complex procedures, limited support, inadequate facilities, and staffing issues. These factors contribute to fatigue, frustration, and burnout. However, there is a paucity of data on the challenges and experiences of perioperative nurses in Southwestern Nigeria.

Purpose: This study aimed to explore work-related experiences and challenges of perioperative nurses in selected hospitals in a southwestern state, Nigeria.

Methods: The study adopted a phenomenological qualitative design. Twenty perioperative nurses who had spent a minimum of six months in the operating theatres of three public hospitals were selected. Data were collected through semi-structured interviews using a key informant interview guide. The qualitative data collected were transcribed verbatim, coded, and analysed using content and thematic analysis.

Results: Findings from the study revealed two major themes: the experiences of perioperative nurses in Osun State and the challenges confronting perioperative nursing practice and perioperative nurses. The study reported perioperative nurses' personal experiences, motivational factors, and their aspirations. Findings further showed that challenges to perioperative nursing include inadequate infrastructure and equipment, a shortage of manpower, financial constraints faced by patients, and insufficient funding for perioperative nursing services.

Conclusion: The study concluded that perioperative nurses' experiences were educative and fulfilling yet challenging and frustrating due to the numerous obstacles they face in their professional roles. Therefore, stakeholders need to address these challenges to enable perioperative nurses to function optimally and improve outcomes for surgical patients.

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1. Introduction

Globally, perioperative nurses are vital members of surgical teams and play substantial roles in the success of surgical procedures at all levels of the healthcare system. These nurses provide care throughout the continuum of surgical care, which involves preoperative, intraoperative, and postoperative phases (Goodman & Spry, 2017; Rothrock & McEwen, 2019). After completing basic nursing education, perioperative nurses are trained to meet the specific needs of surgical patients, providing care for those undergoing invasive procedures.

The care of surgical patients in the operating room is distinct from other hospital settings, with high reliance on technology. Perioperative nurses play an instrumental role in preventing infection, maintaining asepsis, handling instruments, adopting medical techniques, preventing complications, managing biological preparations, and upholding surgical consciousness. Additionally, they play an essential role in planning care, collaborating with the patient, surgical team, and other healthcare providers, ensuring patient safety through proper scheduling of procedures, communication, consistency with the surgical safety checklist, monitoring the progress of surgeries, and making appropriate reports (Chellam Singh et al., 2023; Rothrock & McEwen, 2019).

Perioperative nurses deliver comprehensive patient care during surgery and other invasive procedures using the nursing process framework. They work in partnership with other healthcare professionals, including surgeons, to provide care for surgical patients and evaluate the outcomes of care. While performing these duties, perioperative nurses are uniquely positioned to assist with surgical procedures and serve as the “consciousness” for unconscious patients on the operating table (Brodin et al., 2017). They make appropriate referrals, delegate tasks, and supervise personnel to ensure safe and efficient care. Nurses in this field work in surgical suites, ambulatory surgery centres, endoscopy suites, laser centres, interventional radiology departments, mobile surgical units, and physicians’ offices across developed countries (Phillips, 2017).

Perioperative nurses must possess core nursing skills such as critical thinking, aseptic technique, and the ability to work with diverse patient populations, as well as adherence to evidence-based practices. Their role involves maintaining safety, educating patients, following legal guidelines, and ensuring ethical care. These values are the basis for the quality care that surgical patients have relied on and can expect when being cared for by any perioperative nurse. Perioperative nursing is not just technical; it requires scientific understanding to determine the appropriate care methods and when to implement them. Knowledge of surgical interventions, instruments, and equipment is essential for anticipating and preparing for the steps in a surgical procedure. Perioperative nursing is a systematic, planned process that requires nursing care skills, interpersonal abilities, critical thinking, and technical proficiency to ensure quality care. Therefore, teamwork is fundamental in the operating room and begins the moment one steps inside the unit (Meyer et al., 2016; Salazar Maya, 2022; Stucky et al., 2024).

In addition to technical skills, perioperative nurses rely on knowledge of surgical anatomy, physiological changes, intraoperative risk factors, patient injury prevention, and the psychosocial effects of surgery. This comprehensive knowledge enables nurses to anticipate surgical needs and intervene appropriately while considering the patient’s and surgical team’s perspectives (Rothrock & McEwen, 2019). Perioperative nursing also requires a blend of technical and behavioral care, underpinned by critical thinking, which is essential for providing professional patient care. Good clinical judgment arises from critical thinking, a purposeful, outcomes-directed process driven by patient needs and grounded in the nursing process and nursing science (Hong et al., 2021). Moreover, it demands knowledge, skills, and experience, all guided by professional standards, ethics, and a commitment to continuous self-evaluation, correction, and improvement (Wicker & Dalby, 2016).

