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Developing a program to train nurses in exploration and management of pre-operative anxiety and information needs of patients (PEMPAINP)

Abstract

Objective: The objective of the study was to develop a program to train nurses to explore and manage pre-operative anxiety and information needs of patients.

Methods: A panel comprising 15 experts was purposively selected and engaged through the Delphi technique to formulate the training program. Data collection was executed over three rounds, employing both focus group discussions and self-administered questionnaires, to achieve consensus among the experts regarding the draft training program.

Results: Among the 15 participants, a majority identified three critical components for training nurses in assessing pre-operative anxiety and patient information needs – ‘standard pre-operative interventions’ (12 participants, 80.0%), ‘communicative skills’ (13 participants, 86.7%) and ‘establish rapport’ (13 participants, 86.7%). In terms of managing information needs, all 15 participants (100.0%) agreed on the importance of ‘evaluating information on patient and family’, while 12 participants (80.0%) endorsed the significance of ‘being innovative’ and adopting a ‘multidisciplinary approach’.

Conclusions: The training program has been meticulously crafted to encompass content crucial for enhancing the knowledge and competencies of surgical ward nurses in assessing and managing pre-operative anxiety and addressing the informational needs of patients.

Keywords: assessment, information needs, management, patients, pre-operative anxiety, training program

Background

Globally, approximately 243.2 million surgical procedures are conducted annually, resulting in seven million patients experiencing significant complications and one million fatalities¹. These alarming statistics highlight the critical need for heightened vigilance and attention to patients undergoing surgical interventions to enhance the quality of care¹. Surgery is an inherently life-threatening procedure that subjects patients to direct physical restraint². The potential for adverse outcomes inevitably causes concern to patients, leading to the development of pre-operative anxiety¹. Pre-operative anxiety affects

between 25 and 80 per cent of surgical patients³. While a certain level of anxiety is anticipated during the pre-operative period, it becomes a clinical concern when it is exacerbated and accompanied by excessive fear and multisystemic manifestations⁴.

Providing patients with information has been demonstrated to play a pivotal role in managing pre-operative anxiety, either by eliminating or mitigating it^{5,6}. Research indicates that patients undergoing surgery should receive clear, concise and pertinent information, which not only reduces anxiety but also empowers them to participate in their care and enhances surgical outcomes⁷⁻⁹. However, it

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is imperative for nurses to assess patients to determine their specific informational needs, as it has been shown that information can potentially exacerbate anxiety levels⁹. Another study suggests that patients who are anxious and not adequately assessed and informed experience elevated anxiety levels during surgery, leading to post-operative complications¹⁰.

Research has identified inconsistencies and challenges in surgical ward practices concerning the assessment and management of pre-operative anxiety and the informational needs of patients^{11,12}. A thorough review of the literature revealed an absence of identical or comparable studies focusing on the exploration and management of pre-operative anxiety and informational needs of patients in district hospitals within the Ashanti Region of Ghana. Insights from previous studies have informed the development of a training program aimed at assisting surgical ward nurses in addressing pre-operative anxiety and the information needs of patients^{11,12}.

The training program on the exploration and management of pre-operative anxiety and information needs of patients (PEMPAINP) is a document designed to train surgical ward nurses in assessing patients who have been scheduled and admitted to the surgical wards, with the aim of identifying patients experiencing pre-operative anxiety and managing their anxiety with appropriate information.

This training program will serve as a manual for the periodic instruction of nurses assigned to the surgical wards, preparing patients for various surgical procedures. It will equip them with the necessary knowledge and skills to assess patients for pre-operative anxiety and address their information needs at district hospitals in the Ashanti Region of Ghana and beyond. This study was conducted as part of the researcher's Doctor of Philosophy (Nursing) program at the University of the Western Cape in South Africa.

Methods

Research design and setting

The development of the PEMPAINP took place in the conference hall of a district

hospital in the Ashanti Region of Ghana. The process of developing the training program involved the following steps:

1. conducting a situational analysis to assess the extent to which patients experience anxiety prior to undergoing surgery
2. reviewing literature on the management of anxiety and the information needs of patients
3. employing the Delphi technique to determine the key components of a draft program to train nurses to explore patient pre-operative anxiety and manage patient information needs.

