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Association for Peri-operative Practitioners in South Africa

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- APPSA is a non-profit organisation which exists for the benefit of its members. This is accomplished by way of congresses, local meetings and travel grants, with the express goal of raising the standard of peri-operative practice in South Africa

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APPSA Membership
PO Box 13073,
Noordstad 9305
Tel: 051 436 8145
Fax: 086 275 2869
Email: congress@internext.co.za

Banking details:
SA Theatre Nurse
Absa Bank
Account No: 4040952627
Branch code: 632005

Accounts
PO Box 13073,
Noordstad 9305
Tel: 051 436 8145
Fax: 051 436 6368
Email: congress@internext.co.za

Banking details:
SA Theatre Nurse
Absa Bank
Account No: 4040952627
Branch code: 632005

Please email or fax the deposit slip to the above

website: http://www.theatrenurse.co.za

Association for Peri-operative Practitioners in South Africa

EDITOR:
Mrs Madeleine Hicklin

PRESIDENT:
Mrs Marilyn de Meyer

VICE-PRESIDENT:
TBC

TREASURER:
Mrs Marianne Oosthuizen

LAYOUT:
Carma Design
Tel: 072 825 3124
email: carma@gonet.co.za

CHAPTERS:

Mrs G Botha	Freestate/Northern Cape
Mrs S Rohit	KwaZulu Natal
Mrs L Schutte	Western Cape
Ms D Luphindo	Eastern Cape
Mrs M de Meyer	Gauteng/Mpumalanga
Mrs D Kisten	Pta/Limpopo/North West

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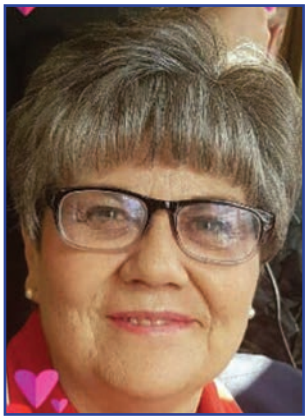

From The President

WELCOME TO 2024! I hope the year ahead will be one filled with opportunities and challenges that make us better peri-operative practitioners, with more goals achieved than missed. Our aim for this year is to treble if not quadruple our current membership base. And for that, we need you to bring all your colleagues in each of your operating theatre complexes to our Study Days. I am sure that, once they experience the APPSA hospitality and learning at one of our Study Days, they will be quick to sign up as members.

We have another APPSA Congress this year - taking place once again in Johannesburg at the Premier Hotel OR Tambo between 18 and 20 October 2024. We hope this year's congress will be bigger than the one we held last year, and just as successful. So, **SAVE THE DATE** - and see you in Johannesburg!

Marilyn de Meyer
APPSA President

From The Editor

HAPPY 2024! Although the year is well underway, this is my first *Editor's Letter* and my first contact with many of the readers of this Journal. I hope the year ahead is filled with blessings - and that these blessing outweigh the challenges each year brings with it. On 10 January, a report in *MedicalBrief* caught my eye. It didn't come as a shock to me, and will certainly not come as a shock to you, but I believe we need to start speaking more loudly about this in places where it really matters. In our Provincial Legislatures. In our Parliament. But most definitely in our very own organisation, here in APPSA.

Nursing is in crisis. Not just peri-operative nursing, but all nursing. And not just in South Africa. It is a worldwide phenomenon. In his address to shareholders in the Netcare Holdings' annual report, chairperson Mark Bower remarked that 'the worsening shortage of qualified nurses in South Africa should be a concern at all levels of society, not only for healthcare service providers'. He said that 'between 2012 and 2022, the rate of population growth in the country significantly outstripped the number of enrolled nurses and midwives registered with the South African Nursing Council (SANC), and that reductions in approved student numbers in private and public sectors, coupled with shifting regulatory requirements, was contributing to the shortage'. We all know that not enough new, young blood is entering the profession. We also know that there are more nursing sisters reaching retirement age than those coming into the system - and that the potential to earn greater salaries by moving to 'greener pastures overseas' is adding to the burden. But, according to Howard Catton, the CEO of the International Council of Nurses (ICN), the worldwide emphasis in the nursing profession is on the recruitment of new nurses - not on the retention of nurses. And this is where I think we - as APPSA - need to step up to the plate.

Our priorities must be twofold: firstly, how can we, as an organisation, ensure that our members remain in the profession; and secondly, how can we ensure that our members remain in the peri-operative profession **in South Africa**? How can we, as APPSA, play a more meaningful role in the lives of peri-operative practitioners so that they see more value in remaining in this profession and in this country? The UK is responsible for poaching thousands of South African healthcare workers annually. We have an obligation to make working in this beautiful country more attractive than leaving here to go to a cold, rainy UK. Recruitment is vital - but what is more important is creating improved working conditions, better support systems, and greater investment in human capital. All three of those are within our own capacity.

We have to make our workplaces better spaces to work in. We have to make our workspaces more welcoming and we have to ensure that - at both a Provincial and a National level - a greater emphasis is placed on investing in the health and well-being of all healthcare professionals. It can be done. It must be done. Our time is now. We need to retain the staff we have if we are to be able to serve our population to the best of our ability.

Madeleine Hicklin

How Are You Living: What Will Your Legacy Be?

By Sheila L Allen, BSN, RN, CNOR (E), CRNFA (E)

INTRODUCTION

Have you ever thought about your legacy to the world, your family, or your colleagues? As we live our lives, we perhaps need to consider how we want to be remembered. We all want to be remembered for something, to be known as more than merely ordinary. We all want to be known as someone who truly made a difference, to leave an imprint on this world and to leave behind something that can make the future a little brighter.

Our own personal code or set of values determines how we behave toward others. This personal discipline is referred to as ***integrity***. There are different kinds of strength and all are needed. You need integrity more than bodily strength. Integrity means having a core of goodness in you and acting on it for the benefit of others. It means keeping your word and speaking the truth. It means thinking and acting for those in your care.

WHAT IS A LEGACY?

Simply put, it's the story of a person that lives on and is remembered. A legacy is the symbol or characteristic made in life that continues to demonstrate your contribution to the world, the community or the organisation that you made a difference. While you might think of a legacy as being at the end of your life, it actually is how you live your life now, every day. We meet people or interact with colleagues/people daily. The shadow of the influence that you cast will fall across somebody's path every day of your life. It's really your choice what kind of example you will be and what kind of influence you will have. A legacy is not left **for** people; actually, it leaving something **in** people.

You may think only leaders have a chance to leave legacies, but actually **we are all leaders** in some setting. We lead how we want to be led. Remember, there's no right way to do the wrong thing.

From an early age, we are encouraged to choose what we want to be and what we want to do. We are told it is our world and we can do anything we set our minds to do. The Greatest Generation taught us to adhere to the values that were embedded in our culture. Simply stated, those were: don't hide behind an excuse, don't allow your problems to decide your current situation or govern your future. **Destiny is a choice not a chance**. We all have our roles and responsibilities; nevertheless, it's not *what* we do but *how we do it* that makes the difference.

As Maya Angelou said, "People won't remember what you said or what you did; however, they will remember how you made them feel".

PRIORITIES: ROCKS IN A JAR

A professor stood before his philosophy class and had some items in front of him. When the class began, wordlessly, he picked up a very large and empty jar and proceeded to fill it with fist-sized rocks. He then asked the students if the jar was full.

They agreed that it was. So the professor then picked up a box of pebbles and poured them into the jar. He shook the jar lightly. The pebbles rolled into the open areas between the rocks. He then asked the students again if the jar was full. They agreed it was.

The professor next picked up a box of sand and poured it into the jar. Of course, the sand filled up everything else. He asked once more if the jar was full. The students responded with a unanimous: "Yes."

The professor then produced two cans of beer from under the table and poured the entire contents into the jar, effectively filling the empty space between the sand. The students laughed.

"Now," said the professor, as the laughter subsided, "I want you to recognise that this jar represents your life. The ROCKS are the important things - your family, your children, your health, your friends, your favourite passions - things that if everything else was lost and only they remained, your life would still be full.

"The PEBBLES are the other things that matter like your job, your house, your car. The sand is everything else-the small stuff. If you put the sand into the jar first," he continued, there is no room for the pebbles or the ROCKS.The same goes for life.

"If you spend all your time and energy on the small stuff, you will never have room for the things that are important to you. Pay attention to the things that are critical to your happiness. Play with your children. Take time to get medical checkups. Take your partner out to dinner. There will always be time to clean the house, and fix the disposal.

"Take care of the ROCKS first, the things that really matter. Set your priorities. The rest is just sand."

One of the students raised her hand and inquired what the beer represented.

The professor smiled. "I'm glad you asked. It just goes to show you that no matter how full your life may seem, there's always room for a couple of beers."

Support your legacy

There are six pillars that represent support for your legacy. They are character, choices, conduct, consistency, confidence, and compassion. With those in mind, here are some suggestions about how to support and build your legacy into something you will be proud of - at any time of your life:

- Concentrate on building your character, not your status/reputation. The way you act needs to align with your values. If you always keep your word, everyone may not like you; but they will respect your integrity

- Don't be afraid to do the right thing, even if it is a hard decision. Even if you do not succeed, the lessons you learn from making mistakes are also important in building your character from the choices you make
- Your conduct reflects your integrity such as how you treat others respectfully and how you demonstrate your dependability
- Act authentically, respectfully, honestly, and with kindness. As Mother Theresa said, "If you cannot find a kind person, be one." How you behave will cast that shadow that touches the people with whom you connect. If your actions are consistent and congruent with your values, you will build the legacy of your vision
- When you are trustworthy and keep your word, you are known for the consistency of your behaviour. Even in your unguarded moments, someone is watching. The manner in which you are responsible and accountable will be remembered
- Trustworthy leaders know who they are and what they know. Confidence is believing in yourself. A confident leader will help others feel empowered and important
- Compassion isn't something you are born with. It is the ability to connect with others and grows out of considerate behaviour. It demonstrates that caring, forgiveness, and kindness are always appreciated. How I remember that is fried chicken ... KFC. It may not be your favourite brand, but it will help you remember that kindness, forgiveness, and compassion or connection. Kindness needs to be practiced, as does forgiveness. Forgiveness doesn't excuse someone's bad behaviour, but forgiveness prevents the behaviour from hardening your heart. Compassion comes with the connections we make with others.

The pillars of character, choices, conduct, consistency, confidence, and compassion will establish that firm support for your legacy - with a side helping of fried chicken! One of my favourite actors, Morgan Freeman, said that you're not grown up until you know how to communicate, apologise, be truthful, and accept accountability ... without blaming someone else for anything.

TEAMWORK

My parents and maybe your grandparents, like others from the Greatest Generation, represented a generation of helpers - or were they a generation of doers. Has that changed? Have we become a generation a viewers??? Do we talk a good game and not follow through if it gets too tough?

Tanveer Naseer, leadership speaker and corporate trainer, talks about tactics that build solid teams that thrive in our world of change:

a. Build relationships to match the needs of those served. The team may change, but the long-term goals should remain constant. Reach out and connect with people so they feel like they are a part of the team and that their opinions matter. The discretionary efforts of people (talents, insights, creativity, for example) are not necessarily invested with simply carrying out their roles and responsibilities. Connecting helps initiate the effort to achieve excellence.

b. Commit to **doing** right, not just **being** right. Own up to your mistakes, no matter how small. The gesture makes it clear that is not about your self-interest. Demonstrates the collective interest drives the success. Success depended on working together. Everyone needs to have a voice - even the dissenting voice. Everyone should feel free to speak up!

c. Everyone should feel heard and understood. Most teams are very diverse. You really don't want a team of 'yes' folks or a group that just 'rubber stamps' decisions. Sharing pertinent information prior to a meeting gives the team time to digest, research, prepare to present alternative solutions, to enrich the dialogue, and to determine the best course of action.

There are 10 things that require ZERO talent:

1. Being on time
2. Work Ethic
3. Effort
4. Energy
5. Body Language
6. Passion
7. Doing extra
8. Being Prepared
9. Being Coachable
10. Attitude

I have a movie to recommend to you, and I encourage everyone to try and see it. It's called *The Boys in the Boat*. It is set in 1936 at Washington University when over 100 young men tried out for the eight-man junior varsity rowing team. These were young farmers or labourers, some of whom tried out to have a place to sleep and a meal. This amazing story is one of resilience, determination, and the power of teamwork.

