JHNS
Journal of Holistic Nursing Science
E-ISSN: 2579-7751 P-ISSN: 2579-8472
Journal of Holistic Nursing Science

Article journey
Submitted
14/10/2025
Revised
14/12/2025
Accepted
14/12/2025
Online first
14/4/2026

CONCEPT ANALYSIS

Justice for patients undergoing general anesthesia: A concept analysis

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https://doi.org/10.31603/jhns.v13i1.15022

Abstract
Patients under general anesthesia experience a temporary loss of consciousness, autonomy, and the ability to self-advocate, leaving their safety entirely dependent on the perioperative team. In this setting, the principle of justice is often overshadowed by beneficence and non-maleficence. However, the concept of justice as it pertains to patients in this condition remains under-researched and has not been adequately explored in the existing literature. Therefore, this analysis aims to clarify and operationalize the concept of justice for patients undergoing general anesthesia. The process follows the eight-step framework developed by Walker and Avant. A comprehensive literature search was conducted across six online databases: PubMed, Scopus, ScienceDirect, Sage Journals, ProQuest, and Semantic Scholar. Included articles were published between 2015 and 2025 and specifically addressed the concept of justice for patients under general anesthesia. The PRISMA 2020 flow diagram was utilized to guide the article selection process. In total, 16 relevant articles were included for analysis based on the study's objectives. Data were analyzed using thematic synthesis to identify the defining attributes, antecedents, consequences, and empirical referents of justice. In the context of general anesthesia, justice is an ethical obligation to provide fair, impartial, and proportionate care that grounded in respect for patient dignity and rights, and reinforced by accountability in clinical decision-making. Key antecedents include patient vulnerability under anesthesia, clinical uncertainty, and resource constraints. The consequences encompass patient safety, professional integrity, and a strong organizational safety culture. To translate the concept into practice, the Perioperative Equity and Safety (PES) bundle is proposed. Given that justice is a fundamental ethical mandate in anesthesia care, it must be integrated into the functional reality of perioperative practice rather than remaining a theoretical ideal. The PES bundle provides an approach for embedding these principles into perioperative practice, strengthening safety and ethical accountability.

Keywords: Concept analysis, general anesthesia, justice, nursing practice, patient safety

Introduction

General anesthesia (GA) constitutes a clinical procedure that renders patient in a condition of complete vulnerability (Agledahl & Pedersen, 2024; Shinde et al., 2021). GA is administered for major, long, or complex surgeries requiring complete unconsciousness, immobility, and pain control (Lin et al.,2025). Common procedures include heart surgeries, brain surgery, organ transplants, abdominal surgeries (like gallbladder removal), major joint replacements (hip/knee), and emergency surgeries (Royal College of Anaesthetists [RCoA], 2019). Integrating the latest innovations and best practices in anesthesia care (e.g., GA) is essential for optimizing patient outcomes (Fu et al., 2025). This involves adopting advanced monitoring technologies and personalized pharmacological protocols to minimize complications and accelerate recovery (Söğüt et al., 2026). Following the latest advancements in perioperative care, clinical teams can ensure safer perioperative experiences and improved long-term health for their patients (Kristensen et al., 2025). However, the pharmacological induction of this state renders the patient devoid of consciousness, autonomy, and the capacity for self-advocacy (Montupil et al., 2023). As a result, the perioperative team is fully responsible for keeping their physiological homeostasis and keeping patient safe (Bellini et al., 2025). This complete dependence establishes a distinct ethical environment, necessitating a closer examination of justice is upheld in practice.

Though typically secondary to beneficence and non-maleficence, justice is the most intricate and critical principle when addressing potential inequities in resource distribution and healthcare access (Munthe et al., 2021). The growing emphasis on justice in anesthesiology is evident across several interconnected domains (Diallo et al., 2022). A primary concern is distributive fairness, particularly regarding the equitable allocation of finite perioperative resources (Kelly et

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Journal of Holistic Nursing Science
E-ISSN: 2579-7751 P-ISSN: 2579-8472

al., 2022). Factors that go beyond just clinical ones often affect decisions about scheduling operating rooms (OR), assigning post-anesthesia intensive care beds, and providing advanced hemodynamic monitoring systems (Chen et al., 2024; Larsson et al., 2021). As stated earlier, the circumstances necessitate an ethical contemplation, interrogating whether patients from diverse socio-economic strata and insurance statuses are provided equivalent access to resources (Sikstrom et al., 2022; Banerjee, 2020). In the OR, justice is operationalized through specific nursing interventions (Beriso et al., 2024). For instance, ensuring equitable access to monitoring technologies and serving as a steadfast advocate for vulnerable patients who cannot communicate the needs (Olejarczyk & Young, 2026). Additionally, the domain of social justice illustrates how unconscious biases within clinical teams can lead to discrepancies in the quality of care delivered (Alhaj et al., 2024; Job et al., 2024). Studies demonstrate that a patient's demographic profile can shape clinical decision-making (Panagides & Keim-Malpass, 2025; Boissoneault et al., 2016). This influence extends across various clinical domains, including the analgesic protocols and the frequency of hemodynamic monitoring in the perioperative room (Harbell et al., 2023; Rowland et al., 2024). For patients unable to articulate the needs, these biases can lead to injustices that are both pervasive and difficult to assess. Injustice represents more than a distinct ethical breach; it is a determinant of patient safety and clinical outcomes (Benda et al., 2022; McCrum et al., 2022; Sakowitz et al., 2024).

