



THE ROLE OF NURSES IN PATIENT EDUCATION ABOUT ANESTHESIA; A SIMPLE REVIEW

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Abstract:

One of the most important parts of professional nurses' educational duties is patient education, which aims to transfer knowledge, change people's attitudes and behaviours, and encourage people to adopt healthy habits whether they are well or not. The objectives of this review are to investigate the current practices and methods used by nurses in educating patients about anesthesia, to assess the level of knowledge and understanding among patients regarding anesthesia, to explore the main barriers or challenges faced by nurses in effectively educating patients about anesthesia and to determine the consequences of poor patient education. The study concluded that the preoperative education is an essential nursing task that can be affected by the nurses' perception. Patients may be receiving insufficient vital information before surgery. However, the essential information that should be provided to patients undergoing surgery is not fully addressed. Patient education is one of the substantial elements of providing the best patient care in all healthcare sectors. It is a systematic process that leading to changes in knowledge, attitudes, and behavior. Patient education is also a method of identifying the patient's needs and improving clinical outcomes. Education is not limited to providing information and advice; it must go beyond this to result in a significant change in the patient's behavior.

Keywords: education, information, nurse, preoperative, perceptions, practice, surgical units

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Introduction:

Patient education is a crucial aspect of the educational responsibilities of professional nurses, aimed at imparting knowledge, shaping attitudes, modifying behaviors, and fostering healthy habits among individuals, whether they are healthy or ill [1]. In recent times, the focus of patient education has evolved from solely addressing the pathophysiology and treatment of illnesses to encompassing disease prevention, patient empowerment, involvement of the patient's family, and active participation in managing care [1].

Preoperative patient education involves providing patients with health information, psychosocial support, and the opportunity to acquire specific skills before undergoing surgery. The main objective of pre-surgical education is to minimize patient distress by educating them about the procedure, pain management techniques, postoperative discomfort, and potential signs of sepsis. Studies have demonstrated that preoperative education not only reduces surgical complications and mortality but also decreases unnecessary cancellations [2].

The benefits of preoperative education extend to alleviating surgery-related anxiety, enhancing postoperative pain management, fostering realistic patient expectations regarding surgery, reducing hospital stays, increasing rates of home discharges, and decreasing postoperative communication with surgeons' offices. By promoting positive health behaviors, supporting autonomous decision-making, and providing health-related information, skills for managing discomfort, and psychological support, hospitals can empower patients and their families, ultimately improving patient outcomes [3]. Pre-operative education plays a vital role in preparing patients for surgical interventions, helping them cope with the economic burden associated with surgery, and ensuring their overall satisfaction with the treatment process. Research has indicated that effective communication, especially facilitated by nurses, can significantly improve patient outcomes by enhancing their understanding of the procedures, promoting emotional well-being, and facilitating psychological adjustment [4]. Nurses play a crucial role in ensuring that patients are well-informed and willing to comply with the essential aspects of their treatment plan, particularly in the context of surgical procedures [5].

Patients rely on nurses for information that helps them set appropriate expectations before and after surgery, highlighting the importance of clear and comprehensive patient education in the perioperative period [6]. To enhance patient

education and optimize outcomes, strategies such as in-service training, the development of standardized guidelines, continuous nursing education, and regular supportive supervision are essential components that contribute to the quality of inpatient care. These efforts are particularly crucial for individuals undergoing surgical interventions, as they rely on nurses to guide them through preoperative procedures and postoperative care instructions [7].

Objectives:

The main objectives of this review are:

1. To investigate the current practices and methods used by nurses in educating patients about anesthesia.
2. To assess the level of knowledge and understanding among patients regarding anesthesia.
3. Barriers or challenges faced by nurses in effectively educating patients about anesthesia.
4. Consequences of poor patient education.

Types of anesthesia and risk factors related to each type:

During various surgical and procedural interventions, anesthesia plays a crucial role, with four primary categories employed: general anesthesia, regional anesthesia, sedation, and local anesthesia, each associated with distinct risk factors [8]. These risk factors encompass a range of considerations, including demographic variables like age and sex, physiological indicators such as body mass index, and the presence of concurrent health conditions like cardiovascular disease, diabetes, and respiratory ailments. Additionally, pre-existing neurological conditions, allergies, and a history of adverse reactions to anesthesia drugs are significant factors that must be taken into account when determining the appropriate type and dosage of anesthesia for a patient undergoing a medical procedure [6].