WORDS OF WISDOM

You know how when you wake up, there's a song in your head that you can't get rid of? Or you're driving to work and you hear a song and that song becomes a sort of obsession that just rolls around in your head all day long? Well, there's a song that we all know sticks in your mind that makes you think of the characters: Elsa, Anna, Sven, Christof, and the snowman - what's his name? On yeah, Olaf. Now I can't sing it for you, but it goes: Let it gooooo, let it gooooooooo, la la lala la

Sometimes those songs remind us of something we need to remember, or perhaps a lesson that we need to remind ourselves: to LET GO of whatever we are afraid of, or whatever problem is taking over your day. Just LET GO of the judgement of a co-worker, or some negative thought that keeps you from living your life. LET GO of what's gone, be grateful for what remains, and look forward to what's coming next.

To make the choice to be a doer, not a viewer.

Perhaps we might need to "LET IT GO" to get the message.

In the USA we have changeable road signs that might give a message such as, "Wipers on; lights on; it's the law," or "Roads may be icy." At times the person who changes the words may get a little "cheeky" and the message might read, "Get your head out of you APPs." The humour is intended to make you think and get the message to put down your phone.

In the video I encourage you to look up and watch (https://www.google.com/search?q=3rd+grade+dropout&oq=3&aqs=chrome.0.69i59j46i512j46i433i512j0i433i512j69i60l3j69i65.3040j0j7&sourceid=chrome&ie=UTF-8) Dr Rick Rigsby, uses humour to deliver a message, such as:
A fish would not get caught if he kept his mouth shut.

Good enough is not good enough if it can be better. And better is not good enough if it can be best. This is the lesson of a Third Grade Dropout ...

TO KEEP YOU THINKING ...

When a flashlight grows dim or quits working, you don't throw it away, you change the batteries. When a person messes up and finds themselves in a dark place, do you cast them aside? NO, you help them change their batteries! Some need AA - attention & affection; some need AAA - attention, affection, and acceptance; some need C - compassion; some, D - direction. And if they still don't seem to shine, simply sit with them quietly and share your light.

Do you remember that HGTV/reality show where the popular host Ty Pennington would find a deserving family, sent them away from their home, and change and remodel that home? When the family was brought home there would be a large bus parked in front of their home. Then everyone in the crowd would yell, "BUS DRIVER: MOVE THAT BUS!"

Everyone would be in awe of the wonderful transformation accomplished by a few concerned individuals in a short period of time. What the family had no vision to do with their home, had been achieved by a caring group of people who had a vision.What we need to do is "MOVE THE BUS" and move beyond whatever is blocking our vision to create a legacy and live our lives accordingly.

Lou Holtz, a famous football coach, said: *"We all have a chance in life to be significant, not successful, but SIGNIFICANT. Success is what you do for yourself. Significant is when you impact or touch someone else's life in a positive way. When a successful person dies, that ends; but when you are significant, that lasts beyond your lifetime."*

In conclusion then, how do you want to be remembered?

A) Focus on your character; not your reputation. Make sure your actions always reflect your words and aligns with your character. Show your integrity.
B) Do right things, does not mean you always have to be right. Everything comes down to choices. You will make mistakes, but if you work with people or a team; TOGETHER you will thrive.
C) Always behave honestly, respectfully, and authentically. Actions and words align with your values; do things consistently.
D) Don't forget the fried chicken: KFC - kindness, forgiveness, compassion/connection.

Remember the Lessons of a third grade dropout. Ego is the anaesthesia that deadens the pain of stupidity. Pride is the burden of a foolish person.

- Keep standing
- Don't judge
- Show up early
- Be kind
- Make sure that the servant's towel is huge and used
- Find your broom [be humble]
- If you're gonna do something, do it the right way

- It's never wrong to do the right thing
- How you do anything is how you do everything – Excellence ought to be a habit, not an act that is how you honour those who have been part of your life
- Look in the unlikeliest places for wisdom every day.
- Ask yourself every day - How am I living?

That's how you create your legacy.

And just one final, parting thought -
Sunflowers follow the sunlight
But when it's a cloudy, rainy day
They turn towards each other
To share their energy

May we be the sunflowers in each other's lives.

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Sheila Allen served as the National AORN President between 2001 and 2002 and the IFPN Secretary between 2001 and 2007. She is a regular contributor to the APPSA Journal and offers contemporary studies and opinions of great value and interest. She wrote this paper specifically for the APPSA Journal.

Bridging The Gap: Preparing And Nurturing Novice Peri-Operative Nurses

By Nick Nijkamp; Associate Professor Dr Pauine Celleja; Dr Ashlyn Sahay

INTRODUCTION

Peri-operative nursing is a highly specialised area within the nursing profession that relies on high levels of theoretical knowledge, clinical skill and critical thinking to maintain patient safety before, during and after surgical procedures. However, attrition rates and the impending retirement of experienced peri-operative nurses have created a need to address the transition of novice nurses into this complex and multi-skilled environment[1]. For purposes of this editorial, a novice peri-operative nurse is defined as any nurse entering peri-operative nursing immediately after graduating or from other nursing backgrounds.

Compounding the issues of attrition and retirement of experienced peri-operative nurses is the fact that peri-operative nursing is not routinely taught in undergraduate nursing programmes, apart from a few students who undertake a peri-operative clinical practicum. This leads to a perceived lack of preparedness among new graduates[2]. In this editorial, we discuss the current challenges facing the peri-operative nursing workforce, transition shock experienced by novice nurses and the role of transition programmes, as well as making recommendations for future research.

PERI-OPERATIVE NURSING AND WORKFORCE CHALLENGES

Depletion of skilled professionals is a significant challenge faced in peri-operative nursing,[1, 3, 4] as in the majority of nursing specialisations. The peri-operative nursing workforce plays a crucial role in ensuring safe and efficient surgical care, but several factors contribute to workforce shortages in this field. Attrition, driven by factors such as burnout, high-stress levels, and inadequate work-life balance, poses a considerable threat to the peri-operative nursing workforce. The demanding nature of the job, long working hours, and exposure to critical situations contribute to physical and emotional exhaustion, prompting many nurses to seek alternative career paths[5].

In addition, the retirement of experienced peri-operative nurses, coupled with insufficient recruitment to the specialty, exacerbates the workforce shortage. As peri-operative nurses reach retirement age, a significant number of skilled peri-operative nurses are leaving the workforce, creating a gap that is challenging to fill. The loss of their expertise and knowledge further intensifies the strain on the remaining workforce[1, 3].

The transition into clinical practice is often a daunting experience for novice nurses. In the context of peri-operative nursing, this transition is amplified due to the high-pressure, fast-paced and complex nature of the peri-operative environment that demands a unique set of skills. Novice nurses may experience transition shock when in the peri-operative environment, characterised by feelings of uncertainty, anxiety and inadequacy[6]. This shock poses an inherent risk to their own well-being and can hinder their ability to provide optimal patient care.

Given the trend of peri-operative nursing attrition and the increasing number of retiring experienced nurses, it could be argued that the recruitment of novice nurses is not adequately meeting current workforce demands. Novice nurses entering the peri-operative environment lack the necessary knowledge and skills specific to this specialised area[7], causing them to experience difficulties in adapting to their new roles. Currently, medical and surgical nursing is taught within undergraduate curriculums; however, education specific to peri-operative nursing is not an integral part of the curriculum in most undergraduate nursing programmes[2, 4].

This educational gap makes it difficult to attract novice nurses to the peri-operative field and potentially results in an increased incidence of transition shock. Furthermore, the lack of peri-operative elements within curriculums limits students' exposure to the specialty area, potentially discouraging them from considering it as a viable career option.

ROLE OF TRANSITION PROGRAMMES

Transition programmes play a vital role in providing peri-operative nursing education, supporting cultural integration, and managing transition shock; thus, ultimately improving patient safety[8, 9, 10]. These programmes are designed to facilitate the smooth transition of novice nurses into the peri-operative environment, ensuring they are equipped with the necessary knowledge and skills to thrive as peri-operative nurses[11]. By offering specialised education and training in peri-operative nursing, transition programmes bridge the knowledge gap and enhance the competence of new nurses[12]. Additionally, transition programmes provide valuable support for integration into the cultural milieu of the peri-operative environment[12]. They help novice nurses adapt to the unique culture, values and dynamics of the peri-operative team, fostering effective communication and collaboration.

Within Australian healthcare organisations, transition programmes remain unmonitored and unregulated[13], resulting in significant variability among providers. This includes variations in the length of programmes; the theoretical and practical content taught; the supervision, mentorship and preceptorship provided, and the qualifications held by educators[13]. Consequently, it is difficult to establish if any programmes are based on best practice and theoretically sound for educating novice nurses. Adding to this, a large body of literature is available on transition to peri-operative nursing practice; however, it lacks empirical research. To address these concerns, the Australian Department of Health report, *Educating The Nurse Of The Future*[13], recommends that standardised transition programmes be developed, accredited by professional bodies, and implemented for all graduate nurses. These programmes must be designed according to a best practice framework to create standardisation, but with sufficient flexibility to be tailored to the specific needs of individual novice nurses and the organisations where they are employed.

Within the peri-operative specialty, the Australian College of Perioperative Nurses (ACORN) recommends that peri-operative nurses have sound knowledge and clinical competence in providing peri-operative care[14]. There is a legal obligation for peri-operative nurses to ensure they possess the knowledge and skills needed to provide specialised care. ACORN recommends that this is achieved through a peri-operative-specific educational programme that involves both theoretical and clinical components[14]. However, this raises the question: Is there sufficient empirical research to develop such a programme?

CONCLUSION: INVESTING IN THE FUTURE OF PERI-OPERATIVE NURSING

The transition from novice to proficient peri-operative nurse is a challenging journey, but it is one that can be facilitated through well-designed transition programmes. These programmes should be theoretically sound and grounded in a best-practice framework. By enhancing under-graduate nursing curricula, offering comprehensive peri-operative nursing education and implementing structured transition programmes, we can cultivate the next generation of confident and competent peri-operative nurses.

Ultimately, investing in the education and support of novice peri-operative nurses not only benefits the nurses themselves, but also has far reaching implications for healthcare organisations, delivery of quality care and overall patient safety. Further empirical research needs to be undertaken to establish the best practices for peri-operative transition programmes. In turn, this would support the development of theoretically-sound transition programmes to support novice peri-operative nurses.

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AUTHORS:
***Nick Nijkamp**, MClinNg, GCTE, BN (Dst.), RN, AFHEA, MACN works at the Central Queensland University*

***Associate Professor Dr Pauline Calleja,** PhD, MANP, GCHigherEd, BNsc, RN, MACN, FCENA, SFHEA, works at the Central Queensland University*

***Dr Ashlyn Sahay**, PhD, BN (Hons.), GC Learning & Teaching, RN, MACN works at the Central Queensland University*

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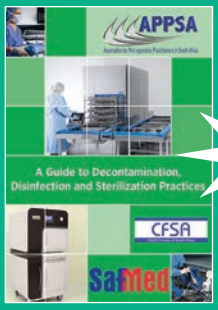

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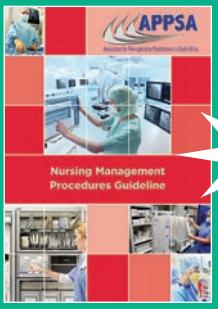

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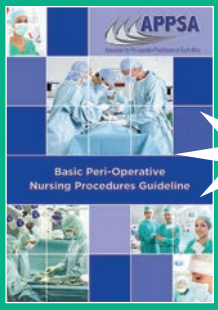

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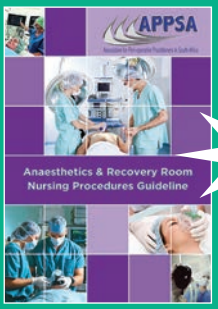

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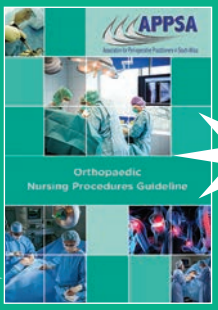

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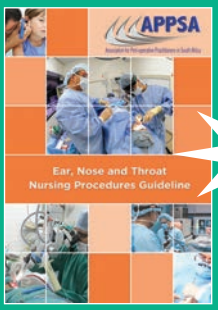

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Reducing The Risk Of Medical Malpractice In The Nursing Profession

By Nesisa Ngwenya, MNSc in Prof Nurs Sc: Nursing Education; and Ntumbuluko Livingstone Nyathela

BACKGROUND

Over the last 15 years, medical negligence claims have skyrocketed in South Africa. There are various factors that contribute to this increasing trend. The prevalence of these factors leads to the increased risk of medical negligence claims.The factors that contribute to the increased risk of medical negligence claims include poor record keeping, poor communication with the patient and failure to exercise reasonable care by nursing professionals. For brevity, we will only discuss the first two factors.

Some of the reasons people want to sue hospitals are because the medical professionals were in fact negligent, or the treatment was not properly discussed with the patient, or the evidence that best explains how the treatment was rendered isn't well managed (such as, for example, the patient records). The latter reason has been exploited by unscrupulous attorneys who take advantage of such system failures and institute bogus claims in order to make a quick buck. This article is a brief critical analysis of some of these factors, where the goal is to promote a reduction of the risk of medical malpractice claims.