Furthermore, practices that overlook justice and equity erode public confidence in healthcare systems and compromise the ethical foundation of the healthcare profession including nurses (Campbell, 2025; Lee et al., 2024; Shukla et al., 2025). A critical evaluation of how justice is interpreted, implemented, and preserved within perioperative care is essential for advancing a clinical practice that balances technical proficiency, ethical awareness and respect for human dignity. Furthermore, a rights-based framework positions the anesthesia team as the patient's primary advocate, responsible for upholding the integrity of informed consent and safeguarding both privacy and dignity during the intraoperative period. Consequently, a comprehensive analysis of justice in the context of general anesthesia has emerged as a vital scholarly priority. Previous scholarship has prioritized the principles of beneficence and non-maleficence (Brown et al., 2021) alongside patient safety (Wichsová & Horakova, 2018), this emphasis has resulted in a relative oversight of distributive justice. Specifically, the ethical challenges confronting surgical patients—who are unconscious and entirely dependent on the perioperative team—remain insufficiently explored in both empirical and theoretical frameworks (Rooddehghan et al., 2019).

Although the ethical dimensions of perioperative care have garnered significant academic scrutiny, there remains a paucity of literature specifically concept analysis that articulates and evaluates the principle of justice for patients undergoing general anesthesia. This significant gap underscores the necessity for a thorough concept analysis to explain and operationalize the definition of justice within the surgical environment. Consequently, this analysis aims to evaluate the uses of justice for patients undergoing general anesthesia, a critical inquiry that addresses the ethical "blind spot" inherent in the care of incapacitated individuals. Given that these patients experience a total loss of autonomy, a rigorous framework is required to warrant their rights are never subordinated to institutional efficiency. With deconstructing the multi-dimensional nature of justice, this article provides the conceptual tools required to identify and mitigate latent biases that frequently skew perioperative resource allocation. Furthermore, establishing a definition of justice within the OR facilitates the development of objective metrics to evaluate healthcare equity, moving the profession beyond abstract moral ideals toward measurable clinical accountability. The analysis also explores the symbiotic relationship between justice and patient safety, arguing that inequities are not merely ethical failures but are structural risks that correlate with adverse postoperative outcomes and prolonged recovery times. Finally, this scholarly endeavor seeks to redefine the anesthesia provider's role as a proactive guardian of equity. By doing so, it ensures that advancements in pharmacological and technical proficiency are matched by a steadfast commitment to the moral preservation of human dignity.

Method

This concept analysis follows the methodology established by Walker and Avant (Walker & Avant, 2005), a framework extensively utilized in nursing and healthcare literature. The framework enables a methodical identification of the concept's defining attributes, antecedents, consequences, and empirical referents (Walker & Avant, 2013). The methodology was selected for its proven ability to refine the understanding of abstract clinical concepts, a utility well-documented in previous research. For instance, a concept analysis on treatment adherence (Tang et al., 2024), health equity (Lewis et al., 2023), and other published literature. This approach facilitates those complex ethical principles are translated into actionable frameworks for the perioperative setting. The method consists of eight steps as follows selecting a concept, determining the purposes of analysis, identifying of all uses of the concept, determining of the

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E-ISSN: 2579-7751 P-ISSN: 2579-8472

defining attributes, identifying a model case, identifying additional case, identifying antecedents and consequences, and finally, defining empirical referent for the concept (Walker & Avant, 2013).

In conducting this analysis, the authors performed a comprehensive literature search spanning the decade from 2015 to 2025. Studies were included if they discussed the concept of justice or related ethical concepts such as equality and procedural justice in the context of general anesthesia, perioperative care, or the operating theatre. Articles involving patients undergoing surgery or perioperative healthcare professionals, as well as those discussing clinical decision-making, resource allocation, patient safety, or patient advocacy, were considered for inclusion. Publications that met the criteria were articles in English and available in full text. Studies are excluded if they do not substantively address equity, are conducted outside the context of anesthesia or the operating theatre (e.g., community nursing), focus on ethical issues unrelated to unconscious patients, or are non-scientific publications such as short editorials and opinions. The search utilized six prominent electronic databases within the health and social sciences, specifically PubMed, Scopus, ScienceDirect, SAGE Journals, ProQuest, and Semantic Scholar. A sensitive search strategy was developed, employing a combination of Medical Subject Headings (MeSH) terms and keywords integrated via Boolean operators (AND/OR) to guarantee comprehensive retrieval. There were three conceptual domains for the terms or keywords: *the idea of justice (justice, equity, fairness), the context of anesthesia (anesthesia, perio perative care, operating room), and the population of interest (patient)*.

During the initial phase of the literature search, the authors identified a total of 26,353 articles across the selected databases. Subsequently, 24,548 records were excluded through the application of search limiters, specifically filtering for open-access and full-text availability. Following this preliminary refinement, the remaining 1,805 articles underwent a secondary screening process, resulting in the exclusion of 1,776 papers based on title and abstract reviews; primary reasons for removal included a lack of relevance to ethical themes or the presence of duplicate entries across multiple journals. Thereafter, 29 articles were assessed for eligibility, of which 10 were excluded because they did not specifically address the concept of justice within nursing practice. Transitioning to the final stage of evaluation, the remaining 19 candidates were subjected to a rigorous full-text review, leading to the exclusion of an additional 3 articles that failed to address justice specifically within the perioperative context. Conclusively, 16 relevant articles were selected for inclusion, forming the evidentiary basis for this concept analysis **(Figure 1)**. To minimize potential bias, both the screening and full-text review stages were carried out independently by two researchers. The quality appraisal was performed by considering analysis purposes, methodology, participants, results and recommendations to be applied in the context of justice for patients undergoing general anesthesia. Quality assessments were accomplished on all studies. Each article was assessed in its entirety to acknowledge how justice was integrated in all the stages of perioperative nursing.

