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Psychosocial factors as predictors of pre-surgery anxiety among patients awaiting surgery in selected hospitals in Akwa Ibom State

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Abstract

Pre-surgery anxiety remains a significant psychological concern among patients scheduled for surgery, with implications for recovery, treatment outcomes, and patient compliance. In many clinical contexts, including Nigeria, the psychological preparation of patients is often overlooked, with medical professionals focusing more on physiological stability than mental readiness. This study investigated psychosocial factors as predictors of pre-surgery anxiety among patients awaiting surgery in selected hospitals in Uyo, Akwa Ibom State, Nigeria. A total of 152 in-patients (101 males [66.4%] and 51 females [33.6%]), aged 20 to 51 years (M = 39.3), were purposively selected from surgical wards of the University of Uyo Teaching Hospital and St. Luke's Hospital, Anua. A cross-sectional survey design was adopted. Four standardized psychological instruments were used: the Rosenberg Self-Esteem Scale, the Multidimensional Scale of Perceived Social Support, the Santa Clara Strength of Religious Faith Questionnaire, and the State Sub-scale of State-Trait Anxiety Inventory (STAI Y-1). Data were analyzed using descriptive statistics and multiple regression analysis. Findings revealed that self-esteem ($\beta = .345$; $p < .05$), perceived social support ($\beta = .427$; $p < .05$), and religiosity ($\beta = .285$; $p < .05$) significantly and positively predicted pre-surgery anxiety. Collectively, the psychosocial variables jointly predicted pre-surgical anxiety ($F(5,147) = 6.975$, $p < .001$), accounting for a meaningful variance in anxiety levels among patients. The implications of these findings highlight the need for preoperative psychological screening and interventions that address patients' self-perception, social environments, and religious coping mechanisms. Healthcare professionals should be trained to recognize psychosocial risk factors and integrate supportive counseling into routine pre-surgical care.

Keywords: Patients awaiting surgery, Perceived social support, Pre-surgery anxiety, Religiosity, Self-esteem

1. Introduction

Anxiety has become an increasingly prominent global health concern, affecting individuals across all age groups and socio-economic backgrounds. Characterized by excessive worry, restlessness, tension, and physiological symptoms such as increased heart rate and sweating, anxiety can significantly impair daily functioning and overall well-being (American Psychiatric Association [APA], 2022). According to the World Health Organization (2023), anxiety disorders are among the most common mental health conditions worldwide, with an estimated 301 million people affected. If persistent and untreated, anxiety can lead to poor physical health outcomes, weakened immune function, and a heightened risk of chronic diseases, including cardiovascular illnesses (Liu et al., 2022).

In clinical and hospital settings, anxiety presents even more serious challenges. Patients undergoing medical interventions or facing health crises often experience heightened psychological states, which can reduce treatment compliance, amplify pain perception, and delay recovery (Bashir et al., 2023). One of the most psychologically vulnerable periods for patients is the time preceding surgery. During this preoperative phase, many individuals experience what is referred to as pre-surgery or preoperative anxiety. This specific form of anxiety is triggered by the anticipation of undergoing surgery and is typically associated with fears about anesthesia, postoperative pain, complications, or even death (Tung & Dolan, 2022). Pre-surgery anxiety not only disrupts emotional stability but also contributes to measurable physiological changes, such as elevated blood pressure and heart rate, which can increase risks associated with surgical procedures (Zhou et al., 2023). Surgical procedures, whether elective or emergency, provoke anxiety due to uncertainties about outcomes, potential complications, and the anticipated experience of pain. Numerous studies have confirmed that preoperative anxiety is a common emotional response among patients awaiting surgery (Ineme et al., 2018; Akutay & Ceyhan, 2023; Teunissen et al., 2018). This type of anxiety can profoundly affect physical and psychological health, leading to prolonged recovery times, reduced satisfaction with treatment, and increased healthcare costs. Studies estimate that between 60% and 80% of patients report significant anxiety prior to surgery (Akutay & Ceyhan, 2023; Guerrier et al., 2021).

Pre-surgery anxiety is widely prevalent among adult surgical patients, with prevalence rates reported between 11% and 80% (Msoma et al., 2023). This anxiety can stem from various sources, including fear of surgical failure, concern about anesthesia, fear of disability or worsening health, and anticipated post-operative pain (Tadesse et al., 2022; Baagil et al., 2023). Regardless of its origin, pre-surgery anxiety can undermine the surgical process and outcomes. Empirical evidence suggests that patients with high preoperative anxiety are more likely to experience intense postoperative pain, require more anesthesia and analgesia, and encounter difficulties in pain management (Khalil et al., 2021). Moreover, anxiety has been associated with delayed wound healing, lower adherence to medical advice, longer hospital stays, impaired physical functioning, and reduced quality of life (Bağdigen et al., 2018).

Gender differences in preoperative anxiety are well documented. Studies have consistently shown that female patients experience higher anxiety levels than their male counterparts. For example, research in a tertiary health facility revealed that 68.18% of female patients exhibited pre-surgery anxiety compared to 31.82% of males (Shrestha et al., 2022). Similarly, studies in Ethiopia indicated that 63% of women admitted for elective obstetric and gynecologic surgeries reported preoperative anxiety (Bitew et al., 2023). These disparities may be due to differences in biological factors such as hormonal cycles, as well as sociocultural expectations and coping strategies (Mekonnen et al., 2020).

Pre-surgery anxiety thus represents not only an individual health burden but also a broader public health challenge for healthcare systems (Aust et al., 2018). The link between anxiety and adverse surgical outcomes, including increased anesthesia requirements and impaired healing, has been well documented (Stamenkovic et

al., 2018; Maeshi et al., 2018). These effects can be mediated directly by stress hormones such as cortisol and norepinephrine, and indirectly by patient lifestyle factors, type of surgery, or anesthesia protocols (Karadağ et al., 2019; Sürme, 2019).