The Delphi technique is characterised as a methodology for eliciting and refining collective decisions and facilitating structured group discussions to achieve consensus in the face of complex challenges, resource-intensive endeavours and uncertain outcomes¹³. It is a research approach used for soliciting, distilling and determining the opinions of a panel of experts from a specific field, that seeks consensus among the experts, and formulates predictions or conclusions based on the expert opinions of the panelists participating in the study¹⁴.

Sampling and sample size

The target population for this study consisted of experts engaged in nursing administrative services, clinical care of surgical patients, education of nursing and midwifery students, and development of nursing and midwifery curricula. The researcher used purposive sampling to select 15 experts from four institutions – two hospitals, two nursing and midwifery training colleges – and two nursing and midwifery administrative settings. Panels chosen for the development process often comprise eight to 20 members and should be a diverse group of experts with pertinent knowledge¹⁵.

Inclusion criteria included nurses who had specialised and were experts in the aforementioned departments with extensive experience. Exclusion criteria included nurses who had not specialised in the specified fields of nursing and midwifery and had less than one year of experience.

Data collection

The data collection process consisted of three distinct stages: an initial focus group discussion, followed by two rounds of Delphi data collection. In the first stage, the researcher convened participants in a conference hall at one of the selected hospitals, where a presentation on the study and its findings was delivered and participants were engaged in a focus group discussion, which lasted for three hours, to express their opinions on the draft of the training program.

The second stage involved the distribution of a questionnaire to participants at their respective offices via a dispatch rider. The completed questionnaires were then returned to the researcher through the same method. The third stage involved distribution of a second questionnaire and collections of completed questionnaires in the same way. This entire process was conducted over a period of three months, from 1 February 2022 to 31 April 2022.

Data collection instruments

Two instruments were used to collect data for this study. The first was a semi-structured interview guide equipped with audio recording capabilities, which was used during the first stage of data collection. The semi-structured interview comprised one primary question and several follow-up questions designed to solicit expert opinions on the components of the draft training program.

The second instrument consisted of two questionnaires, used in the second and third stages of data collection. The questionnaires contained items and responses intended to evaluate the components in the draft training program by rating them as 'agree', 'disagree' and 'remarks'. The 'remarks' option required participants to propose modifications or alterations to the components in the draft.

Questionnaire items were formulated based on the components of the training program, which was redrafted by the researcher in accordance with findings from the first stage of data collection. The questionnaire underwent a review by curriculum development experts and the researcher's supervisor. The questionnaire was organised into three sections. Section

A included items related to participants' demographic characteristics, such as gender, age and marital status while sections B and C related to components of the draft training program.

Section B, which sought to gather participant responses to assessment of pre-operative anxiety and patients' information needs, included items relating to components of the training program across three objectives: knowledge acquisition, development of skills required to facilitate nursing assessment, and fostering a positive attitude towards patient assessment. Components evaluated by participants within these objectives included 'pre- and post-operative expected outcomes', 'communication skills' and 'development of a positive attitude towards patient assessment'.

Section C, which addressed the management of pre-operative information needs, included items relating to two objectives: management and evaluation of provided information, and facilitating management of information needs. Components within these objectives included 'findings from patient history' and 'development of confidence'.

Consensus was considered to have been achieved when 75 percent or more of the participants responded with 'agree' when rating a component. Components that had less than 75 percent of the participants responding with 'agree' were modified according to participant suggestions and subjected to another round of rating. This criterion for consistency is within the range indicated by the literature, which is from 51 to 100 percent¹⁶ or when over 70 percent of participants either agree or disagree with the items on the questionnaire¹⁷.

Ethics approval

The study was granted approval by the ethical committee at the University of the Western Cape, with authorisation from both the national and the regional director of the Ghana Health Service (GHS). Informed consent was obtained from participants involved in the Delphi technique.

Data analysis

Data analysis was conducted using content analysis and SPSS

version 24. Descriptive statistics, including percentages, were employed to characterise the demographic characteristics of the participants, as well as the items related to the components evaluated under both the assessment and management of pre-operative anxiety and the information needs of patients.