An examination of the sixteen chosen studies was conducted utilizing Walker and Avant's eight-step approach. Justice was chosen as the main idea in order to make its meaning clearer in the context of anesthesia care. The analysis examined the use of the concept in the literature and identified its principal defining characteristics. To delineate conceptual limits, a model case was constructed, underpinned by both borderline and contrary cases. The model, borderline, and contrary cases are hypothetical scenarios aimed to show the key features and limits of the notion, as Walker and Avant's methods suggest. After that, the concept's antecedents and implications were found, and then empirical referents were defined as quantitative indicators (Walker & Avant, 2021). The results from all eight analytical steps were synthesized to provide a thorough relevant operational definition of justice in anesthesiology. Thematic synthesis was conducted through a methodical, multi-phase procedure. Initially, the authors extracted all qualitative data pertaining to the principle of justice from each selected study. Subsequently, an inductive approach was employed to generate primary codes, effectively encapsulating recurring ethical concepts and clinical practices. Building on this foundation, similar codes were aggregated into higher-order themes categorized by the defining attributes, antecedents, and consequences of justice. Finally, these themes were iteratively refined through constant comparative analysis to ensure internal coherence and alignment with Walker and Avant's framework.

Results

Selecting a concept

The first step in conducting a concept analysis is selecting the concept (Walker & Avant, 2005). Justice was chosen in this analysis due it embodies a core tenet of bioethics and the practical implications of which remain unclear in clinical nursing contexts. The idea is important under anesthesia, because patients are dependent on others and more vulnerable parameters. The implementation of justice is often impeded by challenges such as the fair allocation of scarce resources, the insidious impact of implicit bias, and the obligation of the professional team to serve as the patient's

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Journal of Holistic Nursing Science
E-ISSN: 2579-7751 P-ISSN: 2579-8472

advocate. Unclear ideas about what justice means can lead to inconsistent practices and make health outcomes even worse.

Determining the purposes of analysis

The second step is determining the purposes of the analysis, particularly within the context of nursing practice (Walker & Avant, 2013). The analysis aims to connect theory and practice by clearly defining the concept's key features, origins, and effects. This objective is accomplished by elucidating conceptual difficulties, identifying the distinguishing characteristics that separate just actions from unjust ones, and differentiating justice from other associated ethical ideals. The resulting operational definition will support ethical decision-making, improve education, and encourage research on fairness in perioperative care. Furthermore, it establishes a theoretical basis for creating clinical guidelines and instructional frameworks. These resources will enable professionals to address ethical challenges more confidently and promote equity throughout perioperative practice.