THE DUTY TO KEEP PROPER RECORDS

The standards of nursing and midwifery practice in South Africa are set and maintained by the South African Nursing Council (SANC). The SANC has Rules and Regulations that set out clear practice guidelines for professional conduct. A nurse is required to, at all times, keep accurate and clear patient records of all nursing actions done to the patient. Failure to do so constitutes professional misconduct, where the SANC can take disciplinary action against such nurses (SANC 2005, R387 as amended).

Good nursing practice requires detailed record keeping that is comprehensive, timely and accurate. Courts often assess nursing records and rely on expert reports to determine the merits and payout of a claim. Due to the prevalence of medical negligence claims, there are occasions where nursing records come under court scrutiny. It has been observed in the various nursing units that sometimes the nurses do not record their actions in full or correctly.

Plain notes in patient records such as 'patient satisfactory', 'patient communicating well', 'patient slept well', 'patient fully mobile', 'patient awake', as an example, is not sufficient or accurate record keeping. It simply does not explain the full progress of the patient over the last given period of time, while the patient was in the nurse's care. The nursing records must be accurate, detailed and clear. Should the patient decide to later sue the hospital and the nursing records are scrutinised, it would hardly prove believable that the litigating patient was in fact 'satisfactory' as indicated in the nursing notes. Other problems that arise include where the nursing records are not readily available, or if the records are readily available, the entries are illegible. Sometimes there is information missing in the file, and sometimes there are inconsistencies between the entries made by the doctors and the nurses. Clearly there are various risks and challenges around records management, which require mitigation.

Self-evidently, improper nursing records management places the healthcare provider at risk of litigation: if litigation occurs and the records are missing, or the notes are illegible or inconsistent, how can a case be properly made out to explain the standard of treatment or successfully defend the lawsuit? Nurses need to be fully aware that when patients seek legal advice in cases of malpractice allegations, the attorneys will need to do an assessment of the patient, along with the nursing records. This step is a preliminary assessment of the merits of the claim, and it is usually done by an independent expert, who would thereafter, write an expert assessment report.

When considering strategies to mitigate this risk factor, there is a wise saying to remember: "What is not written is not done". It is all the more difficult to prove that a nurse provided quality care to a patient where the nursing records are silent on it.

EFFECTIVE, COMPASSIONATE COMMUNICATION

Effective communication is an essential component of quality healthcare. As we all know, the healthcare setting can be very unpredictable, complicated, and stressful, with patient's condition changing drastically at any time. Due to the unpredictability and urgency that occurs while caring for a patient, nurses must constantly guard against communication breakdowns. It is of utmost importance to note that there is always a correlation between communication skills of healthcare providers and patient healthcare outcomes.

As mentioned in previous articles, nurses are at the forefront of patient care and therefore are responsible for effectively communicating patient information to the multi-disciplinary team involved in the patient's plan of care. This is essential to patient safety and achieving good patient care outcomes.

STRATEGIES TO MITIGATE RISK

There are various strategies to mitigate the risks in the management of patient records and effective communication. We will mention two: policy development/implementation and continuous professional development training. In order to improve our record management and communication skills in nursing practice, it is recommended that healthcare organisations should develop policies and standardised procedures that promote effective communication and prioritise good records management.

Organisational policies would make it mandatory for all the stakeholders to commit to improving their outcomes on the key areas of records management and effective communication. After all, the records management and effective communication all go towards one end - effective communication is a function of compassionate patient care, while the management of the nursing records preserves the evidence of the standard of patient care.

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Continuous training of nurses is another useful tool to support and develop them professionally. Management must put in place systems to monitor the nurses' progress in those key areas. To these ends, there must be an adequate supply of training material on the subject of record keeping and effective communication.

To make this work, there must also be a buy-in from the stakeholders. For instance, the senior nurse leaders must be on board to supervise the junior nurses, and the junior nurses must make a commitment to attend to continuous professional improvement programmes. The realisation of any ideal requires partnership and persistence.

IN CONCLUSION

All stakeholders must work together to mitigate the risks of malpractice claims. That partnership must be understood as one that prioritises risk mitigation through policy development and continuous professional development training. While the analysis and recommendations in this piece are in no way exhaustive, nurses should always proceed with the courage that it is the little steps made consistently that mark steady progress.

AUTHORS:

Nesisa Ngwenya is the Theatre Unit Manager of the Dr G M Pitje Day Hospital

Ntumbuluko Livingstone Nyathela works as a Medico-Legal Mediator for SAMLA at Nyathela Attorneys Inc

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Nurses' Priorities For Peri-Operative Research In Africa

By The APORG Nurses Collaborative
Gillian J Bedwell, MSc, Juan Scribante, PhD, Tigist D Adane, BSc, Judita Bila, BSc, Caritas Chiura, MSc, Priscilla Chizombwe, BSc, Betsy Deen, BSc, Lucy Dodoli, BSc, Mahmound MA Elfiky, MD, Ifeoluwapo Kolawole, MSc, Tina Makwaza, BSc, Seleman Badrlie M'Baluku, Diploma, Gaone Mogapi, BA, Christine Musee, PhD, Dominic Mutua, MSc, Worku Misganaw, MSc, Jessy Nyirenda, Diploma, Lucia Ojewale, PhD, Uwayesu Roda, BSc, Bruce M Biccard, PhD

ABSTRACT

BACKGROUND

Mortality rates among surgical patients in Africa are double that of surgical patients in high-income countries. Internationally there is a call to improve access to and safety of surgical and peri-operative care. Peri-operative research needs to be co-ordinated across Africa to positively impact peri-operative mortality.

METHODS

The aim of this study was to determine the top 10 peri-operative research priorities for peri-operative nurses in Africa, using a research priority-setting process. A Delphi technique with four rounds was used to establish consensus on the top 10 peri-operative research priorities. In the first round, respondents submitted research priorities. Similar research priorities were amalgamated into single priorities where possible. In rounds two, respondents ranked the priorities using a scale from 1 to 10 (where 1 is the first/highest priority and 10 is the last/lowest priority). The top 20 (out of 31) were determined after round two. In round three, respondents ranked their top 10 priorities. The final round was an online discussion to reach consensus on the top 10 peri-operative research priorities

RESULTS

A total of 17 peri-operative nurses representing 12 African Countries determined the top research priorities were:

(1) Strategies to translate and implement peri-operative research into clinical practice in Africa
(2) Creating a peri-operative research culture and the tools, resources, and funding needed to conduct peri-operative nursing research in Africa
(3) Optimising nurse-led post-operative pain management
(4) Survey of operating theatre and critical care resources
(5) Perception of, and adherence to sterile field and aseptic techniques among surgeons in Africa

(6) Surgical staff burnout
(7) Broad principles of infection control in the surgical wards
(8) The role of inter-professional communication to promote clinical teamwork when caring for surgical patients
(9) Effective implementation of the surgical safety checklist and measures of its impact, and
(10) Constituents of quality nursing care

CONCLUSIONS
These research priorities provide the structure for an intermediate-term research agenda for perioperative research in Africa.

INTRODUCTION

There is currently limited co-ordination of peri-operative research in Africa. The South African Peri-operative Research Group (SAPORG) previously used a Delphi technique (an anonymous consensus-building technique)[1] to determine the Top 10 National Research Priorities[2] for South Africa. This has been an unprecedented success which has addressed four of the 10 priorities [3, 4, 5, 6, 7], and others are currently being studied. Given that the primary uses of the Delphi technique is to generate consensus[8] among experts and facilitate international collaboration, it is the ideal study design for determining African clinicians' research priorities for peri-operative research in Africa.

Internationally there is a call to improve access to and safety of surgical and peri-operative care[1, 9]. To do this in Africa, we need to understand what researchers and clinicians in Africa consider research priorities that need to be addressed to improve surgical outcomes. The African Peri-operative Research Group (APORG) network[5], which includes researchers from over 30 countries, provides a unique opportunity to determine research priorities for Africa. Defining the research priorities for the continent will help to co-ordinate researchers in Africa on the most important issues that need to be addressed in the resource-limited African environment. Previously, we determined the Top 10 peri-operative research priorities for doctors in Africa[10].

However, what may be considered priorities for doctors may differ from other healthcare providers. Differing priorities may hamper the delivery of these research projects. To provide a more holistic picture of the peri-operative research priorities for Africa, it is also essential to understand the priorities of peri-operative nurses. Therefore, the aim for this study was to determine the top 10 research priorities for perioperative nurses in Africa, using a research priority setting process using a Delphi process.

METHODS

Ethical approval was obtained from the Human Research Ethics Committee of the University of Cape Town (HREC 501/2019). All respondents provided written consent prior to participation. A Delphi technique[11] was used for this research priority setting project, which was conducted as an e-survey over three rounds with a final round virtual meeting. The Delphi was conducted between October 2020 and March 2021. This approach to consensus development for priorities was modelled on the previous priority setting

processes conducted in South Africa[2], and Africa[10]. We asked the national leaders of the African Surgical Outcomes Study (ASOS)[5] and the African Surgical OutcomeS Trial-2 (ASOS-2) trial[12] to nominate one or two peri-operative nurses in their surgical units (purposive sampling) to participate in this Delphi study. An email invitation including the participant information sheet was sent to all identified nurses. (See Appendix 1 online) This was a closed survey within this group and was not openly advertised. Participation was voluntary. There were no incentives for participation. The survey was piloted and checked by Gillian J Bedwell (GJB) on RedCap to ensure the scoring system was working accurately before each round. All survey data will be stored in a password protected Google Drive for 10 years after study completion.

In the first round, respondents were asked 'What research questions do you think should be prioritised for peri-operative research in Africa?'. They were requested to submit at least six potential priorities (for example, research questions) via RedCap (https://www.project-redcap.org/) for peri-operative research in Africa. The responses were collated into common themes and where appropriate, similar research priorities were amalgamated into a single priority by GJB and Bruce M Biccard (BMB). Conflicts were discussed until consensus between GJB and BMB was reached.

In the second round, these potential research priorities were circulated to all respondents. They were asked to rank each priority on a scale from 1 to 10 (where 1 is the first/highest priority and 10 is the last/lowest priority). In the third round, the Top 20 research priorities from round two were presented in rank order and respondents were asked to consider re-ranking their previous submissions from round two, based on the grouped ranking results. If the respondents preferred not to change their previous rankings, they were encouraged to provide justifications for their decision.

The fourth and final round was held via an online meeting. We planned to present the Top 10 (of the Top 20 from round three) and confirm consensus with respondents on the final Top 10 priorities. However, the mean score for the 9th, 10th and 11th priorities were the same. Therefore, we deviated from protocol and respondents were presented with the Top 11 research priorities from the results of the third round. Respondents were encouraged to openly discuss and negotiate these bottom three priorities and come to a consensus on the Top 10 priorities.

The first round of the survey was conducted in English and French, with all communications, responses and proposed priorities communicated in both languages. In the first round, none of the respondents responded in French. Therefore, the remaining rounds were conducted in English only. All priorities were visible on a single screen in the second and third rounds, and all responses were captured electronically. If a response were incomplete, or the respondent wanted to change the response, they could resubmit a response during that round of the Delphi.

The most complete response from a respondent in a round was included in the ranking. All responses were identifiable to GJB, who collated the responses per round for analysis, to ensure that the e-survey was completed only by the invited nurses, and to prevent inclusion of multiple e-surveys per round by a single respondent. Following collation of these responses, the database was then de-identified. This e-survey is presented according to the Checklist for Reporting Results of Internet E-Surveys (CHERRIES) guidelines (Appendix 2)[13].

STATISTICAL ANALYSIS

The rank-order of the research priorities from the second and third rounds was calculated by using a reverse scoring system. A rank of one was assigned 10 points, with a descending point allocation down to a rank of 10, which was allocated one point. The scores of each respondent for each proposed priority were summed to present the research priority rank order. Incomplete responses (less than 10 priorities ranked) were included in the analysis, and no adjustments were made for incomplete responses.