The current practices and methods used by nurses in educating patients about anesthesia:

In the healthcare domain, the pivotal role of nurses in patient education regarding anesthesia is paramount, as it significantly contributes to ensuring patient safety, comprehension, and cooperation. Nurses stand at the forefront of patient care, acting as educators, advocates, and communicators. The methods and practices employed by nurses in educating patients about anesthesia have undergone substantial evolution over time, mirroring advancements in medical knowledge, technology, and patient-centric care [9]. With a primary focus on facilitating informed

decision-making and improving patient outcomes, nurses employ a diverse array of educational techniques tailored to the unique needs and preferences of each patient. These approaches often incorporate a blend of verbal instructions, written resources, visual aids, and interactive tools to effectively communicate intricate information in a lucid and understandable manner. By actively engaging in open discussions, practicing attentive listening, and employing empathetic communication, nurses establish a foundation of trust with patients, thereby fostering a supportive learning environment conducive to comprehension and knowledge acquisition. Furthermore, nurses work closely with interdisciplinary teams, which include anesthesiologists, surgeons, and other healthcare professionals, to ensure a holistic and coordinated approach to patient education. Through their unwavering commitment, specialized knowledge, and compassionate care, nurses play a vital role in empowering patients to make informed choices regarding anesthesia, consequently elevating the overall standard of care and fostering favorable health outcomes [10].

Impact of nurse-led anesthesia education on patient outcomes:

The findings from various studies examining the influence of education on anxiety levels have yielded conflicting results. Some studies, involving healthcare professionals such as physicians, anesthesiologists, and advanced practice nurses, who provided patients with information regarding their surgical procedure or anesthesia processes, did not observe any significant change in patient anxiety levels, despite the inclusion of large sample sizes [11]. Conversely, smaller studies that utilized a combination of written and verbal communication by nurses to educate patients demonstrated a reduction in anxiety levels [12]. Additionally, educational interventions that incorporated discussions on pre- and post-surgical instructions through verbal and/or written means were associated with a decrease in anxiety levels as measured by various evaluation tools.

As for more comprehensive literature review, a previous systematic review with meta-analysis of six studies investigating effectiveness of nurses preoperative education on patient anxiety levels, Effectiveness of nursing interventions for preoperative anxiety in adults: A systematic review with meta-analysis showed that nursing interventions for patients who are going to be operated seems to have a positive impact in their preoperative anxiety [13].

Nurses frequently employ educational interventions as a means to alleviate patients'

anxiety [14]. These interventions are designed to empower patients in self-management, promote self-care practices, facilitate active involvement in decision-making processes, offer emotional support, provide skills training to enhance health and well-being, and encourage patients to take an active role in their treatment [15]. For instance, research has shown that educational interventions before spine surgery can effectively reduce postoperative anxiety, pain, and the need for analgesia [16,17].

Despite the positive outcomes associated with preoperative educational interventions in surgery, some scholars have pointed out limitations in the existing literature. Studies supporting the clinical, economic, and psychological benefits of these interventions are deemed to have methodological shortcomings, such as small sample sizes and variability in both surgical procedures and educational approaches [18]. While a diverse range of educational topics were covered in these studies, there remains a lack of consensus on which topics are most effective in reducing anxiety among general surgical patients.

Among the commonly addressed educational topics were those related to the anesthetic process, covering various types of anesthesia, surgical risks and benefits, and potential complications [19]. Other educational interventions focused on providing pre- and post-operative instructions, acquainting patients with the operating room environment, and explaining events during the post-operative hospital stay, including information on pain management and standard patient education [20]. Additionally, some educational programs centered on educating patients about their diagnosis, treatment plan, and the upcoming surgical procedure [21].

Barriers to effective patient education about anesthesia:

One of the primary challenges hindering patient education is the inadequate knowledge and skills of nurses, manifesting in various forms: a lack of understanding among nurses regarding the significance of patient education, a belief held by some nurses that such educational efforts do not significantly impact the quality of treatment, and a general lack of enthusiasm among nurses towards engaging in educational activities of this nature [22]. It is observed that a limited number of nurses are well-versed in the fundamental principles and methodologies of patient education; for example, many nurses struggle with effective communication with their patients, thereby impeding the delivery of comprehensive patient

education. Additionally, patients' lack of readiness both physically and emotionally serves as a substantial obstacle to effective patient education. Physical ailments coupled with associated anxiety can diminish patients' receptiveness to learning or hinder their recognition of the importance of education in managing their health conditions. Furthermore, Beagley (2012) [23] identifies factors such as literacy levels, cultural differences, language barriers, and physiological considerations as additional challenges that caregivers face in imparting information to patients, highlighting the importance for nurses to account for diverse learning styles among patients to determine the most suitable approaches for preparing and educating them.