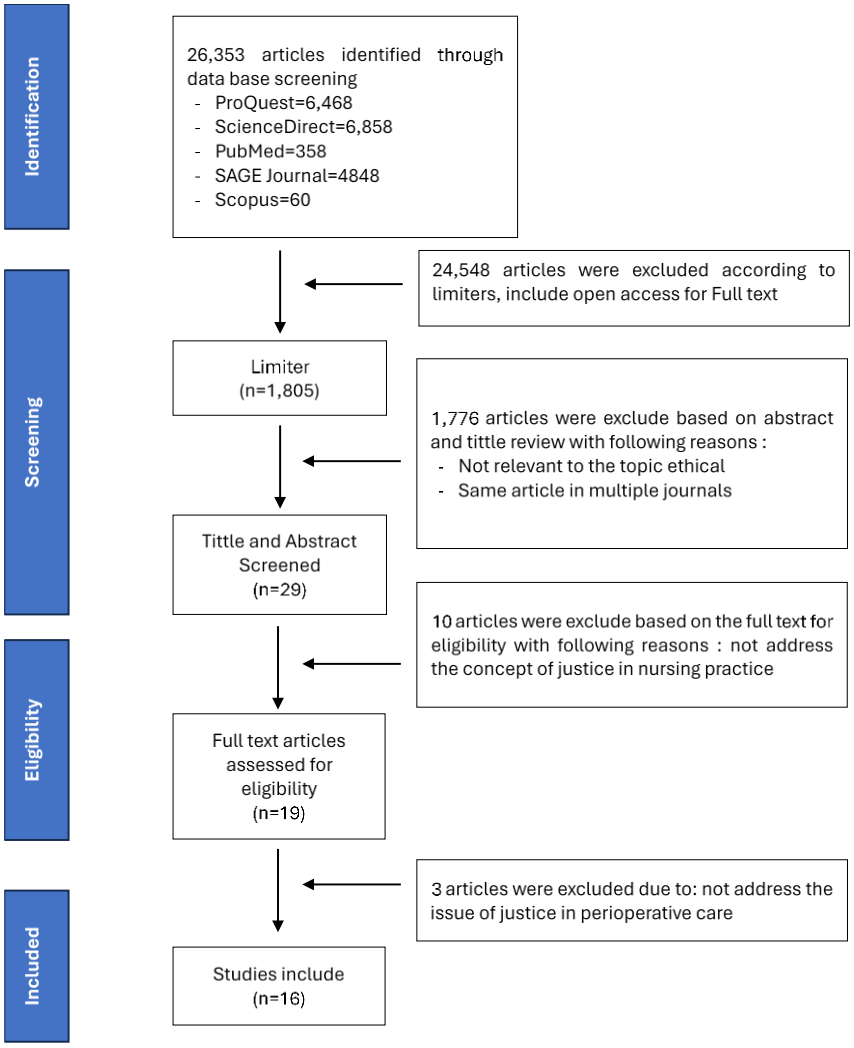

Figure 1. Stages of the search process.

Identifying of all uses of the concept

The next step in conducting a concept analysis is identifying of all uses of the concept (Walker & Avant, 2013). A synthesis of sixteen studies reveals that justice within perioperative healthcare is a construct encompassing four overarching domains **(Table 1)**. These four domains are bioethics, clinical practice, health policy and organization, and socio-legal issues and human rights. Collectively, these domains form a comprehensive framework for equitable, safe, and dignified anesthesiology care practice. Within the bioethical domain, justice is recognized as a fundamental moral principle (Rawlings et al., 2021). This principle can be further articulated through three interrelated dimensions such as distributive justice as concerns the fair allocation of medical resources (Meier, 2022), procedural justice that relates to transparency and fairness in decision-making processes (Juujärvi & Tetri, 2025), and social justice that emphasizes the removal of structural barriers to ensure equitable access to healthcare (Matwick & Woodgate, 2017; Valderama-Wallace, 2017). Parallel to this, the domain of clinical practice reflects the concrete translation of these ethical principles into everyday care (Aghamohammadi et al., 2021). This involves advocating on behalf of patients unable to express their needs (Abbasinia et al., 2020; Nsiah et al., 2019a), prioritizing interventions according to clinical urgency (Rawlings et al., 2021), and promoting equity in the quality of care (Schroeter et al., 2017; Sillero et al., 2023). Justice serves as a macro-level guiding principle in health policy (Abu, 2025) and establishes the ethical basis for resource distribution, particularly during crises (Meier, 2022). Furthermore, it facilitates the development of hospital accreditation criteria that prohibit discriminatory treatment (Schroeter et al., 2017). This principle also underpins health insurance policies designed to ensure equitable access to surgery and anesthesia (Matwick & Woodgate, 2017; Valderama-Wallace, 2017). Simultaneously, the socio-legal arena includes important issues of law and professional responsibility (Juujärvi & Tetri, 2025). This encompasses the protection of the patient's fundamental right to care without discrimination (Abbasinia et al., 2020; Nsiah et al., 2019b), the promotion of equity during the informed consent process (Rawlings et al., 2021), and

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E-ISSN: 2579-7751 P-ISSN: 2579-8472

the maintenance of accountability standards in cases of malpractice or negligence (Aghamohammadi et al., 2021). These four areas show that justice is not a single or fixed idea, but a complex idea whose meaning changes depending on how it is used. A synthesis of these fundamental aspects is needed to construct a cohesive and thorough definition of its principal qualities.

Table 1. Study finding.

No	Authors, years	Research method	Finding and relevancies to the concept
1	Matwick & Woodgate, 2017	Concept analysis	Social justice is a core value of nursing provide theoretical foundation.
2	Estime et al., 2021	Narrative review	A Diversity, Equity, and Inclusion (DEI) a framework support equitable, inclusive, and bias-free anesthesia care.
3	Rawlings et al., 2021	Ethical analysis	Health resources must be distributed fairly and transparently for justice distribution.
4	Schroeter et al., 2017	Ethical guideline	Perioperative guidelines emphasize patient dignity, safety, privacy, advocacy, and ethical practices.
5	Sillero et al., 2023	Qualitative study	Perioperative nurses face ethical dilemmas and moral distress that demonstrates the importance of fairness in ethical decision-making and resource allocation.
6	Abbasinia et al., 2020	Concept analysis	Patient advocacy protects patients' rights as rights-based advocacy for patients who are unconscious.
7	Aghamohammadi et al., 2021	Phenomenological study	Nursing ethics encompass respect for the dignity, professional responsibility supporting the principle of justice.
8	Juujärvi & Tetri, 2025	Cross-sectional study	Nurses use care-based reasoning and justice-based reasoning demonstrating the integration of fairness into ethical decision-making.
9	Nsiah et al., 2019a	Qualitative study	Patient advocacy improves the quality of care, safety, along with promoting equity in the protection of vulnerable patients.
10	Nsiah et al., 2020b	Qualitative study	Barriers to patient advocacy include organizational and cultural factors.
11	Meier, 2022	Ethical-Philosophical Analysis	The theory of distributive justice serves as the basis for resource allocation during a crisis.
12	Burger et al., 2022)	Concept Analysis	Reproductive justice highlights structural injustices and violations of reproductive health rights.
13	Nhunzvi et al., 2020	Scoping Review	Occupational justice emphasizes equality, social inclusion, and human rights.
14	Abu, 2025	Constructivist Grounded Theory	Nursing education needs to incorporate the principle of social justice.
15	Valderama-Wallace, 2017	Critical Discourse Analysis	The nursing document emphasizes the importance of social justice and health equity.
16	Garcia, 2021	Theory Analysis	Social justice in nursing emphasizes human rights and the rejection of structural injustice.