In the first stage of data collection, participants' opinions were reviewed to become acquainted with changes and modifications to the components of the draft. The suggested changes and modifications were implemented, after which a questionnaire was developed to commence the second stage. Items pertaining to the objectives of the training program were scored and classified according to whether or not consensus was achieved. Items for which consensus was not achieved during the second stage were revised and modified according to the participants' remarks and used to formulate a second questionnaire for the third stage. Simple descriptive statistics, using tables and percentages, were applied to analyse the questionnaires in stages two and three. Modified items analysed in the third round achieved consensus.

Results

In this study, 20 experts were invited to participate, with 15 individuals from 10 hospitals and other health institutions accepting the invitation. Eight of the participants (53.3%) were male, slightly less than half (46.7%) were aged between 35 and 39 years, and nine (60.0%) were married. All 15 participants identified as Christian, and 14 (93.3%) were of the Akan ethnic group.

In terms of qualifications and experience, 12 participants (80.0%) held a bachelor degree in nursing, six (40.0%) were perioperative nurses, eight (53.3%) served as charge nurses in their respective wards, and eight (53.3%) held the rank of senior tutor in nursing, midwifery or health studies. Regarding work experience, nine participants (60.0%) had worked in surgical wards for ten to 14 years.

The results are presented in three stages, in alignment with the data collection process. Table 1 summarises the components of the training program.

Stage 1: Focus group discussion

The semi-structured interview sought to gather expert opinions on components of the draft training program. Feedback and recommendations from participants regarding these aspects were integrated and subsequently used to develop the questionnaire for the second stage.

Stage 2: Delphi data collection first round

This stage aimed to assess the levels of agreement among the participating experts on the components essential for assessing pre-operative anxiety and the information needs of patients (section B of the questionnaire) and management of pre-operative information needs (section C of the questionnaire).

Assessment of pre-operative anxiety and patients' information needs

In terms of the objective of knowledge acquisition, all participating experts agreed with the inclusion of 'pre- and post-operative expected outcomes'. Additionally, 14 experts (93.3%) endorsed the importance of 'communication skills'.

In terms of development of skills required to facilitate nursing assessment (the second objective of Section B), 14 experts (93.3%) agreed on the significance of 'assuring patient and family confidentiality' and 13 experts (86.7%) agreed on the significance of 'validation of findings'.

Regarding the objective of fostering a positive attitude towards patient assessment (the third objective of Section B), 12 experts (80.0%) supported the item 'adhere to the mission and vision of the hospital', while all experts agreed on the importance of 'adhering to the ethics of the profession' and 'being innovative'. Furthermore, 13 experts (86.7%) and 14 experts (93.3%) concurred with the items 'follow ward protocols' and 'maintain good relationships with other staff', respectively.

Management of pre-operative information needs

In terms of the objective of management and evaluation of provided information, all experts agreed with the inclusion of 'findings from patient history', while 14 (93.3%) agreed with the items 'findings on

Table 1: Components of the training program

	Objectives	Components	Stage consensus achieved	
Components of training program relating to assessment of pre-operative anxiety and patients' information needs	knowledge acquisition	pre- and post-operative expected outcomes	2	
		communication skills	2	
		standard pre-operative interventions		3
	development of skills required to facilitate nursing assessment	assuring patient and family confidentiality	2	
		validation of findings	2	
		therapeutic communication skills		3
		establish rapport		3
		comprehensive history		3
		nursing assessment		3
	fostering a positive attitude towards patient assessment	adhere to the mission and vision of the hospital	2	
		adhering to the ethics of the profession	2	
		being innovative	2	
		follow ward protocols	2	
		maintain good relationships with other staff	2	
		develop strengths based on qualities		3
		develop patient-centred goals		3
Components of training program relating to management of pre-operative information needs	management and evaluation of provided information	findings from patient history	2	
		findings on other assessments	2	
		provide holistic care to patient and family	2	
		evaluate information on patient and family		3
	facilitating management of information needs	take initiative	2	
		development of confidence	2	
		be innovative		3
		multidisciplinary approach		3

other assessments' and 'provide holistic care to patient and family'.