Health psychology literature has explored how various emotional, social, and individual variables influence health outcomes, particularly in surgical settings. Some psychosocial predictors such as self-esteem, perceived social support, and religiosity have gained attention for their role in modulating the intensity of preoperative anxiety (Levett, 2019; Mavros et al., 2011). Despite growing evidence that anxiety can be influenced by both procedural and patient-centered factors, limited studies have comprehensively investigated the contribution of psychosocial predictors of preoperative anxiety, particularly in sub-Saharan African contexts like Akwa Ibom State in Nigeria (Amiri et al., 2021; Taylan & Çelik, 2022; Kaya & Karaman, 2019).

Self-esteem, for instance, has been identified as a significant factor in emotional stability and anxiety regulation. Studies have demonstrated that high self-esteem correlates with lower levels of anxiety symptoms and greater overall well-being (Yektatalab & Ghanbari, 2020; Liu et al., 2021). Conversely, low self-esteem is associated with difficulty coping with life challenges and a greater likelihood of developing mental health issues (Filosa et al., 2022; Wagner et al., 2024). Clucas (2020) defines self-esteem as an individual's perception of personal competence and worthiness, while Doré (2017) emphasizes its foundational role in psychological resilience. Longitudinal studies have found that individuals with low self-esteem are at greater risk of anxiety and other internalizing problems (Keane & Loades, 2017; Veselska et al., 2009).

Perceived social support is another vital psychosocial variable. Research has shown that higher levels of perceived social support are significantly associated with reduced preoperative anxiety (Kapikiran & Bulbuloglu, 2022; Sharma & Gharti, 2019). Social support entails both the size and quality of a person's social network and the extent to which they feel supported and connected to others (Kent de Grey et al., 2018). Emotional, instrumental, and informational support from family, friends, and peers can enhance psychological resilience and coping mechanisms (Taylor, 2011; Sarason et al., 1990). Studies confirm that the presence of social support improves treatment outcomes, strengthens stress-coping abilities, and contributes to emotional well-being among patients awaiting surgery (Dumrongpanapakorn & Liamputtong, 2017; Ozdemir & Tas Arslan, 2018; İnan & Üstün, 2014). In surgical contexts, patients often face emotional turmoil related to loss of control, fear of death, and the unknown. Supportive relationships can buffer these stressors and reduce anxiety (Al-Sulaiman et al., 2018).

Religiosity is also increasingly being recognized for its influence on health and coping. Although definitions of religiosity vary, it typically includes beliefs, practices, and a sense of spiritual connection that help individuals find meaning and cope with adversity. While religiosity was not elaborated upon in detail here due to text constraints, existing literature supports its potential role in anxiety reduction and emotional regulation.

In sum, the period before surgery is often marked by intense psychological responses that can influence surgical success and recovery. Understanding the psychosocial predictors of pre-surgery anxiety specifically self-esteem, perceived social support, and religiosity is essential for designing effective interventions to enhance patient outcomes. Given the limited research in this area within Nigeria, this study seeks to contribute to the body of knowledge by examining how these psychosocial factors predict pre-surgery anxiety among patients in selected hospitals in Akwa Ibom State.

Based on the background of the study, the following were hypothesized in this study;

i. Self-esteem will predict pre-surgery anxiety among patients awaiting surgery in Akwa Ibom State
ii. Perceived social support will predict pre-surgery anxiety among patients awaiting surgery in Akwa Ibom State.
iii. Religiosity will predict pre-surgery anxiety among patients awaiting surgery in Akwa Ibom State

2. Literature review

2.1. Self-esteem

Self-esteem is defined as an individual's perception of their value or worth, often influencing their confidence and ability to cope with stress. According to Rosenberg (1965), self-esteem reflects a person's overall evaluation of their own abilities and characteristics. High self-esteem promotes emotional stability, while low self-esteem can predispose individuals to anxiety and psychological distress, especially in stressful situations like surgery. Mata et al. (2016) conducted a correlational study among cancer surgery patients in Brazil and found that self-esteem was negatively correlated with distress indicating that patients with higher self-esteem reported lower levels of pre-surgical distress. Similarly, Yektatalab and Ghanbari (2020) studied 261 women with breast cancer and found a significant inverse correlation between self-esteem and both state and trait anxiety, suggesting that as self-esteem decreases, anxiety increases.

Akutay et al. (2022) examined factors influencing surgery-related anxiety in 300 patients and revealed that low self-esteem was a strong predictor of higher pre-operative anxiety. Feelings of inadequacy and confusion about the surgical process significantly heightened anxiety levels.

Although Nguyen et al. (2019) studied Vietnamese students, their findings further confirmed that low self-esteem was associated with anxiety and other psychological challenges such as depression and suicidal ideation.

2.2. Perceived social support

Perceived social support refers to an individual's subjective evaluation of the availability and adequacy of emotional, informational, and instrumental support from others, particularly during times of stress or health crises. According to Zimet, Dahlem, Zimet, and Farley (1988), perceived social support encompasses support from family, friends, and significant others, and it influences how individuals cope with stress. It differs from actual received support, as it reflects personal belief in the accessibility and reliability of others' help. This perception plays a crucial role in psychological outcomes, especially for individuals anticipating surgery.

Research has shown that perceived social support has a mitigating effect on pre-surgery anxiety. Kok, Newton, Jones and Cunningham (2023) conducted a systematic review and meta-analysis of studies on elective surgery patients and found a weak but significant inverse correlation ($r = -0.372$) between social support and pre-operative anxiety, suggesting patients with more support experienced less anxiety. Similarly, Kapikiran and Bulbuloglu (2022) reported that perceived social support significantly reduced surgery-related anxiety among oncology patients, explaining 35% of the variance in surgery anxiety and enhancing psychological resilience. In Nigeria, Oyediran et al. (2022) observed that over half of the patients had high pre-operative anxiety, with fears of surgical errors and death, highlighting the potential benefit of social support in mitigating these concerns. Sharma and Gharti (2019) found a statistically significant inverse relationship ($r = -0.133$, $p = 0.005$) between perceived support and anxiety among surgery patients in Nepal. Moreover, Ruiz-Muelle et al. (2021) emphasized the vital role of family, friends, and healthcare professionals in providing both emotional and informational support, particularly for bariatric patients.