Consequences of poor patient education about anesthesia:

Insufficient patient knowledge concerning anesthesia can lead to severe outcomes such as brain injury, mortality, and consciousness during general anesthesia. When patients lack adequate information about the potential risks and adverse effects of anesthesia, they may struggle to make well-informed decisions regarding their medical treatment [24]. This dearth of comprehension may result in heightened levels of anxiety and apprehension surrounding the anesthesia procedure, subsequently impacting the patient's overall journey and recovery process. Moreover, individuals who are unaware of the possible complications associated with anesthesia may fail to identify warning signals or effectively communicate with their healthcare providers before and after surgery. Consequently, this could lead to treatment delays or even critical medical crises. It is imperative for healthcare professionals to enlighten patients about anesthesia to guarantee their safety and welfare throughout the surgical journey. Educating patients about anesthesia falls within the educational obligations of professional nurses, who are tasked with ensuring that patients possess a thorough understanding of the anesthesia process. This responsibility encompasses elucidating the various anesthesia options available, discussing potential risks and side effects, confirming patients' comprehension of the risks and benefits of anesthesia prior to treatment initiation, and addressing any queries or apprehensions they might have [25].

Conclusion:

In conclusion, the role of nurses in patient education about anesthesia is crucial for ensuring optimal patient outcomes and safety throughout the surgical journey. Effective preoperative education provided by nurses can lead to a reduction in patient

anxiety, improved understanding of procedures, enhanced postoperative pain management, and overall satisfaction with the treatment process. Despite the challenges and barriers faced by nurses in educating patients about anesthesia, such as inadequate knowledge and skills, cultural differences, and patient readiness, it is essential to address these issues to guarantee that patients are well-informed and prepared for surgery. Poor patient education about anesthesia can have severe consequences, including increased anxiety, treatment delays, and potential medical crises. By employing diverse educational techniques, collaborating with interdisciplinary teams, and focusing on patient-centered care, nurses can play a pivotal role in empowering patients to make informed decisions regarding anesthesia, ultimately elevating the standard of care and improving patient outcomes in surgical settings.

References:

1. Niedzielski JK, Oszukowska E, Słowikowska-Hilcz J. Undescended testis - current trends and guidelines: a review of the literature. *Arch Med Sci.* 2016;12(3):667–677. doi: 10.5114/aoms.2016.59940 [PMC free article] [PubMed] [CrossRef] [Google Scholar]
2. Burgess LC, Arundel J, Wainwright TW. The effect of preoperative education on psychological, clinical and economic outcomes in elective spinal surgery: a systematic review. *Healthcare.* 2019;7:1. doi: 10.3390/healthcare7010048 [PMC free article] [PubMed] [CrossRef] [Google Scholar]
3. Elbashier IM, Shaaban KMA. Qualitative evaluation for cardiac surgical patients experience during psycho-educational sessions in Ahmaed Gassim cardiac center-2017. *Nurs Primary Care.* 2018;2(6):1–4. doi: 10.33425/2639-9474.1087 [CrossRef] [Google Scholar]
4. Thorell A, MacCormick A, Awad S, et al. Guidelines for perioperative care in bariatric surgery: enhanced recovery after surgery (ERAS) society recommendations. *World J Surg.* 2016;40(9):2065–2083. doi: 10.1007/s00268-016-3492-3 [PubMed] [CrossRef] [Google Scholar]
5. Swartz JS, Amos KE, Brindas M, Girling LG, Ruth Graham M. Benefits of an individualized perioperative plan for children with autism spectrum disorder. *Paediatr Anaesth.* 2017;27(8):856–862. doi: 10.1111/pan.13189 [PubMed] [CrossRef] [Google Scholar]
6. Pelkowski JN, Yoon SL, Adams S. Benefits of implementation of preoperative education classes for Hip and knee arthroplasty. *Curr*