Concerning the objective of facilitate management of information needs, it was noted that all experts agreed with the item 'take initiative' and 14 (93.3%) agreed with the item 'development of confidence'.

Stage 3: Delphi data collection second round

Items that did not achieve consensus (75% or higher level of agreement) during the second stage were revised based on expert recommendations

and subsequently incorporated into the questionnaire for the third stage. Consensus was achieved for all components involved in training nurses to assess patients' pre-operative anxiety and information needs as well as manage pre-operative information needs.

Assessment of pre-operative anxiety and patients' information needs

Twelve participants (80.0%) agreed with the inclusion of 'standard pre-operative interventions' under the objective of knowledge acquisition.

In terms of the objective of development of skills required to facilitate nursing assessment, 13 participants (86.7%) agreed with the inclusion of 'therapeutic communication skills', 14 (93.3%) with the inclusion of 'establish rapport', 13 (86.7%) with 'comprehensive history' and 12 (80.0%) with 'nursing assessment'.

Concerning the objective of fostering a positive attitude towards patient assessment, 13 participants (86.7%) agreed on the inclusion of 'develop strengths based on qualities' and 'develop patient-centred goals'.

Management of pre-operative information needs

All participants expressed agreement with the inclusion of 'evaluate information on patient and family' under the objective of management and evaluation of information provided.

Regarding the objective of facilitating management of information needs, 12 participants (80.0%) concurred with the items 'be innovative' and 'multidisciplinary approach' being included.

Description of the training program

The training program that was developed consists of two distinct phases: the first addresses assessment of pre-operative anxiety and information needs of patients while the second addresses management of these pre-operative information needs. Each phase has specific objectives, with corresponding activities, content and expected outcomes.

The objectives are what the instructional sessions aim to achieve. The activities are teaching and learning activities undertaken by trainers and nurse trainees to enhance the teaching and learning process. The content includes essential components of the training program specifically designed for delivery in the instructional sessions to enable surgical ward nurses to acquire the necessary understanding and skills for assessing and managing pre-operative anxiety and addressing patients' informational needs. The expected outcomes are the specific and measurable understanding and expertise that surgical ward nurses are expected to have acquired through completing the training program.

Phase 1: Assessment of pre-operative anxiety and information needs of patients

Objective 1: Acquire knowledge

Activities: A nurse specialist provides training to surgical ward nurses to achieve the specified objective through the implementation of various pedagogical methods, including lectures, slide presentations, discussions, demonstrations, group work and role-playing. Nurse trainees engage in

active listening and critically observe illustrations, demonstrations and role plays. They actively participate by posing questions and contributing to discussions.

Content: Provision of pre-operative and post-operative care following patient admission procedures, implementation of standard pre-operative interventions and communication skills.

Expected outcomes: By the end of this session, trainee nurses will be equipped to demonstrate their understanding of delivering pre- and post-operative care upon patient admission, determining and implementing standard pre-operative interventions and engaging in effective communication.

Objective 2: Develop skills required to facilitate nursing assessment

Activities: A nurse specialist provides training to nurses to achieve the desired objectives through various methods, including lectures, slide presentations, discussions, demonstrations, group work and role-playing. Nurse trainees engage in active listening and critically observe illustrations, demonstrations and role plays. They formulate inquiries and actively contribute to discussions.

Contents: Assurance of confidentiality for patients and their families, establishment of rapport, effective therapeutic communication, comprehensive collection of patient and family history, nursing assessment (including vital signs, physical, psychosocial, spiritual and pain evaluations) and validation of findings with the patient and family.

Expected outcomes: By the end of this session, nurse trainees are expected to have acquired the understanding and skills necessary to ensure patient and family confidentiality regarding information needs, establish rapport with patients and their families, engage in effective therapeutic communication, conduct a comprehensive history of the patient and family, perform nursing assessments (including vital signs, physical, psychosocial, spiritual, and pain assessments) and validate findings with the patient and family.