2.3. Religiosity

Religiosity refers to the extent of individuals' religious beliefs, practices, and commitment to their faith. According to Zinnbauer et al. (1997), religiosity encompasses both public (organizational) and private (non-organizational) expressions of faith, as well as the internalization of religious values and beliefs. Similarly, Hill and Pargament (2003) defined religiosity as a multidimensional construct involving cognitive, emotional, and behavioral components that guide individuals' engagement with the divine or sacred. These dimensions may influence coping mechanisms, especially during stressful life events such as surgery.

Studies have explored how religiosity correlates with pre-surgical anxiety. Karačić et al. (2023) conducted a cross-sectional study in Croatia to investigate the association between religiosity and surgery anxiety among elective surgery patients. Using the Duke Religiosity Index and the Surgery Anxiety Questionnaire, they found that all three dimensions of religiosity—organizational, non-organizational, and intrinsic—were significant predictors of increased surgery anxiety. This suggests that patients may become more religious as a coping mechanism in response to heightened anxiety.

Rybarski et al. (2023), in a study of Polish cancer patients, observed that while religiosity can influence death anxiety, religious struggles may weaken this effect. Interestingly, religious comfort did not necessarily reduce anxiety. This complexity reflects the ambivalent role religiosity may play in psychological adjustment to health threats. Farag and Behzadi (2017) found no significant correlation between religiosity and psychological distress in surgical inpatients, although patients cited faith as a common coping strategy. Likewise, Kalkhoran and Karimollahi (2007) reported an inverse—but statistically insignificant—relationship between religious belief and preoperative anxiety. These mixed findings underscore the need for tailored spiritual interventions and further research to understand how religiosity affects surgical anxiety across different populations.

3. Research method

3.1. Study design

The study adopts a cross-sectional survey design. This design is chosen because it allows for the collection of data at a single point in time from a sample of individuals, making it possible to identify the psychosocial factors associated with pre-surgery anxiety among patients awaiting surgery in selected hospitals in Akwa Ibom State. The design is appropriate for examining the relationships between variables and predicting outcomes, as it facilitates the analysis of multiple psychosocial factors as predictors of anxiety.

3.2. Research area

The study was conducted at University of Uyo Teaching Hospital (UUTH), Uyo and ST. Luke Hospital, Anua. Uyo is the capital of Akwa Ibom State, situated at 5.03^0North latitude, 7.93^0East longitude, and 196 metres elevation above the sea level. The population of Uyo is 309,573 according to 2006 Census Report (National Population Commission, 2006). The University of Uyo Teaching Hospital, Uyo, is located about 6 km from the centre of Uyo, accessed through an excellent dual carriage way along Uyo Abak Road. The hospital is a referral centre and also provides primary and secondary health-care services. There are a number of specialized services within the hospital, viz Renal Dialysis, Intensive Care Unit, Molecular Virology (PCR) Laboratory Unit, Ophthalmology Unit, Endoscopy Unit, Burns and Plastics Unit. This Unit was established by the Federal Government for the treatment of HIV patients. These services are supported by the Institute of Human Virology of Nigeria (IHVN) and Centre for Diseases Control (Uniuyo website, 2015). Also, St. Luke's Hospital, Anua, is located in the Anua community of Uyo, Akwa Ibom State, Nigeria. Situated approximately 5 km from the center of Uyo, the hospital is easily accessible via Wellington Bassey Way and other connecting roads. Established as a missionary hospital, St. Luke's Hospital serves as a referral center and provides primary, secondary, and specialized health-care services to residents of Uyo and surrounding communities. The hospital is known for its Maternal and Child Health services, with a long-standing reputation for obstetric and neonatal care. Other specialized services offered include general surgery, internal medicine, pediatrics, orthopedics, ophthalmology, and laboratory diagnostics. The hospital plays a significant role in HIV/AIDS treatment and prevention programs, often collaborating with international health organizations and non-governmental agencies.

3.3. Population of study

The population of this study comprises patients awaiting surgery at the University of Uyo Teaching Hospital (UUTH) and St. Luke's Hospital, Anua, in Akwa Ibom State, Nigeria. These hospitals serve as major healthcare centers providing primary, secondary, and specialized medical services to residents of Uyo and surrounding communities. Given their status as referral hospitals, they cater to a significant number of surgery patients who require both elective and emergency procedures across various medical specialties, including general surgery, orthopedics, ophthalmology, and obstetrics.

At UUTH, the surgery department handles a large number of patients annually, with an estimated monthly surgery case load of 300–400 patients across different units. This includes patients scheduled for procedures in general surgery, neurosurgery, cardiothoracic surgery, and gynecology, among others. Similarly, St. Luke's Hospital, Anua, renowned for its maternal and child health services, also conducts a high volume of surgery procedures, particularly in obstetrics, gynecology, pediatrics, and general surgery, with an estimated monthly surgery case load of 200–250 patients.

The study population, therefore, includes pre-surgery patients in both hospitals, encompassing individuals undergoing minor and major surgery procedures. These patients vary in demographics, including age, gender, medical condition, and socio-economic background. The total estimated population of patients awaiting surgery in both hospitals during the study period is approximately 500–650 individuals per month, making them the primary focus for examining psychosocial factors influencing pre-surgery anxiety.