Determining of the defining attributes

The further step is determining of the defining attributes of the concept being analyzed (Walker & Avant, 2013). An examination of the definitions of justice presented in the literature led to the identification of several defining attributes. These include the provision of fair and equitable treatment, a consistent commitment to equality, the practice of impartiality in clinical decision-making, the equitable distribution of resources, opportunities, and responsibilities, a deep respect for human rights and for the inherent dignity of every individual, and a moral and professional responsibility to challenge inequitable systems and to uphold non-discrimination in all aspects of care.

When put together, these traits make it possible to come up with a more precise and relevant concept of justice in the context of anesthesia care. Justice is a basic moral value and principle that means treating everyone fairly, equally,

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and without bias. This principle requires that resources, opportunities, advantages, and burdens be shared fairly, taking into account the unique needs and differences of each person or group, especially when there isn't enough of them. Furthermore, justice embodies a great regard for the human rights and dignity of each individual, guaranteeing their agency and autonomy in decision-making. The notion of justice transcends individual clinical interactions to include societal and institutional aspects. It is a moral obligation to confront and reform systems that sustain inequality. The main goal is to create a society where everyone, no matter who they are or what their situation is, has the same chance to be healthy and well-being.

Identifying a model case

Walker and Avant explained the use of a model case because it serves as the "gold standard" for the concept being studied (Walker & Avant, 2005). It is an essential step in methodology for reaching clarity and providing a practical anchor for the abstract attributes identified during the analysis. The following clinical scenario takes place in a university teaching hospital where two complicated surgeries are happening at the same time.

The first case in OR 1 involves a 35-year-old female with a history of psychological trauma and a severe phobia of hospitals. She is scheduled for Total Intravenous Anesthesia (TIVA), a technique associated with a slightly higher risk of intraoperative awareness. Given her medical and mental health history, the patient has explicitly requested Bispectral Index (BIS) monitoring to ensure she remains in a deep state of anesthesia throughout the procedure. In OR 2, an 80-year-old male is scheduled for major abdominal surgery. He is hemodynamically fragile with a low cardiovascular reserve. For patients in this demographic, Bispectral Index (BIS) monitoring is strongly recommended to precisely titrate the depth of anesthesia, thereby preventing severe hypotension and prolonged recovery times associated with anesthetic overdose. An ethical and practical dilemma arose when the BIS monitor in OR 1 malfunctioned beyond immediate repair before the team in OR 2 had deployed their own sensor. An inventory check showed that there was just one disposable BIS sensor in the whole operating suite. There were instantly competing claims for this last resource. The anesthesiologist in OR 1 suggested using BIS monitoring to respect the patient's freedom and keep them from having significant mental suffering. On the other hand, the staff at OR 2 said that the sensor was necessary to keep their severely vulnerable patient stable. The senior consultant anesthetist was asked to look at both cases and make a final decision. The consultant determined that while the elderly patient's physiological parameters could be adequately managed through conventional hemodynamic monitoring, the risk of significant and iatrogenic psychological trauma in the initial patient constituted the more pressing ethical and clinical issue. The extra challenge of finding out if a patient is cognizant during TIVA without neuromonitoring made the choice to put the patient in OR 1 even stronger.

The attributes included fair and proportional distribution of resources, impartiality without discrimination, patient-rights-based advocacy, and professional and systemic accountability. These attributes demonstrate the ideal application of justice for patients under general anesthesia, reinforcing it as an essential ethical foundation of perioperative practice.

Identifying additional case

The additional cases in this concept analysis are borderline and contrary cases. The borderline case incorporates many of the defining attributes of the concepts being analyzed (Walker & Avant, 2013).

Two surgical operations were concurrently performed in a tertiary hospital environment. In OR 1, a patient was receiving TIVA, a method that requires BIS monitoring to lower the chance of the patient becoming conscious during the procedure. In OR 2, a weak old person was also scheduled for surgery. To lower the risk of problems caused by too much anesthesia depth, BIS monitoring is suggested. When it became clear that the hospital's central supply unit only had one BIS sensor, it created an ethical and practical problem. The anesthesiologist in charge of OT 1 knew that there weren't many of these. She also knew that the hospital's most important and experienced surgeon was watching her case. The anaesthetist took the last sensor for her patient without asking anyone else because she thought it was important to show the greatest standard of care in front of her senior colleague and because her main concern was the safety of her own patient. This action was executed without previous consultation with the clinical staff in OT 2 or a governing authority. Her decision was based primarily on her belief that her patient posed a bigger clinical danger, along with a desire to do an excellent job professionally. In the end, the patient in OT 1 had the treatment without any problems. The patient in OT 2 also had a good surgery because a skilled anesthetist used established monitoring protocols to take care of them.

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E-ISSN: 2579-7751 P-ISSN: 2579-8472

This case is classified as a borderline case because it meets only some of the attributes of the concept of justice. Although the decision made had clinical justification, the lack of impartiality, transparency, and systemic accountability indicates that justice has not been realized. This analysis confirms that justice in perioperative care is determined not only by the final outcome but also by an ethical, collaborative, and unbiased decision-making process.