RESULTS

The 20 nurses working in surgical units across 17 African countries (Botswana, Democratic Republic of Congo, Egypt, Ethiopia, Kenya, Madagascar, Malawi, Mali, Niger, Nigeria, Rwanda, Sierra Leone, South Africa, Tanzania, Uganda, Zambia and Zimbabwe) were invited to participate in this Delphi study. Of the 20 invited nurses, 17 participated, representing 12 African countries: Botswana, Egypt, Ethiopia, Kenya, Malawi, Mozambique, Nigeria, Rwanda, Sierra Leone, South Africa, Zimbabwe, and Zambia. The clinical and research characteristics of these respondents are shown in ***Table 1.***

Table 1

Clinical and research characteristics of respondents

Participate ID code	Full-time or part-time nurse.	Protected research time included in job description.	Years of nursing experience.	Postgraduate research training (e.g. research masters and/or PhD)
101	Full-time	Yes	16	No
102	Full-time	Yes	14	No
103	Part-time	Yes	17	Yes, PhD
104	Full-time	Yes	13	No
105	Full-time	Yes	16	No
106	Full-time	No	14	No
107	Full-time	Yes	7	Yes (courses in research methodologies)
108	Full-time	No	32	Yes (Postgraduate certificate in research)
109	Full-time	No	30	Yes (current Masters student)
110	Full-time	No	15	No
111	Not currently doing clinical work	Yes	32	Yes, PhD
112	Full-time	Yes	10	No
113	Full-time	Yes	19	Yes, PhD
114	Full-time	No	3	No
115	Full-time	No	25	Yes, Masters
116	Full-time	Yes	5	No
117	Full-time	Yes	32	Yes, Masters

Figure 1 summarises the Delphi process. In the first round, all 17 respondents proposed a total of 79 research priorities. Where appropriate, similar priorities were combined and grouped within seven themes: education and training, equipment and systems, pre-operative, intra-operative, post-operative, staff collaborations, and quality of care. Similar research priorities were amalgamated into a single priority by GJB and BMB. A summary of this grouping and amalgamating process can be seen in Appendix 3 online.

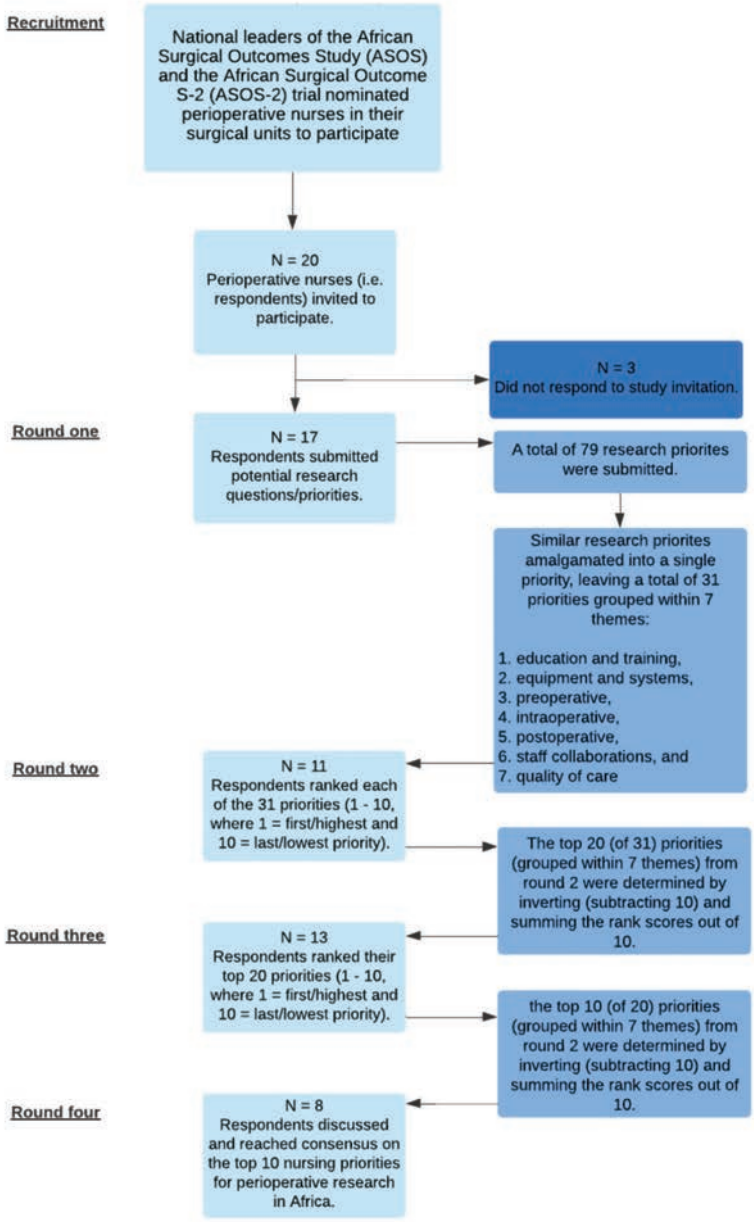

Figure 1. Flow chart depicting the Delphi process.

In the second round, 31 priorities were presented to all respondents. Eleven (of 17) provided a ranking (1 to 10, where 1 = first/highest priority and 10 = last/lowest priority) of all priorities. In the third round, the top 20 priorities ranked from round two were presented to all respondents. Thirteen (of 17) provided a ranking (1 – 10, where 1 = first/highest priority and 10 = last/lowest priority) for their top 10 priorities.

After the third round, there was a tie in the ranking for priorities 9, 10 and 11. Therefore, the top 11 priorities were presented to all respondents in the fourth round. Respondents discussed and reached consensus on the final agreed Top 10 priorities, within six themes: education and training, equipment and systems, intra-operative, post-operative, staff collaboration, and quality of care, for peri-operative research in Africa. These are shown in Table 2. None of the priorities within the 'pre-operative' theme were ranked high enough to include in the final Top 10 list.

Table 2
Top 10 priorities for perioperative nursing research in Africa

Top 10 priorities for perioperative nursing research in Africa	Research theme
1. Strategies to translate and implement perioperative research into clinical practice in Africa.	Education and training
2. Creating a perioperative research culture and the tools, resources, and funding needed to conduct perioperative nursing research in Africa.	Education and training
3. Optimising nurse-led postoperative pain management.	Postoperative
4. Survey of operating theatre and critical care resources.	Equipment and systems
5. Perception of and adherence to sterile field and aseptic techniques among surgeons in Africa.	Intraoperative
6. Surgical staff burnout.	Staff collaboration
7. Broad principles of infection control in the surgical ward.	Postoperative
8. The role of interprofessional communication to promote clinical teamwork when caring for surgical patients.	Staff collaboration
9. Effective implementation of the surgical safety checklists and measures of its impact.	Intraoperative
10. Constituents of quality nursing care.	Quality of care

DISCUSSION

In total, 10 research priorities have been identified for peri-operative research in Africa. These priorities, together with those identified from our previous research[2,10] provide the structure for an intermediate-term, African collaboration peri-operative research programme. These priorities represent the consensus of peri-operative nurses from 12 African countries, and they cover a broad range of topics which are context-sensitive to the challenges and needs of peri-operative research in Africa[14].

Interestingly, our sample of nurses identified research priorities related to training and education, and quality of care. In contrast, doctors in our previous research[10] identified research priorities mostly related to patient outcomes. Both this current study and our previous research identified staff collaboration as a peri-operative research priority. Despite there being some commonalities, the nurses identified unique peri-operative research priorities, emphasising the need for inter-disciplinary collaboration in peri-operative research.

Priority number 1: Strategies to translate and implement peri-operative research into clinical practice in Africa

Given that this was the highest priority, it is likely that nurses are aware of research that is not being implemented into clinical practice. We have previously identified that the common barriers for conducting and implementing peri-operative research in Africa are limited human resources and structural barriers, such as access to reliable internet access[14]. Clearly translation of research into clinical care is a neglected aspect of research in low-income and middle-income countries. We need to address these barriers in tandem to achieve this priority.

Priority number 2: Creating a peri-operative research culture and the tools, resources, and funding needed to conduct peri-operative nursing research in Africa

This priority is consistent with our previous work: clinician-researchers across Africa believe that research is an important component of clinical practice and are motivated to contribute to collaborative African research[14]. The basic barriers explained under Priority 1 need to be addressed to allow for the development of a peri-operative research culture and establishment of on-going peri-operative research by nurses in Africa. In a human resource-limited environment, it is important that there is a focus on funding to provide research capacity, as the dual provision of clinical service, and peri-operative research is unlikely to deliver quality research in this environment.

Priority number 3: Optimising nurse led post-operative pain management

Post-operative pain is poorly managed globally, however, poor post-operative pain management is particularly high in low-income and middle-income countries[15,16]. Poor post-operative pain management is associated with delayed mobilisation, compromised pulmonary function and chronic pain[17]. Nurses are ideal for leading post-operative pain management within the multi-disciplinary team[18]. The implementation of nurse-led post-operative pain management has contributed to improved post-operative outcomes[19, 20, 21] and patient satisfaction with care[22].

However, inadequate training in pain assessment and management is a barrier to effective nurse-led post-operative pain management[23]. A Nigerian study reported that pain management needs to be included in the undergraduate nursing curriculum[21]. There is a need for improved pain education among all members of the multi-disciplinary team to effectively optimise nurse-led post-operative pain management and improve patient post-operative outcomes.

Priority number 4: Survey of operating theatre and critical care resources

There are well-established international guidelines for peri-operative resource requirements from high-income countries[24]. However, these guidelines are often inappropriate for the poorly resourced African settings due to the large disparities between the guideline, and the context on the ground. Our previous work[10] and this current study indicate that both physicians and nurses in Africa want to know:

(1) What resources are currently available
(2) What resources are critically needed, and most importantly
(3) What resources are realistically attainable in their perioperative care setting

Our impression is that the international resource recommendations are far removed from the reality of the resources that are available, hence there is a call by clinicians[10] and nurses to document this disparity, and develop a strategy to address this limitation.

Priority number 5: Perception of and adherence to sterile field and aseptic techniques among surgeons in Africa

Sepsis is a global health concern, contributing to post-operative morbidity and mortality. The incidence of sepsis is substantially greater in low-income and middle-income countries than in high-income countries; additionally African countries may carry a higher rate of antibiotic resistance[24]. Surgical site sepsis has been reported as the most common post-operative complication in Africa[5, 25]. To decrease the incidence of surgical site sepsis, it is vital for researchers to examine the perception of and adherence to sterile field and aseptic techniques intraoperatively among surgeons in Africa.

Priority number 6: Surgical staff burnout

Surgical staff burnout is common[26, 27, 28] and has been reported to be disproportionately high among South African anaesthetists[28, 29]. The Association of Anaesthetists has published guidelines for wellbeing, including resources on achieving a work/life balance, mindfulness, stress management, and coping with death[30]. Importantly, this priority is vague when referring to 'surgical staff'. It is unclear which surgical staff members respondents thought were specifically vulnerable to burnout. However, we suspect respondents are referring to surgical staff working in the theatres and peri-operative wards, given that this priority was generated from the perspective of nurses working in the peri-operative setting. The prevalence of burnout among peri-operative nursing staff is unclear. Given the limited resources and staff shortages in low-income and middle-income countries, it is likely that burnout among peri-operative nurses is common[30, 31]. Identification of this priority suggests that burnout may be important in nursing in Africa, with further research into nursing staff burnout needed.

Priority number 7: Broad principles of infection control in the surgical ward

As stated above, surgical site sepsis is a major concern in Africa, and intra-operative sterility is a priority. This priority extends effective infection control to the post-operative ward setting. The emphasis on infection control intra-operatively (Priority 5) and post-operatively (Priority 7) in these 10 priorities may indicate nurses' experience of poor adherence to aseptic techniques and a high incidence of surgical site sepsis, despite there being numerous national and international standards for infection control. These research priorities are consistent with the observations of high rates of sepsis in low resource environments.

Priority number 8: The role of interprofessional communication to promote clinical teamwork when caring for surgical patients

There is extensive literature to support the benefits of an inter-disciplinary team approach to improve patient outcomes[32] and satisfaction with care[33]. Physicians also acknowledged the importance of effective communication and teamwork in our previous work[10]. Given that both nurses and physicians have both prioritised communication and teamwork suggests that ineffective communication may be impeding the teamwork necessary for quality peri-operative research and care.

Priority number 9: Effective implementation of the surgical safety checklist and measures of its impact

The use of a surgical safety checklist (SSCL) has been associated with improved post-operative outcomes and decreases mortality[34, 35, 36]. However, a SSCL is used in only 57% of surgeries in Africa[6]. The importance of the utilisation of a SSCL has also been prioritised by African clinicians[10, 12]. Further research is needed to identify the barriers to routine implementation of a checklist in Africa.

Priority number 10: Constituents of quality nursing care?

Post-operative mortality is substantially higher among patients in Africa than patients in high-income countries. Mortality rates among adult surgical patients[5] and neonates[7] in Africa are twice that of the global average. Maternal mortality after Caesarean section is 50 times higher in African than in high-income countries[7]. Further, an eight-fold and twelve-fold variation in outcomes due to the quality of maternal and neonatal care, respectively, has been reported between low-income countries, middle-income countries, and high-income countries[37]. These data indicate the importance of improving the quality of peri-operative care to successfully decrease mortality among surgical patients in Africa.