3.4. Participants

The participants for this study were 152 in-patients drawn from different surgery wards in the selected hospitals (University of Uyo Teaching Hospital (UUTH) and St. Luke's Hospital, Anua, in Akwa Ibom State, Nigeria). Of this number, 101(66.4%) were males while 51(33.6%) were females. Participants' ages ranged from 20 to 51 years with a mean age of 39.3 years. Ninety-seven (97) of the participants had severe illnesses, while fifty-five (55) had mild illnesses. All the male participants were selected from male surgery wards, while the female participants were drawn from female surgery, obstetrics, and gynaecology wards.

3.5. Sampling techniques

The sample size for this study was determined based on the need to obtain a representative group of patients who were experiencing pre-surgery anxiety within the selected hospitals. Given the focus on patients scheduled for surgery within 48 hours, a total of 152 participants were purposively selected from the University of Uyo Teaching Hospital (UUTH) and St. Luke's Hospital, Anua. The sample size was considered adequate for capturing variations in psychosocial factors affecting anxiety levels while ensuring a manageable number of participants for effective data collection and analysis.

A dual-stage sampling method was employed to ensure a systematic approach to participant selection. In the first stage, a convenience sampling technique was used to select UUTH and St. Luke's Hospital, Anua as the study sites. These hospitals were chosen due to their accessibility, high patient turnover, and diverse range of surgery procedures. Both hospitals serve as major referral centers in Akwa Ibom State and provide specialized surgery services, making them ideal locations for the study.

In the second stage, a purposive sampling technique was applied to select specific hospital wards and individual participants. Only wards where patients were admitted for surgery procedures were considered. Within these wards, patients scheduled for surgery within the next 48 hours were identified and invited to participate. This selection criterion was designed to focus on patients who were most likely experiencing significant pre-surgery anxiety, as anxiety levels tend to peak shortly before a scheduled operation.

To ensure the reliability of the study, strict inclusion and exclusion criteria were followed. All admitted patients in the surgery wards were initially eligible; however, only those who were scheduled for surgery within 48 hours and had been informed of their procedure were included in the final sample. Patients who were unconscious, undergoing emergency surgery, or receiving outpatient care were excluded from the study. Additionally, individuals who had previously undergone surgery were excluded to avoid bias, as their past experiences might influence their anxiety levels differently from first-time surgery patients. Furthermore, patients undergoing intermediate surgery procedures, such as appendicitis or hernia repair, were excluded, as these cases are typically less complex and may not elicit the same level of anxiety as major surgery interventions. This careful and systematic approach to sampling ensured that the study population was highly relevant, focused, and representative of patients experiencing significant pre-surgery anxiety.

3.6. Procedure

To conduct this study, a letter of identification was obtained from the Department of Psychology, University of Uyo, Nigeria, along with ethical approval from the Research Ethical Review Committee of the University of Uyo Teaching Hospital (UUTH). These documents provided the necessary authorization to access the hospitals and interact with participants. With these approvals, permissions were further sought from the matron in charge of each ward at both University of Uyo Teaching Hospital (UUTH) and St. Luke's Hospital, Anua to facilitate the smooth administration of the research instruments.

Participants were identified and contacted the morning before their scheduled surgery to ensure that their pre-surgery anxiety levels were captured accurately. They were briefed on the purpose of the study, the nature of the questionnaire, and the voluntary nature of their participation. Each participant was assured of confidentiality and anonymity, and only those who provided informed consent were included in the study. The research instruments were then administered, with each participant taking an average of 30 minutes to complete them.

To maintain the integrity of the study, participants were instructed not to discuss the study with others in their wards to avoid bias. Any patients who admitted to receiving prior information from fellow participants were excluded from the study to prevent the influence of external factors on their responses. Additionally, only those who completed the questionnaire in full were included in the final data analysis.

In all, data collection spanned a total of 20 days within a period of 2 months and 1 week. Over this period, a total of 180 patients participated in the study. However, of this number, only 152 copies of the questionnaire were completely filled, while 28 copies were discarded due to incomplete responses. As a result, the final analysis was based on the 152 valid responses, ensuring that only complete and reliable data were utilized for the study.

3.7. Instrumentation

The instrument for this study was a structured questionnaire with five sections.

Section A: Demographic variables: The demographic variable of interest to this study include age, gender, religion, level of education, marital status, employment status and estimated monthly income.

Section B: Rosenberg Self-Esteem Scale (Rosenberg, 1965)

The Rosenberg Self-Esteem Scale (RSES), developed by Rosenberg (1965), is a 10-item self-report instrument designed to measure global self-esteem. It is suitable for use in both clinical and non-clinical populations and has been widely employed across various demographic groups, including general populations and specific subgroups like orthodontic patients. The RSES uses a 4-point Likert scale to assess the intensity of agreement

with each statement. The response options are: 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, and 4 = Strongly Agree. The total score ranges from 10 to 40, with higher scores indicating higher levels of self-esteem. The scale comprises both positively and negatively worded items. To ensure accurate scoring, items 2, 5, 6, 8, and 9 are reverse scored, meaning that for these items, higher agreement indicates lower self-esteem. Some items in the scale include: *"On the whole, I am satisfied with myself" and "I feel that I have a number of good qualities," "At times, I think I am no good at all" and "I feel I do not have much to be proud of."* The RSES has demonstrated high reliability and validity. It consistently shows strong internal consistency, with Cronbach's Alpha values typically ranging from 0.77 to 0.88. Its test-retest reliability scores over a 2-week interval are reported to range from 0.82 to 0.85, indicating good stability over time.

Regarding its validity, the RSES has shown significant correlations with other established measures of self-esteem and related constructs, such as the Coopersmith Self-Esteem Inventory, demonstrating excellent convergent validity. The norm of the scale is 25. Scores above the norm represent high self-esteem while score below the norm represent low self-esteem. Also, Olajide *et al.* (2024) of their study, revalidated the scale using 30 patients from the male surgery ward (n = 15) and the female surgery ward (n = 15) in University College Hospital, Ibadan, Nigeria. Ten (10) items were found reliable with a Cronbach's coefficient of .88. A norm score of 25.0 was established at 2 standard deviations above the mean. Scores lower than the norm (25.0) indicate low self-esteem, while scores from the norm and above indicate high self-esteem. This shows that the scale reliable for use in the Nigerian setting hence its adoption.