- Orthop Pract. 2021;32:112–117. doi: 10.1097/BCO.0000000000000959 [CrossRef] [Google Scholar]
7. Vuong QH. Be rich or don't be sick: estimating Vietnamese patients' risk of falling into destitution. SpringerPlus. 2015;4(1):529. doi: 10.1186/s40064-015-1279-x [PMC free article] [PubMed] [CrossRef] [Google Scholar]
 8. Vuong QH. Sociodemographic factors influencing Vietnamese patient satisfaction with healthcare services and some meaningful empirical thresholds. Iran J Public Health. 2018;47(1):119–126. [PMC free article] [PubMed] [Google Scholar]
 9. International Federation of Nurse Anesthetists IFNA International Federation of Nurse Anesthetists. 2022. [[cited 2020 Mar 20]]. [Internet] c. Available from: <http://ifna.site/about-ifna/> [Ref list]
 10. Brasil. Lei n. 12.842, de 10 de julho de 2013 . Dispõe sobre o exercício da Medicina. Presidência da República. Casa Civil, Subchefia para Assuntos Jurídicos. Brasília: 2013. [[cited 2020 Mar 25]]. [Internet] Available from: http://www.planalto.gov.br/ccivil_03/_Ato2011-2014/2013/Lei/L12842.htm . [Google Scholar] [Ref list]
 11. Gezer, D., & Arslan, S. (2019). The effect of education on the anxiety level of patients before thyroidectomy. *Journal of PeriAnesthesia Nursing*, 34(2), 265–271. <https://doi.org/10.1016/j.jopan.2018.05.017>.
 12. Amini, K., Alihossaini, Z., & Ghahremani, Z. (2019). Randomized clinical trial comparison of the effect of verbal education and education booklet on preoperative anxiety. *Journal of PeriAnesthesia Nursing*, 34(2), 289–296. <https://doi.org/10.1016/j.jopan.2018.06.101>
 13. Ruiz Hernández, Carolina et al. "Effectiveness of nursing interventions for preoperative anxiety in adults: A systematic review with meta-analysis." *Journal of advanced nursing* vol. 77,8 (2021): 3274-3285. doi:10.1111/jan.14827
 14. Effectiveness of nursing interventions for preoperative anxiety in adults: a systematic review with meta-analysis. Hernández CR, Gómez-Urquiza JL, Pradas-Hernández L, Roman KV, Suleiman-Martos N, Albendín-García L, Cañadas-De la Fuente GA. *J Adv Nurs*. 2021;77:3274–3285. [PubMed] [Google Scholar]
 15. Effects of educational intervention on state anxiety and pain in people undergoing spinal surgery: a randomized controlled trial. Lee CH, Liu JT, Lin SC, Hsu TY, Lin CY, Lin LY. *Pain Manag Nurs*. 2018;19:163–171. [PubMed] [Google Scholar]
 16. Nurse-delivered patient education in the acute care setting: challenges and opportunities. Karl JI, Mion LC. *Geriatr Nurs*. 2020;41:187–190. [PubMed] [Google Scholar]
 17. Increased preoperative knowledge reduces surgery-related anxiety: a randomised clinical trial in 100 spinal stenosis patients. Kesänen J, Leino-Kilpi H, Lund T, Montin L, Puukka P, Valkeapää K. *Eur Spine J*. 2017;26:2520–2528. [PubMed] [Google Scholar]
 18. Effects of psychoeducational care for adult surgical patients: a meta-analysis of 191 studies. Devine EC. *Patient Educ Couns*. 1992;19:129–142. [PubMed] [Google Scholar]
 19. Harms MS, Elisabet C. A Nurse Led Pre-Operative Patient Education Intervention and its Effect on Anxiety Levels in General Surgical Patients.
 20. Aasa, A., Hovback, M., & Bertero, C. M. (2013). The importance of preoperative information for patient participation in colorectal surgery care. *Journal Of Clinical Nursing*, 22(11-12), 1604-1612. <https://doi.org/10.1111/jocn.12110>
 21. Conner JO, Pope DC. Not just robo-students: Why full engagement matters and how schools can promote it. *Journal of youth and adolescence*. 2013 Sep;42:1426-42.
 22. Aghakhani, N., Nia, H. S., Ranjbar, H., Rahbar, N., & Beheshti, Z. (2012). Nurses' attitude to patient education barriers in educational hospitals of Urmia University of Medical Sciences. *Iranian journal of nursing and midwifery research*, 17(1), 12–15.
 23. Robinson M, Gilmartin J. Barriers to communication between health practitioners and service users who are not fluent in English. *Nurse Educ Today*. 2002;22(6):457–65. [PubMed] [Google Scholar] [Ref list]
 24. Ribeiro C.S., de Barros Mourão J.I. Anesthesiologist: the patient's perception. *Braz. J. Anesthesiol*. 2015;65(6):497–503. [PubMed] [Google Scholar] [Ref list]
 25. Djagbletey R., Aryee G., Essuman R., Ganu V., Darkwa E.O., Owoo C., et al. Patients' knowledge and perception of anaesthesia and the anaesthetist at a tertiary health care facility in Ghana. *South. Afr. J. Anaesth. Analg*. 2017;23(1):11–16. [Google Scholar] [Ref list]