STRENGTHS AND LIMITATIONS OF THE RESEARCH PRIORITY-SETTING PROCESS

We are unaware of any other studies that have reported nurses' priorities for peri-operative research in Africa. This research echoes physicians' priorities determined in our previous work [2,10.] emphasising the importance of a survey of operating theatre and critical care resources, perception of and adherence to sterile field and aseptic techniques among surgeons in Africa, broad principles of infection control in the surgical ward, the role of inter-professional communication to promote clinical teamwork when caring for surgical patients, and how to ensure effective implementation of the SSCL and measure its impact.

We would suggest that these common priorities should be addressed early to improve peri-operative care in Africa. Limitations to this work are the small sample size and a lack of representation and unequal representation (for example, 3 of 17 respondents were from Malawi) from all African countries. There is potential selection bias in this current study. Some respondents are involved in research-related activities and therefore could induce a bias related to their current research activities. Importantly, 10 (of 17) respondents have at least 10 years of clinical nursing experience and most (15 of 17) are full-time peri-operative nurses. Therefore, these clinicians are well-versed to identify priorities for peri-operative research to improve peri-operative care.

The Top 10 priorities for peri-operative research in Africa are presented following a research priority setting process using the Delphi technique. Although there is some overlap in the research priorities among the respondents (nurses) in the current study and the doctors in our previous work[10], the unique focus on training and education, and quality of care presented by the respondents in this study emphasises the need for ensuring inter-disciplinary collaboration in perioperative research. These research priorities provide the structure for an intermediate-term research agenda for peri-operative research in Africa. It is hoped that addressing these priorities will significantly improve peri-operative outcomes in Africa.

SUPPLEMENTARY MATERIAL

Refer to Web version on PubMed Central for supplementary material.

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AUTHORS:
Gillian J Bedwell, MSc, is with the Department of Anaesthesia and Peri-operative Medicine, University of Cape Town, Cape Town, South Africa
Juan Scribante, PhD, is with the School of Clinical Medicine, University of the Witswatersrand, Johannesburg, South Africa
Tigist D Adane, BSc, is with the Debre Berhan University, Health Sciences College, Debre Berhan, Ethiopia
Judita Bila, BSc, is with the Hospital Central de Maputo, Maputo, Mozambique
Caritas Chiura, MSc, is with the Nurse Educator Association of Zimbabwe, Harare, Zimbabwe
Priscilla Chizombwe, BSc, is with the Kamuzu Central Hospital, Lilongwe, Malawi
Betsy Deen, BSc, is with the Connaught Teaching Hospital, Freetown, Sierra Leone
Lucy Dodoli, BSc, is with the Kamuzu Central Hospital Surgical Department, Kamuzu college of nursing, University of Malawi, Lilongwe, Malawi
Mahmound MA Elfiky, MD, is with the Kasr Al Ainy Faculty of Medicine, Cairo University, Cairo, Egypt
Ifeoluwapo Kolawole, MSc, is with the Department of Nursing, University of Ibadan, Ibadan, Nigeria
Tina Makwaza, BSc, is with the Ndola Teaching Hospital, Zambia
Seleman Badrlie M'Baluku is with the Kamuzu Central Hospital, Lilongwe, Malawi
Gaone Mogapi is with the Department of Surgery, Princess Marina Hospital, Gaborone, Botswana
Christine Musee, PhD, is with the Kenyatta National Hospital; GRASPIT training in Kenya, Nairobi, Kenya
Dominic Mutua, MSc, is with the Kenyatta National Hospital, Nairobi, Kenya
Worku Misganaw, MSc, is with the Debre Berhan University, Health Sciences College, Debre Berhan, Ethiopia
Jessy Nyirenda is with the Kitwe Teaching Hospital, Kitwe, Zambia
Lucia Ojewale, PhD, is with the Department of Nursing, University of Ibadan, Ibadan, Nigeria
Uwayesu Roda, BSc, is with the King Faisal Hospital, Kigali, Rwanda
Bruce M Biccard, PhD, is with Department of Anaesthesia and Perioperative Medicine, Groote Schuur Hospital and University of Cape Town, Cape Town, South Africa. Corresponding author: **Professor Bruce Biccard, Professor** and Second Chair, Department of Anaesthesia and Perioperative Medicine, Groote Schuur Hospital and University of Cape Town, Observatory, Western Cape, South Africa. bruce.biccardb@uct.ac.za

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Evaluation Of Critical Thinking Skills In Bridging Programme Student Nurses At A Private Nursing Education Institution

By Nesisa Ngwenya, Theatre Unit Manager, Dr GM Pitje Day Hospital

ABSTRACT

Background: Critical thinking is a necessity for the provision of safe, high quality clinical care, particularly in a healthcare setting characterised by patients with complex medical conditions and culturally diverse backgrounds.

Objectives: The objective of this study was to evaluate the critical thinking skills of bridging programme student nurses at a Private Nursing Education Institute (PNEI) and make recommendations based on the results on how critical thinking skills could be improved.

Method: A quantitative, non-experimental, and descriptive research design.

Results: The respondents' overall scores for critical thinking ranged between 38% and 88% with an average of 55.46%. More respondents, 42% (n = 21) obtained a lower score, showing an inability to use critical thinking skills. Followed by 28% (n = 14) of the respondents who obtained an average score, meaning they were categorised as average in terms of their use of critical thinking skills. While 30% (n = 15) scored higher and were categorised as having a greater use of critical thinking skills.

Conclusion: Based on the study results, bridging programme student nurses need to develop critical thinking skills and incorporate it in the nursing process while caring for the patient, to aid in the provision of quality nursing care.

INTRODUCTION

Critical thinking is explained as 'the purposeful, self-regulatory judgment resulting in interpretation, analysis, evaluation, and inference, including the explanation of the evidential, conceptual, methodological, criteriological or contextual considerations on which judgment is based' *(Facione 1990:2)*. The skill of critical thinking has become a tool that is often used daily when tackling patient problems. In order for the bridging student nurse to make reliable decisions, they should be able to apply logical reasoning, interpret, analyse and evaluate information found *(Widana, Parwata, Parmithi, Jayantika, Sukendra & Sumandya 2018:25)*. A bridging student nurse in the South African context is the student that is an enrolled nurse and currently registered as a student under the regulation of the R683 for a Bridging Course for Enrolled Nurses Leading to Registration as a General Nurse or a Psychiatric Nurse.

The duration of the bridging programme is two academic years whereupon, after completion, the student should have met certain objectives such as being skilled in the diagnosing of man's health problems, the planning and implementing of therapeutic action and nursing care for the individual at any point along the health/illness continuum - in all stages of the life cycle, as well as care of the dying - and in the evaluation thereof.

Nurses usually apply critical thinking on a daily basis as they solve patients' problems *(Papathanasiou, Kleisiaris, Fradelos, Kakou & Kourkouta 2014:283)*. For these student nurses, they work under the guidance of the scope of practice R2598 which stipulates that they are supposed to work under direct and indirect supervision of the registered nurse. By virtue of their previous training, they are dependent on registered nurses who are tasked with the responsibility and accountability for their practice as enrolled nurses, therefore, make critical decisions on their behalf regarding the nursing care of their patients *(Poorchangizi, Borhani, Abbaszadeh, Mirzaee & Farokhzadian 2019:438)*.

Following graduation under this bridging programme as well as having obtained a higher professional status, these new registered nurses will be expected to take on this responsibility and accountability task, work independently and interdependently, and therefore, have to think critically in the clinical setting with regards to solving patients' complex problems *(El Haddad, Moxham & Broadbent 2013:233; Milton-Wildey, Kenny, Parmenter & Hall 2014:648)*.

According to *Van Nguyen & Liu (2020:1970)*, critical thinking is a 'mental active process and subtle perception, analysis, synthesis and evaluation of the information collected from observation, experience, reflection, and reasoning.' In nursing, it allows nurses to successfully handle the various situations and make important decisions through collecting and interpreting information necessary for making decisions in an environment characterised by constant changes in the patient's condition and constant stress *(Papathanasiou et al. 2014:283)*. Critical thinking is a necessary tool to be utilised by all nurses during the care of a patient, and with the correct application of the nursing process, contributes to delivering quality nursing care *(Ngwenya 2022:4)*. Therefore, the objective of the study was to make recommendations on how to improve the critical thinking skills of bridging programme student nurses enrolled in the bridging programme(s) in a PNEI.

RESEARCH METHODS AND DESIGN

Study design, population and sampling strategy

A quantitative, non-experimental, and descriptive research design. The population of the study comprised of second-year student nurses enrolled in the bridging programme in a PNEI. There were approximately 133 second-year student nurses enrolled in the bridging programme in the PNEI under study.

The sample size included 50 student nurses, which was decided upon after consultation with a statistician and having noted that more than 50 students will not be feasible considering the number of hours that will be put in the data collection. All 50 student nurses signed the consent to take part in the study. Purposive sampling was chosen as the most suitable sampling method for this study. The inclusion criteria were second-year bridging programme student nurses at a PNEI, registered with SANC under regulation R683 Bridging Course for Enrolled Nurses Leading to Registration as a General Nurse. The

researcher used second-year bridging programme student nurses because they are about to qualify as registered nurses and are expected to apply critical thinking skills when nursing the patients in the clinical area. All 50 second-year bridging programme student nurses participated in the study.

Setting

The study was conducted at a PNEI, located in Johannesburg, South Africa. The R683 Bridging Programme was over two years with approximately 133 students enrolled during the 2019 to 2020 academic year. During the programme, they attended campus lectures and engaged in clinical practice where they did their practicals.

Data collection

Data were collected over a period of four months, from June to October 2020. Data was collected using an adapted checklist based on Facione's Holistic Critical Thinking Scoring Rubric (HCTSR). Section A of the instrument began with demographic data and was filled in by the student nurses. It included questions like 'When did you start the bridging programme?', 'How long were you qualified as an enrolled nurse prior to your registration into the bridging programme?'. The remainder of the instrument was Section B and involved only the researchers' observation as the main researcher, which covered the actual assessment of critical thinking skills.

The tool included descriptions on assessment, diagnosing, planning, implementation and evaluation, measured on a Likert scale from weak (1), acceptable (2), and strong (3) with a total score of 36. The scores were categorised into three distinct classifications, including low score, if the participants scored 49% and less; average score, for those who obtained 50% to 74%; as well as higher score, for those with overall score of 75% or more.

The researcher observed and evaluated each student nurse in the hospital while conducting their assessments on patients during their ward round allocation for unit management. Each assessment lasted between 45 minutes to 60 minutes and each participating student was observed only once. The instrument used in the study is an instrument already used globally, the HCTSR, which was developed by Facione (2016) as a rating measure that can be used for developmental purposes in assessing critical thinking skills, thus it is an instrument that already exists and is reliable.

Data analysis

Data analysis included descriptive and correlational statistics. Descriptive statistics describe numerical data, and assist in organising, summarising, and interpreting quantitative data *(Kumari, Lavanya, Vidhya, Premila & Lawrence, 2023)*. Correlational statistics describe the extent to which variables are linearly related *(Seeram, 2019)*. Descriptive and correlational statistical analysis included data capturing data cleansing using Microsoft® 365 Excel spreadsheet, and data encoding and analysis using Statistical Package for the Social Sciences (SPSS) Version 28 programme.

Data capturing was done to record responses from the questionnaire and transfer these into a single Microsoft® 365 Excel spreadsheet. The data on the spreadsheet was assessed during data cleansing to ensure consistency and quality. Data encoding involved assigning pre-determined codes to responses from the questionnaire to facilitate processing and analysis. Lastly, descriptive and correlational

statistical data analysis procedures were followed using Social Sciences (SPSS) Version 28 programme and the results were presented as frequencies, proportions (as expressed in percentages), and in tabular and graphical formats.

Ethical consideration

Ethical approval to conduct the study was obtained from Higher Degree Committee and Research Ethics committee of the University of Johannesburg *(REC-562-2020)*. Ethical principles were observed, including the principle of respect for autonomy, the principles of beneficence and non-maleficence and the principle of justice *(Dhai & McQuoid-Mason, 2011)*. This was followed by an informed consent form which was completed and signed by each participant. The participants were also informed that should they wish to withdraw from the study at any time they wish to, they can without any repercussions. The participants were assured that their anonymity would be preserved, and confidentiality of the research data would also be maintained.

RESULTS

Figure 1 and *Table 1* below shows details of participant's demographic data. Provides details of when the students started the bridging programme and how long where they qualified as enrolled nurses' prior registration to the bridging programme. The participants were all second-year bridging programme student nurses. The results indicated that there is no statistically significant relationship between the two variables.