While perioperative nurses’ knowledge and critical thinking skills form the foundation of their practice, these competencies vary significantly depending on work environments. The work-related experiences of perioperative nurses differ across countries (Clayton et al., 2016). For example, nurses in high-income countries such as Canada, Australia, and the United States often face different challenges compared to their counterparts in middle- or low-income countries, such as South Africa and West African nations like Nigeria and Ghana (Smith et al., 2022). In the Philippines, for instance, perioperative nurses face a range of experiences, from striving to improve performance to coping with stress, seeking professionalism, and experiencing feelings of exhaustion, dissatisfaction, and burnout (Peñasales et al., 2017).

Scholars have reported that being a perioperative nurse is both intensely challenging and exciting, as they encounter diverse experiences in the operating room setting. The pressure of meeting the expectations of different surgeons and surgical team members—each with their own preferences, demands, and personalities—can create stress and challenges. Additionally, providing perioperative nursing care is both stressful and taxing. Perioperative nurses also face issues such as overworking, understaffing, and feeling undervalued (Attri et al., 2015; Peñasales et al., 2017; Peñataro-Pintado et al., 2021). Their experiences are influenced by factors such as education, work environment, organizational policies, role performance, modern technology, and others (Shin & Kim, 2021). Schmidt and Brown (2019) emphasized that perioperative nursing is one of the most demanding nursing roles, given the challenges of managing long, complex surgeries with insufficient staff, poor remarks from superiors and administrators, and the frustration and burnout that often accompany the work. Another study highlighted that perioperative nurses are not always appreciated for their contributions during the perioperative phases of care and deserve more recognition (Peñasales et al., 2017). Excessive workloads in the operating room remain a major challenge, and this issue needs to be addressed by determining an appropriate nurse-to-patient ratio. These challenges are also evident in developing countries

like Nigeria, where perioperative nurses face poor working conditions, outdated surgical instruments, low remuneration, limited training opportunities, and heavy workloads due to insufficient staffing, often caused by nurse migration to countries like the U.S., Canada, and Europe (Ijah et al., 2023).

While studies on the experiences and challenges of perioperative practitioners are abundant in developed countries, there is a lack of empirical data from African nations. For example, Ryamukuru et al. (2018) noted a gap in the literature on the emerging roles and clinical experiences of perioperative nurses in Rwanda. Similarly, in Nigeria, the clinical experience of perioperative nursing students has been documented in a cohort study focused on educational preparation, which typically follows a basic nursing education or a bachelor's degree in nursing from a university. This is similar to what operates in Nigeria, where the training duration is currently twelve months after completing the basic or degree programme, followed by a qualifying examination organized by the Nursing and Midwifery Council of Nigeria (Auta, 2019). In contrast, educational preparation for perioperative nurses in developed countries has advanced to the postgraduate level. However, there remains a scarcity of studies on the experiences and challenges faced by perioperative nurses in developing countries, particularly Nigeria. This gap in the literature underscores the importance of this study, which aims to explore the work-related experiences of perioperative nurses in selected healthcare institutions in southwestern Nigeria.

2. Methods

2.1. Research design

This study adopted a phenomenological qualitative design to explore the experiences and challenges of perioperative nurses in selected hospitals in Osun State, Nigeria. The design was preferred to other qualitative designs because it helped to describe individual perioperative nurses' experiences (Muhammad et al., 2023).

2.2. Setting and participants

The study was conducted at three selected hospitals: Hospital A (federal government-owned university teaching hospital), Hospital B (state government-owned teaching hospital), and Hospital C (state government-owned specialist hospital). Hospital A was established by the federal government of Nigeria in 1975. The operating theatres have a population of 77 perioperative nurses spread across eleven suites where various surgical procedures are performed. Hospital B is a tertiary health institution jointly owned by the government of Osun and Oyo State. It was established in the year 2000 to provide clinical training for health professional students of a public university in Ogbomosho. It is located at the former premises of State Hospital, Idi-Seke, along Station Road Osogbo. It has seven operating suites: four in the main theatre and three shared among the labour ward, casualty, and ophthalmic units. The hospital currently has a total number of 20 perioperative nurses working in the seven operating suites. Meanwhile, Hospital C is a secondary health facility owned by the Osun state government. It was established in the mid-fifties and was formerly located at the current premises of Hospital B, but it was relocated to the Asubiaro area by the state government in the year 2000 when the teaching hospital was about to take off in Osogbo. It is the largest state-owned secondary health facility. Among the surgical treatments offered in the hospital are general surgery, urology, ophthalmic, obstetric, and gynaecological surgeries. The hospital currently has a population of 14 perioperative nurses in its theatre.