Objective 3: Foster a positive attitude towards patient assessment

Activities: A nurse specialist provides training to nurses to achieve the objective through various methods, including lectures, slide presentations, discussions, demonstrations, group work and role-playing. Nurse trainees engage in active listening and critically observe illustrations, demonstrations and role-playing activities. They also participate in discussions and role-playing exercises, during which they pose and respond to questions.

Content: Nursing qualities (empathy, caring etc.), mission and vision of the hospital, ethical standards of the profession, patient-centred approach, clearly defined goals, adherence to ward protocols, establishing a positive relationship with colleagues, assuming assigned responsibilities, demonstrating innovativeness and consistently engaging in active listening.

Expected outcomes: By the end of this session, nurse trainees are anticipated to be able to cultivate essential nursing qualities such as empathy and compassion, align with the hospital's mission and vision, adhere to professional ethical standards, establish patient-centred objectives, comply with ward protocols, maintain positive relationships with colleagues, fulfil assigned responsibilities, demonstrate innovation and consistently engage in lifelong learning.

Phase 2: Management of pre-operative information needs of patients

Objective 1: Manage and evaluate information provided to patients

Activities: A nurse specialist provides training to nurses to achieve the specified objectives through various methods, including lectures, slide presentations, discussions, demonstrations, group work and role-playing. Nurse trainees engage in active listening and critically observe illustrations, demonstrations and role-playing activities. They also participate in discussions and role-playing exercises, during which they pose and respond to questions.

Content: Inform the patient and/or the patient's family of findings on history and other assessments, provide holistic care to the patient and/or their family and evaluate information provided to the patient and/or their family.

Expected outcomes: By the end of this session, nurse trainees are expected to be able to communicate findings from patient histories and other assessments to patients and their families, deliver comprehensive care to both patients and their families, and assess the information conveyed to patients and their families.

Objective 2: Facilitate management of information needs

Activities: A nurse specialist provides training to nurses to achieve the specified objectives through various methods, including lectures, slide presentations, discussions, demonstrations, group work and role-playing. Nurse trainees engage in active listening and critically observe illustrations, demonstrations and role-playing activities. They actively engage by asking and answering questions.

Content: Cultivation of confidence and the ability to take initiative and be innovative, employing a multidisciplinary approach involving collaboration between nurses and other health professionals.

Expected outcomes: By the end of this session, nurse trainees are expected to have gained confidence, demonstrated initiative, exhibited innovation and employed a multidisciplinary approach to effectively inform patients.

Objective 3: Evaluate nurses after training

Activities: A nurse specialist assesses nurse trainees in terms of the expected outcomes of the training sessions. Nurse trainees engage in assessment activities and actively engage by asking and answering questions.

Content: Participants' understandings are evaluated throughout the training program via presentations, demonstrations and role-playing exercises, culminating in the awarding of certificates for participation.

Expected outcomes: By the end of this session, nurse trainees are expected to competently execute assigned tasks

through the use of presentations, demonstrations and role-playing activities, and to receive certificates acknowledging their participation.

Discussion

The content of the training program serves as a foundational framework for equipping nurses with the requisite knowledge and skills to assess and manage pre-operative anxiety and manage the information needs of patients. Research indicates that elements within a model are instrumental in aiding nurses to comprehend their professional responsibilities and roles in patient care¹⁸.

In the context of evaluating pre-operative anxiety and patient information needs, the current study emphasises the need for nurses to possess expertise in both pre- and post-operative care upon patient admission. Consistent with these findings, a study¹⁹ identified that pre-operative preparation and post-operative expectations are critical domains where nurses must demonstrate proficiency to effectively assess patients.

The current study further revealed that nurses require specific competencies, such as maintaining confidentiality for patients and their families, during the information-gathering process. Supporting these findings, research suggests that nursing care is fundamentally predicated on trust²⁰ and that patient information should remain confidential and not be disclosed to third parties²¹. Furthermore, research also highlights the significant personal repercussions for nurses concerning professional and legal issues when confidential patient information is mishandled²².