Figure 1: Participants' commencement of the bridging programme distribution

As reflected in Figure 1 above, most of the participants commenced with the bridging programme in 2019, 42% (n = 21) commenced in January 2019 while 40% (n = 20) commenced in June 2019. The remaining 14% (n = 7) of the participants commenced their bridging programme in June 2018, and only 4% (n = 2) chose other, which means that they might have commenced the bridging programme before January 2018.

Table 1: Participants' duration of being an EN prior to enrolment in Bridging Programme

Duration	Total (n)	Frequency (%)
6 months to 1 year	7	14
Between 1 year and 2 years	6	12
Between 2 years and 3 years	6	12
Between 3 years and 4 years	7	14
Between 4 years and 5 years	14	28
More than 5 years	10	20
Total	**N = 50**	**100**

Table 1 indicates that a fifth of the participants (n = 10) had at least five years' experience as enrolled nurses prior to registration in the bridging programme, 14% (n = 7) had a year or less of experience, and another 14% (n = 7) had between three to four years' experience as enrolled nurses prior to registration into the bridging programme.

Assessment results

An evaluation of the participants' ability to do inference making indicated that more participants, 48% (n = 24) were categorised as weak. An analysis was also done for the participants' ability to do synthesis in the evaluation of critical thinking skills; responses indicated 10% (n = 5) were strong, 50% (n = 25) were acceptable and 40% (n = 20) were weak. The results of participants' ability to hypothesise as part of diagnosis in the evaluation of critical thinking were also broken down and the results indicated that more than half of the participants were categorised as acceptable at 54% (n = 27). More of the participants had more than five years' experience as enrolled nurses before enrolling into the bridging programme at 18% (n = 9). With the p = 0.364, the results also indicated that years of experience had no significant relationship with the participants' ability to hypothesise.

The assessment of planning included evaluation of participants' ability to generalise, hypothesise, as well as inference-making. For hypothesising, the results indicated that 42% (n = 21) were acceptable and 58% (n = 29) were weak. While for inference-making, responses indicated that 36% (n = 18) of the participants were strong, 58% (n = 29) were acceptable, while only 6% (n = 3) were weak. More than half of the participants were reportedly weak when evaluated for generalising at 58% (n = 29), and 42% (n = 21) were categorised as acceptable.

The assessment of implementation included explanation, which entailed stating results, justifying procedures, and presenting arguments. The results indicated that only 4% (n = 2) were categorised as strong, 46% (n = 23) were acceptable, and half (50%, n = 25) of the participants were weak when it came to their ability to do implementation in critical thinking. Correlation was done to assess if the participants' years of experience had any significant relationship with their ability to explain as part of the implementation of critical thinking and the results indicated that there was no statistically significant relationship between the participants' years of experience as enrolled nurses prior to registration into the bridging programme and implementation.

The assessment of evaluation included the examination of three variables: self-regulation, which entailed self-examination and self-correction; assessing and making criterion-based evaluations; as well as assessing claims and arguments. On self-examination and self-correction, the results indicated that only 4% (n = 2) of the participants were strong, 62% (n = 31) were acceptable and 34% (n = 17) were weak. On assessing, making criterion-based evaluations, responses indicated that 4% (n = 2) of the responses were strong, 64% (n = 32) were acceptable and 32% (n = 16) were weak. While responses on assessing claims and arguments indicated that 2% (n = 1) of the participants were strong, 50% (n = 25) were acceptable and 48% (n = 24) were weak. Results indicated that participants' ability to do self-regulation in evaluation had no significant relationship with their previous experience.

DISCUSSION

The results in the study showed 42% (n = 21) of student nurses obtained a lower score, showing an inability to use critical thinking skills. Followed by 28% (n = 14) of the respondents who obtained an average score, meaning they were categorised as average in terms of their use of critical thinking skills.

With these findings, it revealed that majority of the student nurses were struggling to apply critical thinking skills in their clinical work. The results indicated that there was no statistically significant relationship between the student nurses' years of experience prior to registration into the bridging programme and their critical thinking scores. In essence, years of experience working as an enrolled nurse before enrolling into the bridging programme did not enhance nor determine the participants' critical thinking skills.

Paynter-Armour (2021:14) identified that student nurses experience difficulty developing and implementing critical thinking skills. It has been noted that listening to nurse educators in the class, studying books, writing down the notes on educators' slides word for word and memorising them and taking the examination without any thinking process does not improve critical thinking in student nurses.

Facione and Facione (2013:15) reported that failure to use critical thinking interferes with learning among healthcare professionals, and affects decisions made which would ultimately lead to patients dying. Understanding the significance of critical thinking for nursing students has been the most highlighted in research studies. The researcher acknowledges that there may be several reasons why student nurses do not apply critical thinking skills in the clinical area. These may include among others; improving teaching and learning activities in the classroom, minimising negative criticism, using simulation rooms to assist students gain confidence in the clinical area.

Classroom learning alone is insufficient for students to become competent nurses who can meet the healthcare workforce's expectations. Students should also be taught in a safe environment such as a simulation lab, and then the application be repeated in the clinical setting where there are real patients. Simulation is a valuable learning tool for improving nursing students' academic knowledge and concepts through practical application. The above statement is supported by *(Umrzokova & Pardaeva 2020)* who state that student nurses must be taught to connect and integrate critical thinking throughout their program of study and continue that practice throughout their careers.

Limitations

The researcher had a smaller sample size, and perhaps had the sample size been bigger, the researcher would have had a better turn of results. Another limitation was that the study was done with students from one PNEI. Also, researcher could not access a larger sample because of COVID-19 lockdown regulations.

CONCLUSION

The findings from the study indicated unsatisfactory capabilities in terms of applying critical thinking skills in clinical practice during patient care. It is recommended that colleges and the hospitals work hand-in-hand to ensure that students practice what they are taught in theory and can apply their critical thinking skills while at clinical with patients. This will allow the students to acquire mastery level and utilise the critical thinking skill in the management of their patients at clinical. When there is a deficit in critical thinking skills, the patient outcome can be poor which will add on misdiagnosis and reduce the quality care rendered to the patient.

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Competing interests

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The Effect On Theatre Nurses For Rendering Peri-Operative Care To Patients Living With HIV In A South African Tertiary Hospital - A Research Article

By Rudzani Ifodia Ngaledzani[1], Avhatakali Allga Ndou-Mammbona[1], and Azwihangwisi Helen Mavhandu-Mudzusi[2]

PURPOSE OF THE STUDY

The study aimed to gain an in-depth understanding of how theatre nurses are being affected when they render peri-operative care to patients living with HIV in a South African tertiary hospital. There is a scarcity of studies that focus solely on the well-being of theatre nurses who render peri-operative care to HIV-positive patients due to the ramifications of the nurses' fear of contracting HIV. Patients living with HIV often receive sub-standard care. The objective of the study was to establish how theatre nurses are being impacted when rendering peri-operative care to patient living with HIV. The study followed a qualitative approach using an interpretative phenomenological analysis design. Data were collected through in-depth individual interviews from 10 theatre nurses who were purposively selected according to specific criteria. They voluntarily agreed to participate. An interpretive phenomenological analysis framework was used to analyse the data. Two main themes emerged from the data analysis, namely, the negative effect on nurses' well-being and the impact that it had on them professionally.

INTRODUCTION

This study focuses on theatre nurses and the effect on them for giving peri-operative care to patients living with human immunodeficiency virus (HIV). The HIV pandemic is still a global concern which needs a concerted effort. This is evident in all the different programmes geared towards combating HIV and AIDS. One of the latest programmes targeting the ending of the AIDS pandemic is the UNAIDS 90-90-90 programme with the (already past) target date of 2020[1].

The aim of this programme is for 90% of the global citizens living with HIV to know their HIV status; 90% of these should be on anti-retroviral treatment (ARV); and 90% of these should have their viral load suppressed[2]. The progress towards achieving the UNAIDS targets differs from country to country. For example, South Africa is on its way to achieving the target of all people living with HIV knowing their HIV diagnosis, but lagging in the remaining two 90s of the 90-90-90 targets[1]. One of the identified hindrances to the uptake of ARVs among HIV patients is stigmatisation by healthcare workers[3].

People living with HIV (PLWH) have named different types of behaviours reflecting this stigmatisation by healthcare workers. These behaviours include wearing extra protective clothing during medical procedures (such as extra gloves and double protective gowns during surgery) and refusing to perform some medical procedures on PLWH. The same experiences were shared in a study conducted in one of the tertiary hospitals in South Africa[4] which found that nurses wore two or even three pairs of gloves as they were afraid of being infected by HIV while assisting with surgical procedures or caring for PLWH.

There are several factors that contribute to the stigmatisation of and discrimination against PLWH among healthcare workers. These factors include individual, hospital, and systemic factors. The individual factors often include the healthcare worker's religious beliefs, age, and gender. Hospital policies and bureaucracies are the leading hospital factors in stigmatisation[5]. In this regard, Opoku *et al*[6]. have reported that some hospitals in Ghana turned away PLWH with the excuse that they were not hospitals designated for HIV patients. According to a study conducted by Mahy *et al*.[7] across 13 countries, the percentage of people who were reportedly denied health services at least once in the preceding 12 months because of their HIV status ranged from 1.7% in Malawi to 21% in Peru and Tajikistan. Sometimes the lack of post-exposure prophylaxis (PEP) in hospitals makes healthcare workers reluctant to render care to PLWH[8]. Even in hospitals where PEP is available, some nurses are still reluctant to care for PLWH. Assumedly, this is due to inadequate knowledge on the use of PEP and how HIV is spread[4, 9]. Some healthcare workers' attitudes towards PLWH are based on a limited understanding of the risk involved, and this may be related to their area of specialisation and cultural setting[10]. Healthcare professionals' continued stigmatisation of PLWH has been a concern in global public health[11]. Healthcare providers' stigmatisation of and discrimination against PLWH contribute to the compromised quality of care rendered to this population[12].

The stigma of and discrimination against PLWH do not end only in general wards but also extend to special nursing units such as the theatre. Theatre nurses view their environment as stressful and not conducive to providing quality care to PLWH[13]. Studies have indicated the reluctance of nurses to scrub for a PLWH. This practice can be quite dangerous, especially if it is a patient for a Caesarean section as the delay may lead to foetal or maternal death. Kaptain *et al*.[14] are of the view that studies conducted on the healthcare of PLWH mainly focused on healthcare professionals and nurses in general wards, not on those in a specialised unit such as the theatre. This gap compelled the researchers to explore how the peri-operative care that theatre nurses in a South African tertiary hospital given to PLWH affects them.

STUDY DESIGN

An interpretative phenomenological analysis (IPA), which is one of the qualitative designs, was used to gain an in-depth understanding of the effect on theatre nurses when they render peri-operative care to PLWH. The IPA design was considered more appropriate as it offered the researchers the opportunity to explore how theatre nurses themselves experienced the effect of providing peri-operative care to PLWH.

Setting: The study was carried out in one of the tertiary hospitals in the Tshwane district, South Africa. The hospital has 12 operating theatres with different areas of speciality.
Population: The population of this study was all the theatre nurses between 25 and 65 years of age, with two years and more experience of working in this hospital.
Sample and Sampling Size: The sample size for the study was 10 professional theatre nurses which was determined by category saturation[8]. The criterion-based purposive sampling was used with the aim of recruiting participants with relevant experience and attributes related to the study purpose.
Ethical Consideration: The study was conducted guided by the principles of the Helsinki Declaration. The Department of Health Studies Research Ethics Committee (REC-012714-039 (NHERC) reviews the ethics proposal and granted the ethical clearance for the study (Ethics Clearance Number HSHDC/987/2020) on 5 June 2020. Permission was also obtained from the Gauteng Department of Health as well as the understudy to the Chief Executive Officer of the hospital. Informed consent was obtained from the participants who voluntarily participated in the study. To protect the hospital, its name was never

mentioned. Pseudonyms were used throughout the study to ensure confidentiality and the anonymity of the participants.

***Data Collection*:** Data were collected from 1 April to 30 June 2021. The researchers used an in-depth semi-structured interview outlined in the interview guide. The interview guide was written in simple English that every theatre nurse would understand easily. A pilot study was conducted before the actual interviews by interviewing two other nurses who previously worked in theatre and did not form part of the participants. The researchers took field notes during the interviews and recorded the interview sessions with a cellphone recorder. Data saturation[8] was reached at participant number seven. However, the researchers continued to conduct interviews till participant number 10. The researchers transcribed all the recordings verbatim.