The study population comprises all available perioperative nurses currently working in operating theatres of the selected hospitals in Osun State. Perioperative nurses in these institutions serve as scrub and circulating nurses for various surgeries from different specialties. Purposive sampling was employed to select twenty (20) perioperative nursing practitioners. Although the initial intention was to select 25, data saturation was attained after the 20th interviewee. The selection took cognisance of inclusion of at least one perioperative nurse from each nursing designation, who have not less than five years in the operating theatres and have acquired experiences in various surgical specializations.

2.3. Data collection

Data were collected from the head of the selected operating theatres and other experienced perioperative nurses with the aid of a two-sectioned key-informant interview guide that was

developed by the researcher following an extensive literature review. This semi-structured interview guide has two sections: the introductory section and the main section. The introductory section has questions like 'Can you please tell me a little about yourself, professional status, qualifications, place of work, current designation, and current position?' The items in the main section focus on exploring the experiences and challenges of perioperative nurses. Questions such as, 'For how long have you been practicing as a trained perioperative nurse?', 'How has the journey been?', and 'Can you describe your experience?' were used. Probing questions were also employed to elicit more detailed or in-depth responses from the informants. The interview explored nurses' experiences, aspirations, and challenges as professional perioperative nurses. Each interview session lasted between 15–20 minutes and was conducted by the principal investigator in the theatre at a fixed time that was convenient for the interviewees. The heads of each theatre allowed the investigator to use their personal offices for the interview. Field notes were used to document data from the participants, and all interviews were recorded verbatim. The data collection period lasted four weeks between February to March 2022.

2.4. Data analysis

All information from interview transcripts and reflective memos was brought together. The step-by-step process of qualitative content analysis (Assarroudi et al., 2018) was employed in the study. The audio-recorded field interviews were transcribed verbatim and then analysed. Given the large volume of data collected, data ordering was achieved by using codes and sub-codes. Data were coded descriptively or interpretively using concepts derived from the study objective and its theoretical framework. All pieces of data that were relevant to the research questions were identified, isolated, contextualised and labelled accordingly. Inferences were drawn from the identified themes by thinking through them (reflection) in the context of the study. The themes were derived from these keywords: work-related experiences, challenges, perioperative nursing personnel, and categories: clinical challenges, interpersonal dynamics, professional development, and team communication.

The detailed steps of data analysis included: (a) Preparing the data: Narrative data from the key informant interviews and in-depth interviews, which had been audio-recorded, were transcribed verbatim and typewritten by the researcher; (b) Defining the coding unit to be analyzed: The transcribed data were uploaded into Atlas.ti version 8 qualitative analysis software, and, with attention to the theoretical framework and research questions, files were set up for emerging codes and themes; (c) Developing categories and a coding scheme or conceptual framework: The entire transcript was read carefully again with the intent of identifying and bringing together related coding units or categories (i.e., concept mapping). After thoughtful consideration of the entire data set, the identified codes and categories were defined systematically, labeled, and organized into a conceptual framework; (d) Testing the developed coding scheme: After developing the coding scheme, its clarity and consistency were double-checked by test-running it on a section or sample of the transcript. Following this exercise, the coding scheme was slightly refined; (e) Coding all text and assessing the coding consistency: The entire transcript was read closely again, fractured, and clustered into chunks of data based on pre-identified codes. A combination of selective coding (selection of core or essential codes that closely correspond with the phenomenon observed in the field) and thematic coding was adopted. All pieces of data relevant to the research questions were identified, isolated, contextualized, and labeled; (f) Drawing conclusions from the coded data (interpreting the data): Inferences were drawn from the identified themes by reflecting on them in light of the context of the study; and (g) Reporting the methods and findings: The report encompasses a synopsis of the methods employed for data analysis and the salient findings thereof.

2.5. Trustworthiness

Trustworthiness in this qualitative research was established through a degree of rigour in the study's conduct. Four criteria have been suggested to ensure the trustworthiness of qualitative studies: credibility, dependability, transferability, and confirmability, which serve as substitutes for internal validity, reliability, external validity, and objectivity. All interview transcripts were presented to some of the interviewees for verification of the accuracy of the accounts, and the researcher's reflexivity throughout the study helped enhance credibility. A rich description of the study setting, the data collection method and procedure, techniques of data analysis, and how

inferences were drawn would make it possible for readers to follow the sequence of the research process and authenticate the findings (audit trail). The study, at various points, also benefited from the expertise of the research team during reflective sessions, thus ensuring the dependability of its findings. The transferability of this study was ensured through a detailed description of the setting, context was presented, and careful attention was given to the selection of study participants using a purposive sampling technique. Confirmability was ensured through the recording and verbatim transcription of the interview sessions and by the principal investigator getting immersed in the data. Peer review by the research team, audit trail, and researcher's reflexivity also enhanced the confirmability of the study.