Section C: The Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet et al., 1988)

The Multidimensional Scale of Perceived Social Support (MSPSS), developed by Zimet et al. (1988), is a 12-item self-report instrument designed to assess perceived social support from three primary sources: family, friends, and a significant other. It is a widely used tool that is suitable for diverse populations, including those in clinical, educational, and community settings. The MSPSS aims to evaluate the strength of an individual's social support network, which is critical for understanding psychological and emotional well-being. The MSPSS employs a 7-point Likert scale, allowing participants to rate their level of agreement with each statement. The response options range from 1, meaning "Very Strongly Disagree," to 7, meaning "Very Strongly Agree." All items on the scale are directly scored, and higher scores indicate greater perceived social support. The scale comprises three subscales, each containing four items. For instance, the family subscale includes items such as *"My family really tries to help me," while the friends subscale has items like "I can count on my friends when things go wrong."* The significant other subscale includes items such as *"There is a special person who is around when I am in need."* The MSPSS is recognized for its strong psychometric properties. It has excellent internal consistency, with Cronbach's alpha values ranging from 0.88 to 0.91 for the overall scale, and from 0.85 to 0.95 for the subscales. Test-retest reliability over a 2- to 3-month period yielded coefficients between 0.72 and 0.85, indicating good stability over time.

In terms of validity, the MSPSS is significantly correlated with other measures of social support and mental health outcomes, demonstrating robust convergent and construct validity. Higher MSPSS scores are associated with better psychological well-being, including lower levels of depression and anxiety. Normative scores for the MSPSS typically range between 60 and 84, with higher scores reflecting stronger perceived social support. The scale can be interpreted either through subscale scores or as an overall measure of social support. This flexibility makes the MSPSS a valuable tool for both research and clinical applications. Also, Olajide *et al.* (2024) of their study, revalidated the scale using 30 patients from the male surgery ward (n = 15) and the female surgery ward (n = 15) in University College Hospital, Ibadan, Nigeria. Twelve (12) items were found reliable with a Cronbach's coefficient of .86. A norm score of 84 was established at 2 standard deviations above the

mean. Scores lower than the norm (84.0) indicate low perceived social support, while scores from the norm and above indicate high perceived social support. This shows that the scale reliable for use in the Nigerian setting hence it adoption.

Section D: The Santa Clara Strength of Religious Faith Questionnaire (SCSRFQ) (Plante and Boccaccini, 1997)

The Santa Clara Strength of Religious Faith Questionnaire (SCSRFQ) developed by Plante and Boccaccini (1997) is a 10-item self-report instrument designed to measure the strength of an individual's religious faith. It is suitable for individuals from various religious traditions and even those without a specific religious affiliation. The SCSRFQ uses a 5-point Likert scale to measure the intensity of each statement. The response options are' 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly Agree. In this scale, all the items a directly scored. Some of the items are: "*My religious faith is extremely important to me", "I pray daily", and "I enjoy being around others who share my faith".* The SCSRFQ is highly reliable; split-half reliability scores range from 0.90 to 0.96 and excellent internal consistency is indicated by Cronbach's Alphas in the range of 0.94–0.97 (Plante and Boccaccini, 1997). With respect to its validity, the SCSRFQ is highly correlated with the intrinsic religiousness as measured by AUROS (r's range from 0.70 to 0.90), the extrinsic religiousness as measured by AUROS (r's range from 0.64 to 0.73), the Religious Life Inventory (r's range from 0.7).

The norm of the scale is 25. Scores above the norm represent high religiosity while score below the norm represent low religiosity. Also, Olajide *et al.* (2024) of their study, revalidated the scale using 30 patients from the male surgery ward (n = 15) and the female surgery ward (n = 15) in University College Hospital, Ibadan, Nigeria. Ten (10) items were found reliable with a Cronbach's coefficient of .88. A norm score of 25.0 was established at 2 standard deviations above the mean. Scores lower than the norm (25.0) indicate low religiosity, while scores from the norm and above indicate high religiosity. This shows that the scale reliable for use in the Nigerian setting hence it adoption.

Section E: The State Sub-scale of State-Trait Anxiety Inventory (STAI Y-1) (Spielberger (1983)

STAI-Y1was used to measure state anxiety. It is a 20-item instrument developed by Spielberger (1983) who provided the original psychometric properties for American samples. The STAI-Y1 uses a 4-point Likert scale to measure the intensity of each statement. The response options are' 1 = Not at all, 2 = Somewhat, 3 = Moderately so and 4 = Very much so. In this scale, items 3, 4, 6, 7, 8, 11, 12, 13, 15, and 16 are directly scored because these items capture feelings of tension, nervousness, and worry, aligning with elevated anxiety states while items 1, 2, 5, 9, 10, 14, 17, 18, 19, and 20 are reversed scored because these items reflect a sense of calmness, relaxation, and contentment, which are inversely related to anxiety. Some of the items are: "*I feel calm?", "I feel secure", and "I feel frightened".* The scale was adopted for Nigerian use by Omoluabi (1997) who provided the psychometric properties for the Nigerian samples; a norm score of 33.59 was obtained, the reliability coefficient for State Anxiety Inventory (STAI Y-1) obtained in a test–retest analysis was .61, and its validity coefficient was .69, and .43 in a concurrent validity coefficient report between STAI and MAACL (Anxiety) by Zuckermaa and Lubin (1965).

Also, Ineme et al. (2018) of their study, revalidated the scale using 24 patients from the male surgery ward (n = 11) and the female surgery ward (n = 13) in St. Luke's Hospital, Anua. Eighteen (18) items were found reliable with a Cronbach's coefficient of .78. A norm score of 25.2 was established at 2 standard deviations above the mean. Scores lower than the norm (25.2) indicate low anxiety, while scores from the norm and above indicate typical manifestation of anxiety. This shows that the scale reliable for use in the Nigerian setting hence its adoption.