The assessment of pre-operative anxiety and the information needs of patients relies on a positive disposition of nurses²³. The current study identified that participants concurred on key elements essential for fostering a positive attitude among nurses towards patient assessment, including nursing qualities, patient-centred objectives, ward protocols and positive staff relationships. Supporting literature indicates that nurses must demonstrate certain qualities, which encompass abilities, values, beliefs or morals, and caring and empathy, to facilitate patient assessment^{24,25}.

In managing the information needs of patients, participants emphasised the importance of informing patients and their families about the findings from assessments. Consistent with this perspective, studies suggest that nurses translate evidence regarding the causes of pre-operative anxiety into information that can help alleviate such anxiety²⁶⁻²⁸.

The current study also underscored the importance of providing holistic care to patients and their families, and adoption of a multidisciplinary approach. This is consistent with findings of other studies that addressing patients' emotional needs is crucial to delivering holistic care²⁹ and nurses should collaborate with other nurses, surgeons, anaesthetists and other health care personnel to inform patients³⁰.

Another study³¹ emphasised the use of videos and other teaching and learning tools to facilitate patient information provision. It was further determined that the information provided to patients and their families should be evaluated. This was corroborated by a study³² that highlighted the necessity of evaluating the success of goals to reduce pre-operative anxiety and the effectiveness and impact of the information provided in the training of nurses. Finally, participants agreed that nurses participating in a training program organised with PEMPAINP should be assessed on their knowledge and skills.

Limitations

This study had limitations in that a small specialised group of experts was used and, with the nature of their feedbacks, findings were not readily applicable to a broader population or to situations beyond the specific context of the study.

Conclusion

Ultimately, PEMPAINP has been designed to provide training to surgical ward nurses for the assessment and management of pre-operative anxiety and management of information needs of patients prior to undergoing surgery. The training program specifies that the content be used to impart knowledge and skills to the nurses. The curriculum necessary for enhancing nurses' knowledge in assessing determinants of pre-operative anxiety encompasses pre- and post-operative care upon patients' admission, standard pre-operative interventions

and therapeutic communication skills. It is requisite that surgical ward nurses are instructed in content delineating skills required to facilitate nursing assessment, such as ensuring patient and family confidentiality, obtaining a comprehensive patient and family history, conducting nursing assessments and validating findings. Furthermore, the program stipulates that nurses should be trained in content related to managing and evaluating information provided to patients. Lastly, the training program outlines positive attitudinal traits that are essential for the nurses to effectively assess and manage pre-operative anxiety and information needs of patients. These include adherence to ethical standards, compliance with ward protocols and development of professional confidence.