2.6. Ethical considerations

A formal application for ethical clearance and research protocol was submitted to the Ethical and Research Committees of the selected institutions for the purpose of obtaining ethical clearance for the study. The research ethical committees of all the selected hospitals gave approval to the study after an extensive review of the study proposal (Hospital A-ERC/2019/10/09; Hospital B-LTH/EC/2019/10/436 & Hospital C- HREC/27/04/2015/SSHO/73). Permission to collect data was also obtained from the management of all the hospitals, and preliminary visits were made to the operating theatres to create rapport with prospective participants and explain the objectives of the study.

The participants were informed that participation in the study was voluntary and that they had the liberty to terminate participation at any time without penalty. They were requested to read and sign the informed consent form that clearly spelled out the study title and purpose as an indication of their willingness to participate in the study. Participants were requested to choose a pseudonym that was used during the interview, and the interviewees were pre-informed that their response was tape-recorded and transcribed verbatim for research purposes only. Their permission to tape/digitally record the interview was also obtained to ensure the accuracy of the data. Recorded audio tapes of interviews that were burnt into compact discs with copies of field notes and transcripts were kept secured in a locked cabinet. The participants were given pseudo names as P1 to P20 to ensure their anonymity and confidentiality.

3. Results

3.1. Socio-demographic features of participants

A total of 20 purposively selected perioperative nurses considered as information rich sources on quality of perioperative nursing care in selected hospitals formed the samples. Although the original plan was to interview 25 of such individuals but by the time the 20th person was being interviewed, data saturation had already set in.

As presented in Table 1, the mean age of the participants was 39.40(8.44) years, indicating that a majority of the participants were over 30 years of age. Nine are actually aged 30 to 40 years. Twelve are females, and eighteen are married. As regards their work experience, ten had between 10 to 20 years of experience as perioperative nurses; four had risen through the ranks to the post of chief nursing officers, and four were assistant directors of nursing services. The educational status of the participants showed that half (10) possessed a bachelor's degree in nursing.

3.2. Themes and sub-themes

The themes and sub-themes are presented in narrative text and supplemented with verbatim quotes from participants and a table, as needed, to corroborate the discourse. Codes (P1 to P20) symbolize pseudonyms for the perioperative nurses. It is also important to note that summative content analysis, which involves counting and comparisons, was particularly used to categorize, compare, and display the participants' demographics in a tabular form. The emerging themes and sub-themes are therefore presented in Table 2.

3.2.1 Theme 1: Experiences of perioperative nurses in Osun State

This theme explored the state of perioperative nursing practice in Osun State. It specifically inquired about the nurses' personal and collective experience in perioperative nursing practice, what motivated them to go into perioperative nursing, and what their aspirations are.

Table 1. Socio-demographic features of the participants

Variables	Frequency	Percentage
Gender		
Male	8	40.0
Female	12	60.0
Age at last birthday: Mean(SD): 39.40(8.44)		
20-30	2	10.0
31-40	9	45.0
41-50	6	30.0
51-60	3	15.0
Marital Status		
Single	2	10.0
Married	18	90.0
Religion		
Christianity	16	60.0
Islam	4	20.0
Ethnicity		
Yoruba	18	90.0
Igbo	2	10.0
Year of Experience		
1-10	4	20.0
11-20	10	50.0
Above 20	6	30.0
Qualification		
RN/RPON Only	9	45.0
Diploma and BNSc	10	50.0
Diploma and MSc	1	5.0
Cadres		
Nursing Officer II & Nursing Officer I	5	25.0
Senior Nursing Officer & Principal Nursing Officer	5	25.0
Assistant Chief Nursing Officer & Chief Nursing Officer	5	25.0
Assistant Director of Nursing Officer & Deputy Director of Nursing Officer	5	25.0

3.2.1.1 Sub-theme 1: Perioperative nurses' personal experiences

The perioperative nurses reported diverse experiences. Some described their experience as educative, wonderful, interesting, and fulfilling. This may not be unrelated to their passion for the specialty and the opportunity of witnessing the positive transformation that takes place in the health of their clients secondary to their care.