3.8. Method of data analysis

The data collected was analyzed using descriptive and inferential statistics. Descriptive statistics (mean, standard deviation, and frequency distribution) was used to summarize the demographic characteristics of the respondents and the psychosocial factors. Multiple regression analysis was employed to determine the extent to which psychosocial factors predict pre-surgery anxiety. Multiple regression analysis was chosen because it enables the assessment of the relative contribution of each psychosocial factor in predicting pre-surgery anxiety. It also examines interaction effects, where the impact of one psychosocial factor on pre-surgery anxiety may depend on the level of another factor. The Statistical Package for the Social Sciences (SPSS) model 25 software was used for the data analysis.

3.9. Ethical considerations

Ethical clearance was obtained from the Akwa Ibom State Research Ethics Review Committee at Ministry of Health after submitting a research protocol, copies of research proposal and introductory letter from the Department of Psychology. Informed consent was obtained from respondents after giving a detailed explanation of the research purpose. The respondents were informed of their voluntariness to participate and assured of confidentiality. Participants' responses at every phase and their information were kept confidential. Informed consent was also obtained from the respondents before embarking on the collection of data. The respondents' participation in the study was made voluntary with freedom to withdraw at any stage of the study without attracting any penalty.

4. Results

Table 1: Summary showing Frequencies and Cumulative percentage of participants Gender, Religion, Level of Education, Marital Status and Estimated Monthly Income (n = 152)

Variables	N	Percentage	Cumulative percentage
Gender			
Male	101	66.40	66.40
Female	51	33.60	**100.00**
Total	**152**	**100.00**	
Religion			
Christianity	103	67.80	76.80
Islam	37	24.30	92.10
Others	12	7.90	100.00
Total	**152**	**100.00**	**100.00**
Level of Education			
Primary	8		
SSCE/GCE	11	19.90	19.90
NCE/OND	9	25.70	45.60
Undergraduate	73	48.00	66.40
HND/BSc	39	25.70	92.10
Msc	8	5.30	97.40
PhD	4	2.60	100.00
Total	**152**	**100.00**	

Marital Status			
Single	63	41.40	41.40
Married	44	28.90	70.40
Separated	26	17.10	87.50
Divorced	13	8.60	96.10
Widow	6	3.90	100.00
Total	**152**	**100.0**	
Employment Status			
Unemployed	44	28.90	28.90
Self-employed	58	38.20	67.10
Employed	33	21.70	88.80
Retired	9	5.90	94.70
Others	8	5.30	100.00
Total	**152**	**100.00**	

The demographic characteristics of the participants, as presented in Table 1, provide a comprehensive overview of their gender, religious affiliation, level of education, marital status, and employment status. Regarding gender distribution, the majority of participants were male, constituting 66.40% of the sample, while females accounted for 33.60%. This indicates a significant gender disparity among the participants, with a higher representation of males in the study.

In terms of religious affiliation, Christianity was the predominant religion, with 67.80% of the respondents identifying as Christians. Islam followed with 24.30% of the participants, while 7.90% identified with other religions. The cumulative percentage shows that 92.10% of the respondents adhered to either Christianity or Islam, reflecting the dominant religious groups in the study population.

The educational qualifications of the respondents varied, with the highest proportion (48%) being undergraduate students. This was followed by holders of HND/BSc degrees at 25.70% and SSCE/GCE holders at 19.9%. A smaller percentage of participants had attained postgraduate education, with 5.30% having a Master's degree and 2.60% holding a PhD. The data suggest that a considerable number of respondents had obtained at least a secondary education, with a significant proportion pursuing or having completed higher education.

Marital status data revealed that a large proportion of the participants were single (41.40%), followed by those who were married (28.90%). A notable percentage of respondents were separated (17.1o%) or divorced (8.60%), while 3.90% were widowed. These figures indicate that the study population included individuals from diverse marital backgrounds, with a significant percentage experiencing separation or divorce.

The employment status of the participants showed that self-employment was the most common category, with 38.20% of respondents engaging in entrepreneurial activities. Unemployment was also significant, with 28.9o% of the participants not currently working. Meanwhile, 21.7% were employed, and 5.90% were retired. An additional 5.3% fell into the "others" category, which could include part-time workers or informal sector employees. The data highlight the economic distribution among respondents, with a sizable proportion engaged in self-employment and a considerable percentage being unemployed.

4.1. Inter-Correlations among the study variables

Figure 1: Inter-Correlations among the Study Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	
Age	1											
Gender	.07	1										
Religion	-.09	-.23**	1									
LE	.15	-.05	.00	1								
MS	-.05	.05	.22**	.03	1							
ES	-.09	-.03	.32**	.13	.38**	1						
EI	.11	-.01	-.01	.23**	.08	.23**	1					
SE	.23**	.09	-.10	-.10	-.13**	.35**	-.05	1				
PSS	.02	.26**	-.30**	-.11	-.28**	-.19**	-.14	.06	1			
RE	.03	.16*	-.06	.01	-.24**	.07	-.00	-.24**	.59**	1		
PSA	-.11	.25**	-.09	.01	-.27**	-.27**	-.12	.17**	.35**	.23**	1	

**. Correlation is significant at the 0.01 level (2 tailed), *Correlation is significant at the 0.05 level (2 tailed), LE = Level of Education, MS = Marital Status, ES = Employment Status, EI = Estimated Income, SE = Self-esteem, PSS = Perceived Social Support, RE = Religiosity, PSA = Pre-surgery Anxiet

The correlation matrix presented in Figure 1 illustrates the relationships between the study variables, highlighting both significant and non-significant associations. Age was positively correlated with self-esteem (r=.23, p<.01), suggesting that older participants tend to report higher self-esteem. However, age showed no significant correlation with most other variables, indicating its limited influence on the measured psychological and socio-demographic factors.