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References

- Aloweidi A, Alghanem S, Bsisu I, Ababneh O, Alrabayah M, Al-Zaben K et al. Perioperative cardiac arrest: A 3-year prospective study from a tertiary care university hospital [Internet]. *Drug, Healthc Patient Saf*. 2022[cited 2024 Oct 12];14:1–8. DOI: 10.2147/DHPS.S332162
- Bedaso A, Ayalew M. Preoperative anxiety among adult patients undergoing elective surgery: A prospective survey at a general hospital in Ethiopia [Internet]. *Patient Saf Surg*. 2019[cited 2024 Oct 12];13:18. DOI: 10.1186/s13037-019-0198-0
- Oteri V, Martinelli A, Crivellaro E, Gigli F. The impact of preoperative anxiety on patients undergoing brain surgery: A systematic review [Internet]. *Neurosurg Rev*. 2021[cited 2024 Oct 12];44(6):3047–57. DOI: 10.1007/s10143-021-01498-1
- Berhe YW, Melkie TB, Lema GF, Getnet M, Chekol WB. The overlooked problem among surgical patients: Preoperative anxiety at Ethiopian University Hospital [Internet]. *Front Med (Lausanne)*. 2022[cited 2024 Oct 12];9:912743. DOI: 10.3389/fmed.2022.912743
- Gröndahl W, Muurinen H, Katajisto J, Suhonen R, Leino-Kilpi H. Perceived quality of nursing care and patient education: A cross-sectional study of hospitalised surgical patients in Finland [Internet]. *BMJ Open*. 2019[cited 2024 Oct 12];9(4):e023108. DOI: 10.1136/bmjopen-2018-023108
- Al ESA-A, Awad HMAA. Effect of preoperative preparation on patients outcome among patients undergoing surgical operations at Almik Nimir Hospital–Sudan [Internet]. *Int J Res Granthaalayah*. 2020[cited 2024 Oct 12];8(8):346–55. DOI: 10.29121/granthaalayah.v8.i8.2020.441
- Ali NN. Assessment of preoperative anxiety, its contributing factors, and impact on immediate postoperative outcomes among cardiac surgery patients: A cross-sectional study [Internet]. Master's dissertation. Karachi: Aga Khan University; 2023[cited 2024 Oct 12]. Available from: https://ecommons.aku.edu/theses_dissertations/2169/
- Al Ghunimat A, Hind J, Abouelela A, Sidhu GA, Lacon A, Ashwood N. Communication with patients before an operation: Their preferences on method of communication [Internet]. *Cureus*. 2020[cited 2024 Oct 12];12(11):e11431. DOI: 10.7759/cureus.11431
- Roche D, Jones A. A qualitative study of nurse-patient communication and information provision during surgical pre-admission clinics [Internet]. *Health Expect*. 2021[cited 2024 Oct 12];24(4):1357–66. DOI: 10.1111/hex.13270
- Abate SM, Chekol YA, Basu B. Global prevalence and determinants of preoperative anxiety among surgical patients: A systematic review and meta-analysis [Internet]. *Int J Surg Open*. 2020[cited 2024 Oct 12];25:6–16. DOI: 10.1016/j.ijso.2020.05.010
- Dankyi S, Adejumo O. Nurses practice on exploration and management of preoperative information needs of patients in Ashanti region of Ghana. Library of the University of the Western Cape. University of the Western Cape. 2014.
- Dankyi S, Bimerew M, Chipps J. A training programme for nurses on the management of preoperative anxiety and information needs of patients in Ashanti region, Ghana [Internet]. PhD thesis. Cape Town: University of the Western Cape; 2022 [cited 2024 October 12]. Available from: <https://uwcscholar.uwc.ac.za/items/218e56a2-9994-425d-810b-47a9fb9f7c3a>
- Rowe G, Wright G. The Delphi technique as a forecasting tool: Issues and analysis [Internet]. *Int J Forecast*. 1999[cited 2024 October 12];15(4):353–75. DOI: 10.1016/S0169-2070(99)00018-7
- Grime MM, Wright G. Delphi method [Internet]. Wiley statsref: Statistics reference online. 2016[cited 2024 October 12];Aug 5:1–6. DOI: 10.1002/9781118445112.stat07879
- Niederberger M, Spranger J. Delphi technique in health sciences: A map [Internet]. *Front Public Health*. 2020[cited 2024 October 12];8:457. DOI: 10.3389/fpubh.2020.00457
- Barrett D, Heale R. What are Delphi studies? [Internet]. *Evid Based Nurs*. 2020[cited 2024 October 12];23(3):68–9. DOI: 10.1136/ebnurs-2020-103303
- Vogel C, Zwolinsky S, Griffiths C, Hobbs M, Henderson E, Wilkins E. A Delphi study to build consensus on the definition and use of big data in obesity research [Internet]. *Int J Obes (Lond)*. 2019[cited 2024 October 12];43(12):2573–86. DOI: 10.1038/s41366-018-0313-9
- Shang Z. Use of Delphi in health sciences research: A narrative review [Internet]. *Medicine (Baltimore)*. 2023[cited 2024 October 12];102(7):e32829. DOI: 10.1097/MD.00000000000032829
- Ataro BA, Geta T, Endirias EE, Gadabo CK, Bolado GN. Patient satisfaction with preoperative nursing care and its associated factors in surgical procedures, 2023: A cross-sectional study [Internet]. *BMC Nurs*. 2024[cited 2024 October 12];23(1):235. DOI: 10.1186/s12912-024-01881-5
- Lee SH, Yoo HJ. Therapeutic communication using mirroring interventions in nursing education: A mixed methods study [Internet]. *Asian Nurs Res (Korean Soc Nurs Sci)*. 2024[cited 2024 October 12];18(5):435–42. DOI: 10.1016/j.anr.2024.09.012
- Beltran-Aroca CM, Girela-Lopez E, Collazo-Chao E, Montero-Pérez-Barquero M, Muñoz-Villanueva MC. Confidentiality breaches in clinical practice: What happens in hospitals? [Internet]. *BMC Med Ethics*. 2016[cited 2024 October 12];17(1): 52. DOI: 10.1186/s12910-016-0136-y
- Ochonma OG, Nwodoh CO, Ingwu JA, Igwe SE, Ani GJ, Dyages EO. Nurses' confidentiality of medical information and trusting relationship with patients: A survey of patients' perceptions of nurses in a south-south hospital, Nigeria [Internet]. *Int J Health Pharm Res*. 2017[cited 2024 October 12];3(3):35–46. Available from: <https://www.iiardjournals.org/get/IJHPR/VOL.%203%20NO.%203%202017/Nurses%E2%80%99%20confidentiality.pdf>
- Asamani L, Agyemang BC, Afful J, Asumeng M. Work attitude of Ghanaian nurses for quality health care service delivery: Application of individual and organizational centered (IOC) interventions [Internet]. *International Journal of Research Studies in Management*. 2018[cited 2024 October 12];7(1). DOI: 10.5861/ijrsm.2018.3003