Table 2. Themes and sub-themes of the study

Themes	Sub-themes
Theme 1: Experiences of perioperative nurses in Osun State	- Perioperative nurses' personal experience - Motivational factors for perioperative nurses - Perioperative nurses' aspiration
Theme 2: Challenges confronting perioperative nursing practice and perioperative nurses	- Inadequate infrastructure and equipment - Shortage of manpower - Poverty/financial constraints on the part of the patients - Inadequate funding of perioperative nursing services

A few other nurses described their experience as challenging, rough, and frustrating. Such feelings may be emanating from the relative lack of infrastructural facilities and equipment to work with, making them improvise virtually all the time and the somewhat difficult work environment. This is evident from participants' comments like:

Well, it's been a wonderful experience. Being a perioperative nurse is something I have always longed to be. I find perioperative nursing a little different from general nursing in

the ward and outpatient departments... You know, seeing a patient in distress coming into the operating room and immediately, when they get there, they are relieved of the distress. (P1)

The journey has been fantastic and wonderful. With cooperation, we have achieved a lot because our unit is one of the unified units; hardly will you be able to differentiate between doctors, anaesthetists and perioperative nurses once we are in our scrub. (P2)

Hmmm, so far, so good; I can say that the journey has not been so easy; it has been full of ups and downs because there are a lot of challenges which we encounter. Being a perioperative nurse is not an easy job because you only know your time of resumption, as the closing time is not that certain. Anything can crop up, necessitating you to stay longer than the scheduled closing time. Beyond that, we are faced with a number of challenges; though we have been able to tackle some of them, some are still pending. Although the theatre environment is relatively okay, but it is not an ideal theatre setting. (P3)

3.2.1.2 Sub-theme 2: Motivational factors for perioperative nurses

Perioperative nurses recounted a number of factors that motivated them to go into perioperative nursing and those that have sustained their interest in the field. These include the awesome experiences they had as students while rotating through the theatre where they witnessed the quick and positive impact of surgery on patients, the zeal to impact positively on the health of patients through expert care and amelioration of patients' pain, and the ample degree of autonomy enjoyed by theatre nurses in their practice when compared with the rest of the nurses. These possibly inform the general level of job satisfaction expressed by the majority of the perioperative nurses in this study. The following excerpts from the field interview aptly buttress this assertion:

What motivated me to go for perioperative nursing was the kind of cordial relationship that I observed between the theatre nurses and other members of the surgical team during the period of jamboree surgery in Osun State... You hardly see them fighting; they are just friendly, and the atmosphere is also friendly. So, those are things that prompted me to go for the training. (P4)

I was opportune to witness a surgery performed on a woman with a ruptured ectopic pregnancy. I must say I was quite fascinated by the way the woman was rescued. I accompanied the woman from the ward to the theatre; I witnessed the operation from the beginning to the end. I even followed the woman back to the ward after the surgery, and when I saw that the woman had recovered, I felt so ecstatic. So, I made up my mind that that would be my area of specialization. (P5)

I find working with men very comfortable and more interesting than working with women on the ward because women have a tendency to gossip, while men talk about ideas, not about other people, hence my choice of perioperative nursing. (P6)

I chose perioperative nursing because I like the way perioperative nurses approach issues; it is very professional, which is quite different from the way other nurses handle matters. Another thing that motivated me is that I always like to be where it is happening. I mean, like seeing directly all that we have been taught theoretically in anatomy, medical-surgical nursing, and others. (P 7)

3.2.1.3 Sub-theme 3: Perioperative nurses' aspiration

Like every upwardly mobile professional, perioperative nurses nurture some aspirations. These aspirations can be coalesced into four broad categories, viz: (a) best practice, (b) career progression and role modelling, (c) academic progression, and (d) advancement in role performance. For instance, many of the perioperative nurses expressed their desire to reach the pinnacle of their careers. They believe that reaching such status will give them the opportunity to influence the practice of perioperative nursing positively. Others opined that perioperative

nursing would have metamorphosed into a postgraduate specialisation within the next couple of years. With the advent of task shifting, some expressed their desires to function as first assistants during surgery, as independent nurse practitioners, and as nurse consultants (clinical nurse specialists). This is evident from typical participants' comments like:

My aspiration is to ensure that all surgical patients who come into the operating room have hitch-free surgery, less infection, and good surgical outcomes. I look forward to seeing the wearied patients coming out with joy, having been a recipient of best practice and holistic nursing care. (P8)

As I have mentioned earlier, it is really difficult to practice what we learnt in our present work environment. I sincerely hope that I will be able to bridge the gap between theory and practice in my little way. It is equally my intention to be like a role model and make perioperative nursing encouraging and more attractive to other people outside so that they can appreciate what we are doing. (P9)

As a perioperative nurse, I desire that we have well-developed sub-specialization like perioperative orthopaedic, and perioperative cardiac, particularly at the postgraduate level. Although I derived utmost fulfilment in what I do and I am actually aiming to be a perioperative nurse consultant, I nonetheless look forward to furthering my education in this specialty, like having my master's and PhD in perioperative nursing. (P10)