Conversely, the contrary case serves as an example where the defining attributes are completely absent, providing a clear antithesis to the model case (Walker & Avant, 2013). In a profit-oriented private hospital, two surgeries were proceeding simultaneously. In OR 1, a patient covered by national health insurance was undergoing a cholecystectomy, while in OR 2, an affluent expatriate was undergoing elective cosmetic surgery. Intraoperatively, the patient in OR 1 experienced an unexpected, significant hemorrhage requiring an immediate blood transfusion. Simultaneously, the anesthetist in OR 2 requested several units of blood to be held on standby, despite no signs of bleeding, citing the patient's 'VIP package' which guaranteed immediate resource availability. Aware that the required blood type was in short supply, the blood bank coordinator consulted the Head of Surgery. Due to financial considerations and the hospital's reputation among high-end clientele, the Head of Surgery prioritized the delivery of blood to OR 2 for standby. Consequently, the team in OR 1 was instructed to manage the hemorrhage with crystalloid fluids and vasopressors alone. This led to a 20-minute delay in blood administration, during which the patient suffered from severe hypotension and hypovolemic shock. Although the patient survived, the prolonged hypotensive episode resulted in acute kidney injury (AKI).

This case demonstrates a complete lack of fairness in perioperative care. Decisions based on financial gain rather than clinical need led to discrimination, violations of patients' rights, and a failure of professional responsibility. This case stands in stark contrast to the model case and underscores that fairness is a fundamental ethical principle that must be upheld in the practice.

Identifying antecedents and consequences

Antecedents are events or related events that must occur or exist before an idea or concept is realized (Walker & Avant, 2013). Consequences are the incidents occurring as a direct effect of the concept being implemented (Walker & Avant, 2013). The discussion about justice starts with the events or situations that led to the clinical predicament. This principle comes up because of resource disputes and clinical deterioration that need to be dealt with right now (Cousley et al., 2014; Shinde et al., 2021; Wang et al., 2020). At this point, patients are defenseless because they have lost consciousness and their protective reflexes. This means that they are dependent on the anesthetic team for their health (Agledahl & Pedersen, 2024; Cousley et al., 2014). This situation offers nurses and doctors complete power to make decisions as moral agents in charge of keeping patients safe (Agledahl & Pedersen, 2024). The core of this phenomena resides in the fundamental principle of justice, which is expressed through the delivery of equitable, fair, and unbiased treatment in all healthcare decisions. Justice requires the fair allocation of resources, opportunities, and obligations, free from structural disparities or discrimination rooted in individual origins. In addition, this trait includes a strong respect for human rights and dignity, as well as a professional duty to fight against unfair systems in order to preserve the rights of weak patients. Using these traits consistently will have a number of good effects that are very important to the healthcare system. For patients, fairness is directly linked to keeping their bodies stable, lowering the chance of problems, and improving the overall results of surgery (Murphy & Brull, 2010; Poon et al., 2020). This increases service standards and promotes a strong safety culture across the board (Braham et al., 2014; Yoon et al., 2020). Lastly, for nurses, following the principle of fairness is a sign of professional integrity that can stop bad ethical problems from happening (Braham et al., 2014) **(Figure 2)**.

Defining empirical referent for the concept

Empirical referents are observable phenomena in association with the defining or critical attributes of the concept (Walker & Avant, 2005). Regarding the attribute of equitable and proportional distribution, justice can be evaluated via medical record audits designed to scrutinize the documented allocation of critical resources (e.g., blood products, scarce pharmaceuticals, specialized monitoring devices) during emergencies. The main sign is a strong link between how resources are used and objective clinical data, like shock indices or the severity of bleeding, rather than non-clinical criteria like patient demographics or insurance status. Additionally, an examination of the duration from the initiation of a clinical crisis to the implementation of a life-saving action serves as a critical benchmark. Equity is deemed to be attained when there is no significant disparity in waiting times among patient groups from diverse socio-economic

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E-ISSN: 2579-7751 P-ISSN: 2579-8472

backgrounds (Cookson et al., 2016; Lasser et al., 2006; Siciliani et al., 2014). Impartiality and non-discrimination can be assessed through direct observational evaluations of team conduct in the OR. The process emphasizes professionalism, communication, and the uniform application of vigilance for all patients. Statistical assessments of risk-adjusted clinical outcomes, including intraoperative complication rates, offer additional evidence of impartiality when no substantial disparities are observed among demographic groups (Dimick & Ryan, 2014).

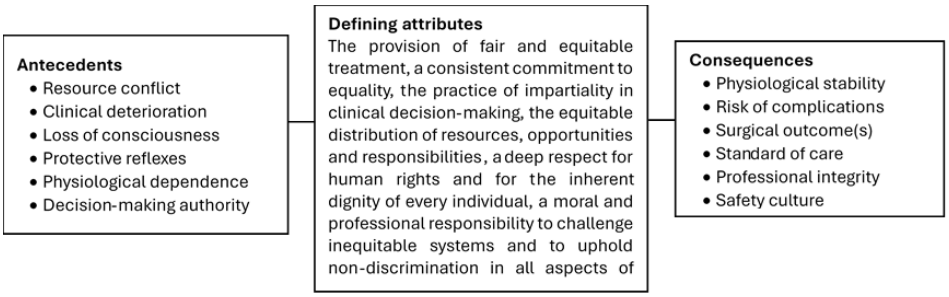

Figure 2. Antecedents, defining attributes, and consequences.