24. Cornell T. Leadership skills essential in the value-based care era [Internet]. Leadersh Health Serv. 2020[cited 2024 October 12];33(3):307–23. DOI: 10.1108/LHS-12-2019-0079
25. Haddad LM, Geiger RA. Nursing ethical considerations [Internet]. In: StatPearls. Treasure Island : StatPearls Publishing; 2023 [cited 2024 October 12]. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK526054/>
26. Birkholz L, Kutschar P, Kundt FS, Beil-Hildebrand M. Ethical decision-making confidence scale for nurse leaders: Psychometric evaluation [Internet]. Nurs Ethics. 2022[cited 2024 October 12];29(4):988–1002. DOI: 10.1177/09697330211065847
27. Curtis K, Fry M, Shaban RZ, Considine J. Translating research findings to clinical nursing practice [Internet]. J Clin Nurs. 2017[cited 2024 October 12];26(5–6):862–72. DOI: 10.1111/jocn.13586
28. Desai S, Bishnoi RK, Devi S, Rukadikar A. A review for development of concise nursing care plan (CNCP) [Internet]. Int J Adv Nurs Manag. 2019[cited 2024 October 12];7(4):371–7. DOI: 10.5958/2454-2652.2019.00087.8
29. Abu-Baker NN, AbuAlrub S, Obeidat RF, Assmairan K. Evidence-based practice beliefs and implementations: A cross-sectional study among undergraduate nursing students [Internet]. BMC Nurs. 2021[cited 2024 October 12];20(1):13. DOI: 10.1186/s12912-020-00522-x
30. Khasoha IR, Omondi LA, Muthuka JK, Wambura FM, Chimbevo LM, Nyamai EM. Factors influencing provision of holistic nursing care to patients admitted in medical wards at Kenyatta National Hospital, Kenya [Internet]. Asian J Res Nurs Health. 2020[cited 2024 October 12];3(1):71–86. Available from: <https://journalajrnh.com/index.php/AJRNH/article/view/19>
31. Musa S, Ali A. Adequacy of pre-operative teaching provided for surgical patients in selected hospitals of Kano state: Patients' perspectives [Internet]. IOSR Journal of Nursing and Health Science. 2018[cited 2024 October 12];7(4):01–9. Available from: <https://www.iosrjournals.org/iosr-jnhs/papers/vol7-issue4/Version-7/A0704070109.pdf>
32. Atlas A, Milanese S, Grimmer K, Barras S, Stephens JH. Sources of information used by patients prior to elective surgery: A scoping review [Internet]. BMJ Open. 2019[cited 2024 October 12];9(8):e023080. DOI: 10.1136/bmjopen-2018-023080