Yeah, sincerely, I want to see theatre nursing beyond what it is today. As a matter of fact, I wish there were a group known as perioperative nurse practitioners that would provide care for surgical patients from surgical outpatients. (P11)

3.2.2 Theme 2: Challenges confronting perioperative nursing practice and perioperative nurses

The nurses shared with us some of the challenges confronting them as professionals and the practice of perioperative nursing. The challenges range from unconducive environment to infrastructural challenges. They reported that the hospital administrators have perennially neglected the specialty in the area of infrastructures, equipment, staffing, surgical consumables, opportunities for in-service training, incentives, and even policies. According to many of the interviewees, perioperative nurses are not usually carried along when policies affecting their practice are being formulated. In their words, the ignoble cancellation of surgeries that have become a trademark of many of our hospitals is often a product of this abject neglect. They also attributed their long working hours and their being ordered to stay back when not on call to this neglect. These, to them, have become burdensome and overwhelming, and the impact on the quality of perioperative nursing care could be better imagined. For the sake of clarity, these challenges are considered one after the other.

3.2.2.1 Sub-theme 1: Inadequate infrastructure and equipment

The perioperative nurses interviewed cited obsolete theatre buildings and inadequate surgical instruments, which sometimes are faulty, as major challenges facing the practice of perioperative nursing. In all the selected hospitals, at least one or more of the autoclaving machines in their Central Sterile Supply Department (CSSD) were reported faulty. This will no doubt affect the supply of sterile materials (gown, gauze, drape, and even the instrument), sometimes resulting in the cancellation of surgery. Other infrastructural-related challenges reported include space constraints in the theatre, lack of running water for surgical scrubbing, insufficient surgical consumables, unavailability of needed instruments for some specialised surgeries, and sometimes lack of oxygen for surgery. Some interviewees also reported poor power supply due to faulty generators and limited or no diesel powering the generator. All these cannot but make the practice of perioperative nursing care cumbersome and frustrating. Despite these inadequacies, informants claimed that they have been able to carefully improvise with the resultant protection of patients from nosocomial infections and iatrogenic injuries. This is exemplified in the following excerpts from field interview:

We do experience challenges with equipment; we sometimes improvise to make surgeries successful. Other challenges have to do with the lack of perioperative nurses, as the entire surgical team looks forward to having perioperative nurses for the success of surgeries. We are also sometimes handicapped by inadequate surgical consumables. As the custodians of these materials, the other healthcare team members usually ask the perioperative nurses for gloves, needles, and surgical blades, and yet they are not within our jurisdiction. So this sometimes makes our work slow and, if not carefully handled, results in hitches and conflict among the surgical team. (P 12)

The challenges are enormous. Let me use our theatre as a case study. When we came on board, the initial problem we had was equipment and instrument issues; later, there were logistic problems and power outages. You may think that shouldn't create a problem, but nay. Even though we have a generating set, sometimes there is no fuel to power... Again, there are things that should be unheard of in government establishments that we sometimes encounter ...; in fact, it got to a stage where we had to buy our own scrubs. (P 13)

As theatre nurses, we have many challenges, but thank God we are able to manage. One of the challenges of the theatre nurses is the things to work with; you are already prepared to work when you leave your house in the morning; you get to the place of work, and patients to work on are there, but things you need to work with are not readily available. (P14)

3.2.2.2 Sub-theme 2: Shortage of manpower

The data reveal a gross shortage of perioperative nurses in all the selected hospitals. Interviewees reported that the situation is so bad that surgeries are sometimes canceled, and nurses have to work for longer hours and even have to stay back when not on call. This development was attributed to a combination of factors: the retirement of aging nurses, the exodus of skilled hands (including perioperative nurses) to overseas countries for greener pastures, and the non-replacement of those who have left despite the increasing patient turnout. Some of the participants claimed that the reason why quite a number of their colleagues have suffered slip disc and intractable back pain is not unconnected with these prolonged work hours. The following participants' comments aptly corroborate this:

Well, there is no practice that does not have its own challenge. One of the major challenges we have is a shortage of staff. The number of people working here is very limited, and as the people are retiring, the government is not replacing them. So, we are reducing. One perioperative nurse just died last month; I am talking about the former head of this unit. Since her demise, there has been no replacement, not even a single additional staff. Yet the number of patients we care for has not reduced, thus compounding the challenge of coming back to work when not on call, working extra hours, and doing more jobs than one needs to do. (P 15)