Anonymous staff perception surveys are also useful for finding out if there are any unfair practices in the department (Sexton et al., 2006). Key indicators of rights-based advocacy include adherence to the Surgical Safety Checklist, which is validated through audits of briefings, time-outs, and sign-outs. Furthermore, an examination of incident reports provides evidence of staff interventions specifically aimed at safeguarding patient safety (Okuyama et al., 2014). Furthermore, it is essential to verify informed consent documentation to ensure that all intraoperative procedures align strictly with the patient's preferences and autonomous choices. Lastly, professional responsibility is assessed through the implementation of, and adherence to, evidence-based Standard Operating Procedures (SOPs) for managing resource conflicts and clinical emergencies. Furthermore, the integration of ethics, bias, and equity within clinical practice can be evaluated by reviewing the minutes of Morbidity and Mortality (M&M) meetings for substantive discussions on these topics (de Vos et al., 2023; Dermody et al., 2025; Samost-Williams et al., 2023). The presence and involvement of a hospital ethics committee further illustrates endorsement of ethical decision-making in perioperative settings. These empirical referents facilitate a thorough assessment of justice; however, they exhibit a retrospective and fragmentary nature. This highlights the urgent need for a comprehensive practical instrument, such as a care bundle or ethical framework. Such a tool would function as both an auditing mechanism and a proactive guide. Its primary purpose is to ensure that clinical teams deliver non-discriminatory care while applying principles of justice to resource allocation and patient advocacy.

Discussion

Justice is a fundamental principle and moral value manifested in the provision of fair, equal, and impartial treatment to all individuals. This principle necessitates the equitable distribution of resources, opportunities, benefits, and burdens, which considers the distinct needs and differences of each individual or group, particularly under conditions of scarcity (Meier, 2022; Rawlings et al., 2021). As an ethical foundation, justice encompasses a profound respect for the human rights and dignity of every person. Within a macro-level framework, justice is inherently social and systemic, demanding a responsibility to challenge and transform unjust structures without discrimination (Garcia, 2021). Instruments to ensure justice and equity in anesthetic practice fall into three main domains. The first includes technological tools that support clinical objectivity. Depth of anesthesia monitors such as BIS or Entropy help deliver a titrated anesthetic dose (Poon et al., 2020), reducing risks of excessive depth like hypotension (Yoon et al., 2020) and delayed recovery (Bagle et al., 2023), or insufficient depth that can cause intraoperative awareness (Chhanwal et al., 2022). Neuromuscular transmission monitors provide an objective assessment of muscle paralysis, ensuring precise dosing of neuromuscular blocking agents and confirming full reversal prior to extubation (Naguib et al., 2018). This objective approach is critical in preventing postoperative complications associated with residual blockade (Murphy & Brull, 2010). Advanced hemodynamic monitoring, particularly non-invasive cardiac output monitoring for high-risk patients, provides objective cardiovascular data that allows fluid resuscitation and pharmacological therapy to be administered according to specific physiological requirements rather than clinical assumptions.

The second category covers procedural tools as standardize care. For instance, the WHO Surgical Safety Checklist that requires teams to verify patient identity, procedure, and key risks (Braham et al., 2014; Wangoo et al., 2016). Evidence-based emergency protocols provide a consistent framework for managing crises, preventing decisions from being driven by panic or bias, such as the massive transfusion protocol, difficult airway algorithm, and malignant hyperthermia protocol. Additionally, standardized tools like Situation, Background, Assessment, Recommendation (SBAR) ensure that info passed to the ICU is clear and complete, which helps prevent communication errors (Starmer et

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Journal of Holistic Nursing Science
E-ISSN: 2579-7751 P-ISSN: 2579-8472

al., 2014). The third category encompasses communication strategies and team cultures that promote psychological safety. For instance, Crew Resource Management (CRM) and Team Strategies and Tools to Enhance Performance and Patient Safety (TeamSTEPPS) frameworks provide approaches to dismantle hierarchical barriers and promote open dialogue (Shi et al., 2024). Briefings and debriefings reinforce this culture by ensuring personalized care before surgery and team reflection afterward (McElroy et al., 2024; Skegg et al., 2023). Together, these practices establish a continuous cycle of learning and improvement that enhances the overall quality and safety of perioperative care. The delivery of equitable care within an anesthesiology department requires a comprehensive bundle-based approach. This strategy integrates objective technological support, strict adherence to established clinical protocols, and the cultivation of an open and safety-oriented team culture. A bundle approach refers to a structured healthcare framework that consists of a set of evidence-based interventions which are implemented together as a unified practice (Braham et al., 2014; Poon et al., 2020; Schroeter et al., 2017; Yoon et al., 2020). When these interventions are applied and in combination, they result in clinical outcomes that are better than those achieved when the interventions are performed separately.