Gender displayed significant relationships with several variables. It was negatively correlated with religion (r=−.23, p<.01), implying that one gender was more likely to adhere to religious beliefs than the other. Additionally, gender was positively associated with perceived social support (r=.26, p<.01) and religiosity (r=.16, p<.05), indicating that gender differences exist in perceived social support and levels of religious commitment. A significant positive correlation between gender and surgery anxiety (r=.25, p<.01) suggests that surgery anxiety levels varied between males and females.

Religion showed a significant positive correlation with marital status (r=.22, p<.01) and employment status (r=.32, p<.01), indicating that religious individuals were more likely to be married and employed. However, religion was negatively correlated with perceived social support (r=−.30, p<.01), suggesting that higher religiosity might be associated with lower perceived social support. Additionally, religiosity negatively correlated with self-esteem (r=−.24, p<.01), implying that highly religious individuals might have lower self-esteem.

Level of education exhibited a positive correlation with estimated income (r=.23, p<.01r = .23, p < .01), indicating that individuals with higher education levels tend to have higher income. However, education did not show significant correlations with most psychological variables, suggesting that academic qualifications might not directly influence self-esteem, or pre-surgery anxiety.

Marital status was significantly correlated with employment status (r=.38, p<.01), indicating that married individuals were more likely to be employed. It also showed negative correlations with perceived social support (r=−.28, p<.01) and religiosity (r=−.24, p<.01), suggesting that marital status might play a role in these psychological constructs.

Employment status had a positive correlation with estimated income (r=.23, p<.01) and self-esteem (r=.35, p<.01), indicating that individuals with stable employment were more likely to earn higher incomes and report higher self-esteem. It also showed a negative correlation with pre-surgery anxiety (r=−.27, p<.01), implying that employment might be a protective factor against anxiety related to pre-surgery. Perceived social support was significantly and positively correlated with religiosity (r=.59, p<.01), indicating that individuals who were more religious also reported higher social support.

Finally, pre-surgery anxiety was negatively correlated with marital status (r=−.27, p<.01) and employment status (r=−.27, p<.01), indicating that married and employed individuals were less likely to experience surgery anxiety. Additionally, surgery anxiety was positively associated with perceived social support (r=.35, p<.01)

and religiosity (r=.23, p<.01), suggesting that individuals with strong perceived social networks and religious beliefs might experience higher levels of surgery anxiety.

4.2. Test of hypotheses

Table 2: Simple Linear Regression Analysis showing that Self-esteem will predict pre-surgery anxiety among patients awaiting surgery in Akwa Ibom State

Predictors	R	R^2	df	F	β	T	P
Constant	.17	.03	1	4.47		10.44	.00
Self-Esteem					.34	2.11	.04

Dependent Variable: Pre-surgery anxiety

The result presented in Table 2 shows that self-esteem yielded a coefficient of correlation (R) of .17 and a coefficient of determination (R^2) of .02. This means that 2% of the variance in pre-surgery anxiety among patients awaiting surgery in Akwa Ibom State is accounted for by self-esteem.

Table 2 also indicates that self-esteem significantly predicted pre-surgery anxiety independently ($\beta = .35$; $p < .05$). This implies that as self-esteem increases, pre-surgery anxiety also increases. Though this may seem counterintuitive, it could suggest that individuals with higher self-worth may be more concerned about the potential risks of surgery. Hence, the first hypothesis which stated that self-esteem will predict pre-surgery anxiety among patients awaiting surgery in Akwa Ibom State was confirmed. Furthermore, the result revealed a significant prediction of pre-surgery anxiety by self-esteem ($F(1, 150) = 4.47$; $p < .05$), indicating that the regression model was statistically significant.

Table 3: Simple Linear Regression Analysis showing that perceived social support will predict pre-surgery anxiety among patients awaiting surgery in Akwa Ibom State

Predictors	R	R^2	df	F	β	Ts	p
Constant	.35	.12	1	20.90		13.03	.00
Social Support					.43	4.58	.00

Dependent Variable: Pre-surgery anxiety

The result presented in Table 3 shows that perceived social support yielded a coefficient of correlation (R) of .35 and a coefficient of determination (R^2) of .12. This means that 12.2% of the variance in pre-surgery anxiety among patients in Akwa Ibom State is accounted for by perceived social support.

Table 3 also indicates that perceived social support significantly predicted pre-surgery anxiety independently ($\beta = .43$; $p < .05$). This implies that as perceived social support increases, pre-surgery anxiety also increases. Though this appears counterintuitive, it may suggest that patients receiving more support may become more conscious of the seriousness of the surgery. Hence, the second hypothesis which stated that perceived social support will positively predict pre-surgery anxiety among patients awaiting surgery in Akwa Ibom State was confirmed. Furthermore, the result revealed a significant prediction of pre-surgery anxiety by perceived social support ($F(1, 150) = 20.93$; $p < .05$), indicating that the regression model was statistically significant.

Table 4: Simple Linear Regression Analysis showing that Religiosity will predict pre-surgery anxiety among patients awaiting surgery in Akwa Ibom State

Predictors	R	R^2	df	F	β	T	P
Constant	.23	.05	1	8.13		16.47	.00
Religiosity					.29	2.85	.01

Dependent Variable: Pre-surgery anxiety

The result presented in Table 4 shows that religiosity yielded a coefficient of correlation (R) of .23 and a coefficient of determination (R^2) of .05. This means that 5.1% of the variance in pre-surgery anxiety among patients in Akwa Ibom State is accounted for by religiosity.