... In this theatre, there are not enough perioperative nurses, and we are very short-staffed because we have five theatres. It has been difficult running the five theatres at maximal capacity because of staff shortage. We can't put nurses on a permanent basis there, so what we do is allocate nurses on a temporary basis. So that is a serious challenge. (P 16)

3.2.2.3 Sub-theme 3: Poverty/financial constraints on the part of the patients

Many of the perioperative nurses reported that some of the patients who come to the theatre for surgery are not all that financially buoyant, and this constitutes a serious constraint to their care. They recalled that there have been instances where patients disappeared into thin air after knowing the cost of surgery, only to reappear when their condition has become a thing of emergency. In their words, some patients are unable to purchase extra materials needed for the success of their surgery, and some patients will even use the emergency surgery packs and fail to replace them. All these cannot but create a burden for perioperative nurses as they are the group that the other members of the surgical team look up to for solutions.

In certain cases, our patients are unable to purchase surgical consumables. Some just collect the list of materials and keep them away from the hospital, only to show up when their condition has deteriorated or become an absolute emergency. Well, thank God for the emergency pack for the CS. Unfortunately, there have been situations where the packs have been used without replacement. When we confront the patients, the story has always been there is no money now o..., we will come and pay. Empty promises hardly materialise. So, I think if medical-surgical care is subsidized, it may improve access to surgical care. However, in spite of that, the number of patients that we do has not reduced. For instance, we can operate up to six CS in a day; we can have nine patients on our surgical list on Tuesday or Thursday. (P17)

The poverty level of some of our patients is also constituting a challenge. You need to see how miserable they look when we have to refer them to the Teaching Hospital. Some will burst into tears, while some will refuse to go in spite of our insistence. At times, some of them who don't know the meaning of DAMA will do it in the morning and only come back in the evening. All these, to my mind, are traceable to abject poverty. (P18)

3.2.2.4 Sub-theme 4: Inadequate funding of perioperative nursing services

Participants reported that funding for perioperative care is grossly inadequate and has affected all aspects of perioperative nursing care. When asked how, they explained that each time they turn to the hospital administrators for support in terms of increased establishment, the need for in-service training, procurement of surgical consumables, and other surgical equipment, the slogan has always been 'no money.' They reasoned that such disposition from the administration and inadequacy of materials to work with is demoralising and cannot but negatively impact the output of care. Excerpts of comments from participants aptly attest to this:

There are lots of problems from the government and administration. They refuse to employ staff, and those currently working are neither appropriately remunerated nor adequately motivated. We have been on the same salary scale since 2009, with no promotion, no employment of new staff, and no replacement of worn-out equipment or materials. In fact, there was a three-year period when I was being paid half my salary, and the balance of the half salary is still pending; there are thirty months of half salary with the government, which is one year and three months of full salary. All this kills morale and, of course, affects productivity. (P19)

I'm looking forward to a time when you will turn on the tap and be able to scrub under running water when all our systems are working and when the generator is automatically switched on as soon as the light goes off. In fact, a time when everything will be automated in the theatre (both laughed). So, these are issues that constitute an obvious challenge to perioperative nursing practice. (P20)

4. Discussion

Perioperative nurses are a group of specially trained professionals who provide care to patients before, during, and after surgical interventions. Their primary goal is to ensure the best possible outcomes for patients undergoing surgical procedures. This study aimed to explore the work-related experiences and challenges faced by perioperative nurses in Osun State, Nigeria. Two main themes emerged: the experiences of perioperative nursing practice, which included three sub-themes—perioperative nurses' personal experiences, motivational factors, and professional aspirations—and the challenges faced in perioperative nursing, which were categorized into four sub-themes: inadequate infrastructure and equipment, manpower shortages, financial constraints among patients, and insufficient funding for perioperative nursing services.

Experiences in the operating suites are important as they are part of the ongoing learning process for perioperative nurses. The constant exposure to different scenarios in this highly specialized field prepares perioperative nurse for various challenges they may discover along the way (Peñasales et al., 2017). The perioperative nurses in Osun state have a myriad of personal positive and challenging experiences in the workplace, which are dependent on the relationship

they have with their colleagues, the cooperation that exists among different types of healthcare workers working in the theatre, and the availability of facilities and equipment. This finding is similar to that of Marais and Downing (2022), who observed that operating department assistants' positive experiences were related to the relationship they have with different healthcare workers in the theatre and their relative autonomy to carry out their assigned roles and tasks in the theatre. In spite of whatever issues that nurses face, previous research (Peñasales et al., 2017; Rouhi-Balasi et al., 2020; Uzun, et al., 2024) found that other members of the healthcare team work together to face those challenges to ensure a positive outcome. Gaudite (2015) also highlighted the importance of nursing autonomy and professionalism in the operating room as a useful tool in advocating for the unconscious anaesthetised patient. This might be due to the universal approaches to the training of perioperative nurses and a certain degree of autonomy enjoyed by this group of nursing professionals.