***Data Analysis*:** The initial data analysis was conducted by the two researchers (first and second authors) individually guided by the steps of interpretative phenomenological analysis highlighted in Howard *et al.*[15]. Each researcher had fully engaged themselves with the data by listening to each recorded interview and reading the transcripts repeatedly. In the process of rereading, the researchers were noting down similarities in each transcript using the comment box alongside the document. The researchers went through all the notes in comment boxes using different colour highlighting to come up with various categories. Similar categories were merged into themes. Each researcher verified all the themes with an open mind to see if there were any new emergent themes. The researchers looked for patterns in the themes and divided them further into smaller themes. At this stage, the researchers renamed the themes. After this step, the researchers discussed their results. In places where they differed, they discussed it until they came up with one table of themes. The third author, who was also the study supervisor, reviewed the table of themes and provided some input and guidance regarding some of the themes. The process led to the final table composed of two super-ordinate themes, themes, and relevant sub-themes.

***Measures to Ensure Trustworthiness*:** Trustworthiness entails a set of criteria for evaluating the rigour of qualitative studies[16], as cited in *DF Polit and CT Beck, Nursing Research: Generating and Assessing Evidence for Nursing Practice, Williams & Wilkins, Philadelphia, PA, USA, 2017*[17] as follows: credibility, dependability, conformability, transferability, and authenticity. To ensure credibility the researchers used the interview guide and audio-recorded the interviews that were transcribed verbatim. The researchers kept records of the interview recordings; each of the recordings was transcribed verbatim and analysed by the two researchers independently while the third researcher acted as the quality assurer of the findings. To ensure conformability, the researchers kept an audit trail from information from the sampling, the interviews, and the data analysis to the writing of the research report. The researchers ensured transferability by giving a sufficient description of the research study and methodology to ensure easy understanding and guidance for other researchers wanting to undertake a similar study. The researchers also ensured authenticity by interviewing theatre nurses with varied experiences, recording the interviews, and writing field notes.

RESULTS

Results are presented in two sections: (i) demographic data and (ii) the impact of rendering peri-operative care to patients living with HIV (PLWH).

Demographic Data. Demographic data in qualitative research guides the reader in understanding the sources of the quotations. Table 1 presents the demographic data of the theatre nurses who

participated in the study. Pseudonyms are used instead of participants' real names to ensure confidentiality. All the study participants were African females. Only one of the participants was below the age of 30. The majority (60%) of participants were above 40. All the participants had more than two years of experience working in theatre. Though they have been working in theatre for several years, 70% of them had a Diploma in Clinical Nursing Science, Health Assessment, Treatment, and Care, which are a specialisation in theatre nursing.

Table 1: Demographic characteristics of participants.

Participants	Age range	Experiences in years	Theatre nursing specialisation
MULAYO	30–39	03	No
MUVHUYA	30–39	13	Yes
MULWELA	40–49	20	Yes
SHALEEN	20–29	03	No
VHOTHUSA	50–59	09	Yes
VHUSHAI	40–49	08	No
VHULENDA	50–59	10	Yes
RINAE	50–59	20	Yes
ROFHIWA	50–59	20	Yes
NDIVHUWO	30–39	06	Yes

The Effect of Rendering Peri-operative Care to Patients Living with HIV. This section describes the impact on theatre nurses for providing peri-operative care to PLWH. Two super-ordinate themes have emerged from data analysis: (i) negative impact on nurses' well-being and (ii) professional impact. Both super-ordinate themes have their own relevant themes and sub-themes as presented in Table 2.

Table 2: Themes.

Superordinate theme	Themes	Subthemes
Negative impact on nurses' wellbeing	Physical health	Physical exhaustion
		Increased risk of contracting HIV
	Mental health	Psychosomatic disorders
		Phobia of conditions witnessed
		Carnophobia (fear of eating red meat)
		Stress
		Emotional trauma
	Social wellbeing	Sympathising with patients living with HIV
		Discriminating against HIV-positive patients
		Irritability leading to potential fighting among staff members
Professional impact	Poor patient care	Compromised healthcare services
		Increased risk of making mistakes
	Threat of losing one's job	High possibility of litigation
		Risk of being struck from professional register

Negative Impact on Nurses' Well-being. This super-ordinate theme describes the effect that the peri-operative care of PLWH has on theatre nurses. It was found that it affected their physical health, social well-being, and their mental health.

Physical Health. This theme focuses on the impact that scrubbing for HIV-positive patients has on the physical health of theatre nurses. It consists of the following sub-theme: physical exhaustion and increased risk of contracting HIV.

Physical Exhaustion. The study showed that participants were particularly exhausted during surgery due to the high incidence of complications that occur during surgery on HIV-positive patients.

"Patients with HIV complicates most of the time. You cannot be relieved as you are responsible for that patient, you must monitor everything given to the patient; if the patient needs to be reopened, you must assist again and you are exhausted and lose concentration." (Rofhiwa)

Increased Risk of Contracting HIV. Besides physical exhaustion, participants were also prone to the risk of contracting HIV. Results indicated that limited supplies of personal protective equipment (PPE) and a lack of concentration due to fatigue put participants at a higher risk. Participants showed that fatigue, lack of concentration, and lack of PPE made them more likely to make mistakes that predisposed them to needlestick injuries and put them at risk of contracting HIV.

"We don't always have all sizes of gloves, most of the time you are compromised about gloves that are not your size, either they are too small or too big as it's difficult to handle sharps and instruments. Fluids like blood can slip inside big gloves and you end up with blood in your hands." (Rinae)

Excessive Fear of Contracting Certain Conditions Based on What Was the Witness. The results indicated that participants were psychologically affected by what they observed during surgery. They associated whatever symptoms they have or feel with what they witnessed in theatre.

"It is emotionally draining, scary, and very sad especially when you see some of the conditions which patients with HIV develop. I had a pap smear done while being allocated in gynaecological theatre because of these conditions that I witness every day, especially after observing that the patients coming to the theatre for gynaecological conditions and removal of the uterus because of cancer or uterine abnormalities are getting younger and younger; I am more scared. It has really affected me psychologically every time I bleed heavily during my menstruation period, I go to the gynaecologist just to check if everything is still fine." (Vhulenda)

Mental Health. This theme is about the impact on the mental health of theatre nurses rendering peri-operative care to patients living with HIV. It is composed of the following sub-themes: phobia of conditions witnessed, carnophobia (fear of eating red meat), stress, and emotional trauma.

Phobia of Conditions Witnessed. Participants mentioned that working with HIV-positive patients who had serious physical problems which required surgery caused them to be always afraid, thinking that they would also develop the conditions they observed during surgery.

"All theatre nurses need to be referred for counselling, especially after certain procedures, like the ones (where) they remove the abnormal growth which develops in HIV-positive patients. For some of those conditions, though we are not informed about HIV patients, we conclude that the person is HIV-positive

as we have seen to the HIV-positive patients. Some procedures, even if it is a hysterectomy, but for people living with HIV, you find that the procedure becomes complicated and can affect them emotionally. Sometimes you imagine the things that happened to the patient happening to you." (Vhothusa)

Carnophobia (Fear of Eating Red Meat). Observing human tissue being removed in the form of organs really affected the theatre nurses psychologically. Participants indicated that they were psychologically affected by what they observed during surgery. When afterwards they saw red meat, they associated it with human tissue. It was also difficult to eat red meat as they somehow associated it with eating human tissue observed during surgeries.

"There is this one patient who came for removal of genital warts. The warts were very big like cauliflower and were obstructing the vagina and the whole perineum. We ended up doing a vulvectomy, and since that day I don't eat beef." (Shaleen)

Stress. Some of the procedures performed in theatre affected the participants so much that they ended up developing stress. Study results revealed that most of the participants were working under stressful conditions, and they carried that stress beyond their work. Because they lived in the same community as the patients, they were always reminded of the ordeal.

"It is very traumatic. You take this patient like your own child. It is very painful. When you go home, you are heartbroken thinking like the team did not do enough. Just imagine an 18-year-old losing the uterus because of profuse bleeding related to being HIV-positive. On top of that, the child did not survive. It is not a nice experience." (Mulwela)

"It really affects me because scrubbing for these HIV patients does not only end up in theatre, but we do also mix with them in the community where we live, or we meet in a mall, and it just reminds them that this is the nurse who removed my uterus, and I will not have any more children because of her." (Muvhuya)

Emotional Trauma. Participants mentioned that they were emotionally very traumatised by their experiences while nursing these patients peri-operatively. They indicated a lack of organisational support from the managers.

"When we go to the managers to report our psychological and emotional trauma, they feel like you are not strong. But being in theatre, having to assist in evacuating a four-month foetus because the mother is HIV-positive and can be allowed to terminate that baby at any time is emotionally traumatising. At some stage, the manager reminded me that you said you wanted employment, but I did not know that I would assist in abortion procedures that are against my religion. The manager also told me that I must go back to theatre and continue working." (Ndivhuwo)

Social Well-being. This theme focuses on how offering peri-operative care to PLWH affected the interaction of nurses with other people. The theme composed of three sub-themes, namely, sympathising with patients living with HIV, discriminating against HIV-positive patients, and irritability potentially leading to fighting among the staff members.

Sympathising with Patients Living with HIV. Results of the study indicate that PLWH tended to complicate a lot, and the theatre nurses often sympathised with them. As a result, the participants became too attached to the patients and put themselves in the patients' shoes, which emotionally drained them.

"There is a lot of psychological impacts. I will give you an example of a young patient who comes to the theatre for evacuation of the uterus and end up with the uterus being removed. It is so painful for the nurse. You feel that maybe as a team, we did not do enough to help this patient. It drains you emotionally because you invest your emotions and get attached to your patient as a nurse or a parent because most of these patients coming for this procedure are young. You put yourself in the boot of this patient when they wake up from anaesthesia, and it is frustrating." (Rofhiwa)

Discriminating against HIV-Positive Patients. Participants mentioned that all patients who came to the theatre were being treated as potentially HIV positive. They protected themselves and always wore two pairs of gloves as they feared contagion.

"All the patients that come to the theatre I treat them like they are suspects when they come into the reception area, I ask them if they are on chronic medication, and if they disclose that they are HIV-positive, I take extra precaution such as putting on two pairs of well-fitting gloves. I also become extra vigilant." (Rinae)

Irritability Potentially Leading to Fighting Among Staff Members. Participants mentioned that most patients living with HIV complicate intra-operatively. When things did not go as planned, the whole team started to panic and team members became very irritable with each other.

"When the patient is bleeding, you must be fast. The more you are trying to be fast, the more chances of pricking yourself. You tend to be irritated by other team members, especially the doctors. If you are not as quick as they expect you to be, they get very irritated, and in turn, you are also irritated by the way they are shouting at you." (Mulayo)

PROFESSIONAL IMPACT

The study revealed that not only were theatre nurses' physical, mental, and social well-being negatively affected but they were also affected in their professional capacity. This is the second super-ordinate theme, and underneath it, we will discuss the two themes that emerged, namely, poor patient care and the threat of losing one's job; and the following sub-themes flow from that: compromised healthcare services, an increased risk of making mistakes, a high possibility of litigation, and the risk of being struck from the professional register.

Poor Patient Care. The study revealed that PLWH were not given holistic quality patient care. The principal problem was that theatre nurses were afraid of contracting HIV in the line of duty.

"To be honest, everybody is afraid to scrub for an HIV-positive patient. Chances of getting infected are very high, as the gloves sometimes will be torn while doing surgical procedure and if you have a cut you can end up being infected." (Rofhiwa).

Compromised Healthcare Services. This sub-theme highlights the quality of care associated with HIV-positive patients in a resource-constrained setting. One participant reported serious problems regarding supplies of consumables, including PPE and staff shortages.

"The consumables are scarce, and it affects us emotionally as you will have to control all items and it causes burnout and I ask myself why the hospital is doing this to us, letting us work without protective equipment and clothes because these items must be readily available." (Ndivhuwo)

Increased Risk of Making Mistakes. The study also found that working in theatre was exhausting due to the urgency of surgeries; it was an environment that was not conducive to quality care anyway - due to a shortage of personnel as a result of high absenteeism and a lack or shortage of some PPE needed to care for PLWH. Due to these problems, theatre nurses often ended up making mistakes while nursing PLWH during surgeries. Study participants mentioned that because of exhaustion and compromise in wearing the wrong glove sizes, they were more at risk of making mistakes, including pricking themselves or leaving swabs or sharps in the abdomen.