To advance justice within surgical care under general anesthesia, the Perioperative Equity and Safety (PES) Bundle is proposed **(Figure 3)**. This framework transforms the abstract ethical principle of justice into concrete and measurable actions that are embedded within routine practice. The bundle consists of four interrelated components, each intended to reinforce and complement the others. The first component, the universal implementation of the Surgical Safety Checklist. The WHO checklist is to be applied to every surgical procedure across its three key phases: Sign In, Time Out, and Sign Out (Braham et al., 2014; Wangoo et al., 2016). This impartial protocol ensures every patient is correctly identified and surgical risks are verified. By following these steps for every case, the team provides fair and equal care regardless of a patient's background or the type of surgery. The second component, the standardization of objective monitoring, seeks to minimize clinical bias and unwarranted variation in practice. This includes the mandatory application of BIS monitoring for all patients receiving TIVA and the consistent use of neuromuscular transmission (NMT) or train-of-four (TOF) monitoring for those administered neuromuscular blocking agents (Blum et al., 2024). Adopting these standards ensures that decisions regarding anesthetic depth and neuromuscular blockade reversal are informed by quantifiable physiological data. In doing so, it promotes a fair, transparent, and evidence-driven standard of perioperative care for every patient (Bagle et al., 2023; Chhanwal et al., 2022). The third component is a structured team communication through mandatory team briefings and debriefings (Schaap et al., 2021). The briefings facilitate proactive planning and collective anticipation of potential challenges. In contrast, the debriefings create opportunities for reflection on performance, teamwork, and communication. By doing so, it ensures that every patient benefit from the collective vigilance and coordinated competence of the perioperative team. The fourth component, compliance audits and periodic feedback, serves as the accountability mechanism underpinning the entire bundle. Regular random audits are conducted to evaluate adherence to the first three components. The results, which include quantitative reports on checklist completion rates, are communicated transparently to all team members. The transparent feedback cycle reinforces the understanding that procedural justice is a shared responsibility which demands continuous monitoring and ongoing evaluation.

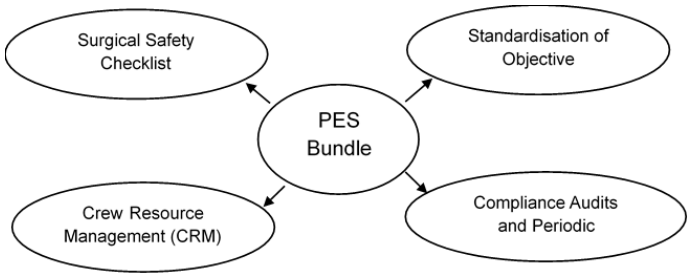

Figure 3. PES Bundle.

Conclusion

Perioperative justice is an equitable treatment and resource allocation grounded in respect for patient dignity and a duty to oppose systemic discrimination. For patients under anesthesia, the loss of autonomy makes justice a foundational element of safety and institutional trust, directly influencing clinical success and the integrity of nursing practice. This analysis demonstrates that the ethical principle of justice can be operationalized through technological integration, standardized procedural protocols, and a team culture rooted in psychological safety. The proposed PES bundle presents a practical framework by synthesizing four critical elements as mentioned above. These components transform the abstract ideal of justice into concrete, measurable, and sustainable actions embedded within the surgical workflow. In the end, justice should be regarded not merely as a moral obligation but as a strategic pillar of high-quality care. Prioritizing its integration into anesthesia nursing policy, education, and research is essential to ensure care that is technically proficient, equitable, and profoundly respectful of patient dignity. Future research should focus on integrating and evaluating the principle of justice within nursing studies, both in the perioperative setting and across other clinical contexts.

Acknowledgments
The authors wish to express their gratitude to Universitas Jenderal Soedirman and the anesthesia nursing staff at Rumah Sakit Umum Daerah (RSUD) Banyumas, Indonesia for the support throughout the completion of this article.

AI statements
The authors declare that no AI or AI-assisted technologies were used in the writing of this manuscript or the collection and analysis of the data.

Author's declaration
All authors have made substantial contributions to complete research.

Availability of data and materials
Data and materials supporting the findings of this study are available upon request to the corresponding author.

Competing interests
The authors declare that there are no conflicts of interest regarding the publication of this article.

Ethical clearance
Ethical review was waived for this article because the process of analysis did not involve any human subjects.

Funding
This analysis was conducted as an independent research initiative and did not receive any financial sponsorship or external grants.

Publishers and journal's note
This concept analysis examines justice, a fundamental ethical principle in nursing practice. Understanding this concept is fundamental as it equips nurses to prevent inequities particularly in the vulnerable context of patients undergoing general anesthesia in the OR. A sincere gratitude goes to the authors for their excellent work in developing this insightful and timely article.

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E-ISSN: 2579-7751 P-ISSN: 2579-8472

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Authors' insight

Key points

- Patients under general anesthesia lose the ability to self-advocate, making the perioperative team the primary guardians of ethical justice and fair treatment.
- Though justice is a fundamental nursing principle, it is often treated as an abstract concept as this analysis seeks to transform it into concrete clinical behaviors.
- Justice in the OR ensures that care standards and hospital resources are distributed impartially, regardless of patient background or clinical complexity.

Emerging nursing avenues

- How do perioperative nurses balance the principle of justice (fairness to all) with beneficence (doing what is best for the individual) when resources are limited in the OR?
- What specific empirical referents can be used to measure whether justice is being successfully upheld for an unconscious patient?
- In what ways can implicit bias among the surgical team compromise the principle of justice for patients who cannot witness or participate in their own care?

How to cite this article (APA style)

Hukum, A. J. A., & Awaludin, S. (2026). Justice for patients undergoing general anesthesia: A concept analysis. *Journal of Holistic Nursing Science, 13*(1), 139–152. https://doi.org/10.31603/jhns.v13i1.15022