The perioperative nurses also recalled that their motivation to enter the field stemmed from the greater degree of nursing autonomy observed in the theatre compared to other clinical areas, the rapid clinical improvement in the health of their patients following an intervention, and the professional mien of perioperative nurses they worked with as student nurses. Their experiences may have been further influenced by their motivation and have led to the aspirations they have for themselves and their chosen specialty. Their aspirations are geared towards improving the perioperative specialty through bridging the gap between theory and practice, making the specialty a master's level programme providing holistic care to surgical patients, and ensuring sub-specialisations in perioperative nursing. These aspirations are not far-fetched and are achievable. For instance, perioperative nursing in Rwanda is not a diploma programme but a Master's level programme (Ryamukuru et al., 2018). Nurses also wish for improved training to improve the perioperative nursing experience and outlook (Peñasales et al., 2017).

Challenges are expected in different aspects of nursing. For perioperative nurses in Osun State, these challenges are not limited to infrastructural problems. The operation suites are not enough to have several surgical procedures carried out at once. Some of the necessary equipment is either not available or is faulty. Nurses have to improvise to ensure the surgeries are not cancelled, but sometimes, there are not enough sterile materials available, water is not available, and there is poor power supply. This is not peculiar to these hospitals, and it may be due to the low- and middle-income status of Nigeria, as it has also been observed in Rwanda, a country with similar status, that the power supply is epileptic, and running pipe-borne water within the theatre is almost inexistent (Ryamukuru et al., 2018). Hence, planned surgeries have to be cancelled or rescheduled. Apart from the physical problems, human resources are grossly inadequate, with the rapid loss of perioperative nurses to other countries or retirees who are being replaced. This is similar to the findings of Ryamukuru et al. (2018), where the scrub nurse is replaced by surgical residents and medical students, while the available nurse in the suite is the circulating nurse, which contravenes international standard practice. Peñasales et al. (2017) also noted that technical failures are challenges that these perioperative nurses face and can cause tension for the nurse, and negatively impact their effectiveness.

Furthermore, not all patients have the financial capacity to carry out surgical operations and seek other means of healthcare till surgical intervention is needed in an emergency. Hence, nurses have to use their scarce resources to ensure that the lives of the patient are not lost. The perioperative nursing department is poorly funded, so nurses are not sent for continuing education. Lack of continuing education can dampen the morale of the perioperative nurses, as it is expected that apart from their clinical experience, nurses should be encouraged to go for further training in their field to improve their clinical and theoretical expertise in their chosen field. This should be in recognition and appreciation of their hard work and dedication (Peñasales et al., 2017). This is similar to what operates in Osun state; perioperative nurses face similar challenges as both the state and federal government-owned health institutions are poorly funded, and perioperative nurses are not recruited when needed. They often use part of their meagre income to support poor patients, and yet they are not appreciated.

5. Implication and limitations

This study provides empirical data on the practice experiences and challenges faced by perioperative nurses, addressing a gap in documentation within a developing country like Nigeria. The findings underscore a critical need for perioperative nurses to amplify their voices to hospital

administrators and government officials, urging them to address the numerous challenges facing their specialty. Increased support will enhance the visibility and impact of perioperative nursing care in the surgical setting. A primary limitation of this study is its focus on public tertiary and secondary healthcare institutions in Osun State, Nigeria, with a relatively small sample size. This may limit the generalizability of the results, as mission and private hospitals were excluded from the study

6. Conclusion

The study concluded that the majority of participants described their experience as educative, wonderful, interesting, and fulfilling, while a few reported it as challenging, rough, and frustrating. Obsolete theatre buildings, faulty and inadequate surgical instruments, a severe shortage of perioperative nurses, and underfunding of perioperative nursing care were identified as major challenges facing the practice. Therefore, it is essential for hospital management to prioritize adequate perioperative nursing staffing to reduce workload. Additionally, implementing training programs and addressing other issues, such as the lack of sufficient surgical supplies and modern equipment, will improve surgical outcomes. It is also recommended that future studies extend to all regions in Nigeria to ensure broader coverage and generalizability of findings.

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Author contribution

OOO was involved in the study conceptualization/design, data collection, and drafting of the manuscript. EOA was involved in editing and proof reading. KEI involved in drafting of the manuscript. BRF was involved in the critical review of the manuscript.

Conflict of interest

This is to state that the manuscript has been read and approved by all the authors all authors met the requirements for authorship and that each author believes that the manuscript represents honest work of all the contributors. There is no known conflict of interest in this manuscript.

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