"Due to the urgency of procedure, medico-legal hazard can occur. One can miscount the swabs and leave some in the abdominal cavity. When the patient is bleeding, and one must be very fast and that is where most of mistakes happen. Another thing is that we are always tired because we are not resting enough." (Vhushai)

Threat of Losing One's Job. The results revealed that working in theatre was like risking one's future because one could be dismissed from work at any time as chances of making mistakes were very high. The theatre nurses worked under stressful conditions, and the patients they were dealing with were mostly HIV-positive. Patients living with HIV needed constant monitoring which was difficult to do as there were many patients to look after while even sometimes being the only nurse on duty. The following participant transcript attests to this:

"It is not easy to work in theatre, it is always busy and most of the time we do not even go for lunch. The resources are always unavailable. I was working alone with the two doctors, and it was difficult to monitor patients after surgeries. The patients end up going to the ward without being properly monitored. I was also afraid that I may lose my job if anything went wrong. The other nurse I was supposed to work with was off sick." (Mulwela)

High Possibility of Litigation. Apart from fear of being dismissed, there was also a high possibility of potential lawsuits from a patient or a relative of a patient who received inadequate care. Theatre nurses' fears were that if they were sued, they would end up forfeiting their pension as the state would take their money to pay the aggrieved litigant.

"It is not easy, you can lose your pension in a split of a second, that is why it needs one to be always vigilant and alert when performing the surgical procedure. If anything bad happens to a patient, as a nurse you are the first one to be blamed. There is no way they cannot find any mistake in the file of a patient, so it means you already lost the case before they can even report it to the South African Nursing Council." (Rofhiwa)

Risk of Being Struck from the Professional Register. Theatre nurses indicated that due to compromised healthcare services and the risk of making mistakes, they had a high risk of being struck off the professional register. The study also revealed that there was too much responsibility and accountability when nursing PLWH peri-operatively. If they did not do their work with caution and professionally, there was a constant risk of being struck off the roll.

"There is a procedure to be followed for relieving each other. But if a person relieves you in an emergency or in a patient that is not stable which is very common to HIV patients, really a lot of things can happen there, and you might find yourself in lawsuits when swabs are left inside the abdomen." (Vhulenda)

DISCUSSION

Results indicate that working with HIV-positive patients during the peri-operative stage has a negative impact on theatre nurses. In this regard, the study has identified two super-ordinate themes: nurses' well-being and their professional service.

Nurses' Well-being. Most of the participants were worried about the risk of contracting HIV while being at the workplace. They said they were being exposed to touching patients' body fluids because of limited PPE and impaired concentration due to exhaustion.

Testimony to that is a systematic review conducted in America, which states that the lack of PPE predisposes nurses to transmittable infections, including HIV[18]. Some of the participants also reported being pricked by a needle during an operation on an HIV-positive patient and having had to take post-exposure prophylaxis (PEP). This means that some of the participants might even have been infected with HIV, carrying the physical effects of living with HIV and its corresponding opportunistic infections. The risk of contracting HIV while working with PLWH is a reality which has also been documented by Moshidi *et al.*[13], where participants mentioned that they accidently could have touched patients' body fluids, while delivering invasive or non-invasive medical intervention in an emergency. They thought that they would be safe from HIV exposure if they took precautions when in direct contact with the patient. An increased workload is one of the significant causes of physical exhaustion experienced by professional nurses. Ghasemi *et al.*[9] described how nurses were always exhausted by the way they lifted patients from one stretcher to the other peri-operatively, as they did not want to be in touch with the patient's body fluid for the fear of contracting HIV.

Working with HIV-infected patients during the peri-operative phase also had an impact on theatre nurses' emotional well-being. Participants mentioned that they were afraid. They feared developing the conditions they observed during surgery. When they saw red meat, for example, they associated it with human tissue. Asimah Ackah and Adzo Kwashie[19] also found that theatre nurses were psychologically affected by what they observed during surgery on PLWH. Our study further revealed that most of the participants were working under stressful conditions, and they carried this stress beyond their work. As they lived in the same community with these patients, it always reminded them of the ordeal. Asimah Ackah and Adzo Kwashie[19] also found in their study, which explored the stress levels of theatre nurses in a Ghanaian teaching hospital, that most of the nurses were working under stressful conditions and that

they carried this stress beyond their work. When things did not go as planned, the whole team started to panic and team members became very irritated with one another[19].

In our study, the theatre nurses indicated that they were emotionally traumatised by their experiences while nursing PLWH peri-operatively. They experienced a lack of organisational support from the managers. It was also found that participants became too attached to the patients and often put themselves in the patients' shoes, which drained them emotionally. They mentioned that all patients who went into the theatre were treated as potentially HIV-positive, and they protected themselves and always wore two sets of gloves as they feared contagion. Sharing this same narrative is another study conducted in Ghana by Abdulai *et al.*[20] which found that nurses did not feel protected at all when nursing PLWH. This was because the PPE they used was of poor quality. The gloves could tear at any time while one was busy with the surgical procedures. The results also indicated that the participants were psychologically affected by what they observed during surgery.

Like in our study, the theatre nurses associated their own ailments and their conditions with what they witnessed in theatre. The same thing was found in the study conducted by Tantchou[21] that nurses were being affected psychologically by what they were witnessing in theatre while surgery was being performed on PLWH.

Professional Impact. Besides the issue of risk of contracting HIV and developing opportunistic infections, rendering peri-operative care to HIV-positive patients had an impact on the theatre nurses' professional service. Participants indicated a serious problem with the compromised healthcare services being rendered to PLWH during the peri-operative phase. Raymond *et al.*[22] are of the view that HIV-positive patients undergoing surgery are receiving substandard care in most public hospitals. The fact that patients usually bleed a lot during surgery is a big factor affecting the quality of care given to HIV-positive patients undergoing surgery as theatre nurses want to avoid contagion. Furthermore, the participants indicated that it was difficult to give quality care without adequate and sufficient protective material. There were similar findings in a study conducted by Mammbona and Mavhandu-Mudzusi[10] where inadequate resources compromised the level of care provided to patients living with HIV.

In addition, there is also the issue of professional and legal ramifications that may follow sub-standard care. Sometimes a minor operation such as a Caesarean section may end up being a hysterectomy which the patient has not signed for. Some women even die during such surgery or post-surgery. Similar to the abovementioned findings is the study conducted in Burkina Faso[23] where women received a haemostasis hysterectomy without their knowledge. These are just examples of the possible general mistakes that can happen, let alone in caring for HIV-positive patients, where more hazardous factors make mistakes even more likely.

When theatre nurses have been involved in an overextended procedure due to complications, they become exhausted and lack of concentration often ensues. This can result in nurses making mistakes like leaving swabs or other instruments in the patient's abdomen. Ghobadian *et al.*[24] say that the most common error during abdominal surgery is leaving behind abdominal swabs and other surgical instruments inside the abdomen of a woman, which can lead to sepsis and then death, in some instances[25]. In all these incidences, nurses are expected to write an incident report which ends up being

discussed in the hospital mortality meeting, or, in the case of South Africa, even sometimes being sent to the South African Nursing Council. Such incidents, if they realise that the nurse was somehow at fault, may lead to litigation and even to that nurse being struck off from the register as a professional nurse, which means the end of their professional life. The same thing was found in the study conducted by Wielogórska and Ekwobi[26], where nurses were affected professionally by being struck off the roll if found to have been at fault while assisting doctors during surgeries.The participants in this study indicated that the risk of medico-legal hazards became even higher when providing care to HIV-positive patients in a resource-challenged hospital.

Another important issue mentioned by the nurses in the study was that one would also possibly forfeit one's pension if one was dismissed and found to have been at fault, with one's pension money being used to reimburse the victim. This was clearly a big potential threat to the participants, something that might have affected them psychologically as well. All in all, our study showed that there was too much responsibility and accountability placed on theatre nurses when rendering peri-operative care to HIV-positive patients with their problems and concerns not being adequately addressed.

Limitation. The researcher used convenience purposive sampling, and participants came from only one hospital, so the sample may not be representative of the healthcare population in other hospitals and other categories of professional nurses. This is unfortunately unavoidable in qualitative research as the focus is of contextual relevancy, and the IPA design focuses on case-per-case rather than generalising the findings.

However, the researchers provided relevant information about the study, including the participants, sampling, data collection, and data analysis, which can assist with the transferability of the findings to other similar settings. The study was conducted during the COVID-19 lockdown, and because of having had to wear masks and social distancing, it was difficult to observe some of the non-verbal cues as the participants' mouths and noses were covered. It was also difficult to maintain eye contact with all the participants as some of them put on face shields. This might have affected the probing process.

CONCLUSION

There is evidence that offering peri-operative care to patients living with HIV (PLWH) has a negative effect on the physical, mental, and social well-being of theatre nurses, while it also impacts them in their professional capacity. They may end up being caught up in a vicious cycle of becoming exhausted (due to diminished well-being) and then accidently making some mistakes when rendering care, which in turn may lead to litigation. Furthermore, a nurse who may have a constant underlying fear of losing her job and possible litigation may become very anxious which may in turn predispose them to making mistakes and concomitant physical challenges, including the possibility of being infected with HIV.

To prevent all this negative impact, the researchers recommend proper in-service training of nurses especially in relation to PLWH. The government/hospital should increase the staff working in theatre to ensure that nurses have adequate time to relieve one another and get adequate rest. There should be debriefing and counselling of theatre nurses especially after complicated procedures which might have led to loss of life or irreversible damage to the patient. Though there is speciality allowance for

the nurses who have advanced training in theatre technique, there is a need for offering a danger allowance to all nurses who are working in theatre because they would inevitably be rendering care to HIV-positive patients. There is also a need for providing appropriate and sufficient protective equipment. The implementation of such recommendations may assist in lessening the negative effect that rendering peri-operative care to patients living with HIV has on theatre nurses. In turn, very importantly, this will contribute to the improvement of healthcare for people living with HIV[27].

Data Availability. The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Additional Points. The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of the institutions with which the authors are affiliated.

Consent. Consent was obtained from all participants regarding recordings, fieldnotes, and observations to be published for research purposes only and without their original names but using pseudonyms. The drafted article was shown to all participants, and consent was given for it to be published but only for its intended purpose, namely, research.

Conflicts of Interest. The authors declare that they have no conflicts of interest.

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1. Rudzani Ifodia Ngaledzani and Avhatakali Allga Ndou-Mammbona work at the Department of Health Studies, University of South Africa, Pretoria, South Africa

2. Azwihangwisi Helen Mavhandu-Mudzusi works at the Office of Graduate Studies and Research, College of Human Sciences, University of South Africa, Pretoria, South Africa

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2024 Chapter Study Days And Workshops

Gauteng/Mpumalanga Chapter

9 March 2024
15 June 2024
18 to 20 October 2024 - APPSA Congress
21 September 2024
Topics to be confirmed

Pretoria/Limpopo/N West Chapter

25 February 2024
25 May 2024
24 August 2024
18 to 20 October 2024 - APPSA Congress
26 October 2024
Topics to be confirmed

KwaZulu Natal Chapter

16 March 2024 - Study Day
20 April 2024 - Meeting
29 June 2024 - Study Day
31 August 2024 - Meeting
18 to 20 October 2024 - APPSA Congress
23 November 2024 - AGM and Study Day
Topics to be confirmed

Free State Chapter

02 March 2024
Laparoscopic surgery trouble shooting of the laparoscopic stack
Correct Assembly of laparoscopic instruments
How can we assist the novice nurse in theatre and training possibilities in this geographic area?

18 May 2024
Challenges in CSSD
Patient safety in the OR

20 July 2024
Neuro surgery/Spinal surgery

21 September 2024
Topic to be confirmed

18 to 20 October 2024 - APPSA Congress

Western Cape Chapter

24 February 2024
Surgical Risks: Prevention and Management

11 May 2024
17 August 2024
18 to 20 October 2024 - APPSA Congress
02 November 2024
Topics to be confirmed

Eastern Cape Chapter

24 February 2024
APPSA on the Map

22 June 2024
APPSA EC Mental Health Day

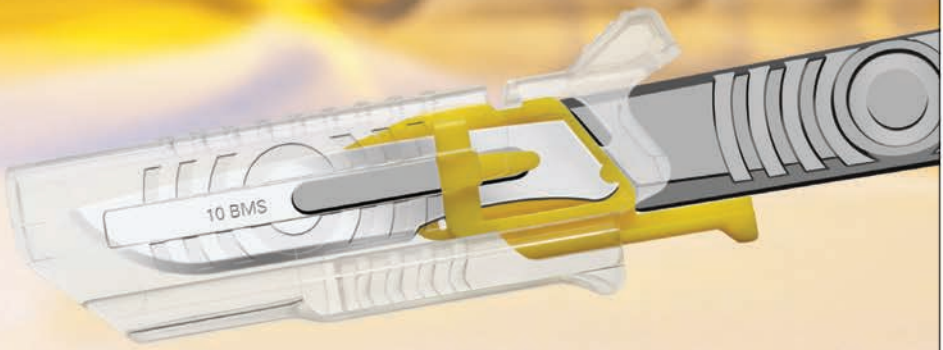
24 August 2024
Exceptional women in the community

18 to 20 October 2024 - APPSA Congress

30 November 2024
Congress feedback

Please confirm the dates and venues with your Chapter Presidents'

Safe



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