Table 4 also indicates that religiosity significantly predicted pre-surgery anxiety independently ($\beta = .29$; $p < .05$). This implies that as religiosity increases, pre-surgery anxiety also increases. Though this may seem unexpected, it may suggest that highly religious individuals are more reflective or concerned about the outcome of surgery. Hence, the third hypothesis which stated that religiosity will predict pre-surgery anxiety among patients awaiting surgery in Akwa Ibom State was confirmed. Furthermore, the result revealed a significant prediction of pre-surgery anxiety by religiosity ($F(1, 150) = 8.13$; $p < .05$), indicating that the regression model was statistically significant.

Table 5: Multiple Linear Regression Analysis showing that psychosocial variables (self-esteem, perceived social support and religiosity) will jointly predict pre-surgery anxiety among patients schedule for surgery operations

Predictors	R	R^2	Df	F	P	β	T	P
Constant	.40	.16	4	6.98			5.53	.00
Self-esteem						.38	2.33	.02
Social Support						.26	2.62	.01
Religiosity						.16	1.47	.01

Dependent Variable: Pre-surgery anxiety

The result presented in Table 5 shows that self-esteem, social support, religiosity, and psychological distress yielded a coefficient of multiple correlation (R) of .40 and a multiple correlation square (R^2) of .16. This indicates that 16% of the variance in pre-surgery anxiety is accounted for by the combined effects of these psychosocial variables. The result further indicated that there was a significant joint prediction of self-esteem, perceived social support, religiosity, and psychological distress on pre-surgery anxiety among patients ($F(3, 147) = 6.98$; $p < .05$). This implies that the three psychosocial variables jointly predict pre-surgery anxiety among patients scheduled for surgery operations in Akwa Ibom State.

5. Findings and discussion

The study investigated psychosocial factors (self-esteem, perceived social support and religiosity) as predictors of pre-surgery anxiety among patients awaiting surgery in selected hospitals in Uyo, Akwa State, Nigeria. The finding reveals that self-esteem positively predicted pre-surgery anxiety among patients awaiting surgery in Akwa Ibom State. This implies that self-esteem is a significant predictor of pre-surgery anxiety. In real-life

situations, this means that individuals with high self-esteem may experience heightened pre-surgery anxiety due to their strong sense of self-awareness and concern about potential health risks, bodily changes, or the outcome of the surgery. Patients with high self-esteem may also have higher expectations for recovery and well-being, making them more anxious about possible complications or loss of control over their health. Additionally, such individuals might be more prone to overanalyzing the situation, leading to increased psychological distress before undergoing surgery.

The finding of this study partially supports the study of Akutay et al. (2022), who reported that self-esteem was among the significant factors influencing anxiety of surgery. Their study found that patients' preoperative anxiety levels were associated with feelings of inadequacy, anxiety, and unhappiness, which aligns with the present study's recognition of self-esteem as a predictor of preoperative distress. However, Akutay et al. (2022) did not explicitly indicate whether self-esteem had a positive or negative correlation with anxiety of surgery.

In contrast, the finding of this study is not consistent with the findings of Mata *et al.* (2016), who reported that self-esteem was negatively correlated with distress in patients undergoing cancer surgery. Their study concluded that higher self-esteem reduced psychological distress, whereas the present study suggests that higher self-esteem increases pre-surgery anxiety. Similarly, the finding of this study does not support the findings of Nguyen *et al.* (2019), who found that lower self-esteem was associated with higher anxiety, depression, and suicidal ideation. Their study suggests that individuals with lower self-esteem experience greater psychological distress, which contrasts with the present study's conclusion that higher self-esteem predicts increased pre-surgery anxiety. Furthermore, the finding of this study does not support the study of Yektatalab and Ghanbari (2020), who found an indirect (negative) correlation between self-esteem and anxiety in women suffering from breast cancer. Their study concluded that higher self-esteem was associated with lower anxiety, whereas the present study suggests the opposite relationship. Finally, the finding of this study is not in line with the findings of Yoon and Kim (2020), who conducted a meta-analysis on self-esteem and cosmetic surgery. Their study found weak correlations between self-esteem and stress, suggesting that self-esteem is not a strong predictor of psychological distress, whereas the present study identifies self-esteem as a significant predictor of pre-surgery anxiety.

Also, the findings reveal that perceived social support positively predicted pre-surgery anxiety among patients awaiting surgery in Akwa Ibom State. This implies that perceived social support significantly influences pre-surgery anxiety, suggesting that patients who receive higher levels of support from family, friends, or healthcare professionals may experience heightened anxiety rather than reduced distress. In real-life situations, this may occur because increased social interaction can lead to more discussions about potential risks, complications, and uncertainties associated with the surgery, thereby amplifying the patient's anxiety. Additionally, individuals who receive more social support may feel an increased sense of responsibility toward their loved ones, leading to heightened concern about post-surgery outcomes and their ability to meet familial or societal expectations.

The present study's findings align with those of Oyediran et al. (2022), who found that a significant proportion of surgery patients in Osun State reported high preoperative anxiety, largely due to anxiety of the unknown, surgery errors, and mortality. While their study did not directly measure the impact of social support on anxiety, it did highlight the role of patient expectations in shaping their preoperative psychological state. It is possible that social support increases awareness of these anxiety, thereby elevating anxiety rather than reducing it.

Additionally, the study shares some similarities with the findings of Ruiz-Muelle et al. (2021), who explored the role of social support in a bariatric surgery program. Their study highlighted the need for both emotional and professional support, but also revealed opposing feelings about such support. Some participants found

comfort in social support, while others experienced increased stress due to heightened awareness of their condition and the expectations placed upon them by their social networks. This ambivalence mirrors the present study's findings, suggesting that while social support is generally considered beneficial, it may, in some cases, amplify anxiety rather than mitigate it.

However, the finding of this study is not consistent with the findings of Kok et al. (2023), who conducted a systematic review and meta-analysis on social support and pre-operative anxiety in elective surgery patients. Their study found that stronger social support was weakly associated with reduced pre-operative anxiety). This suggests that social support plays a minor role in alleviating anxiety, whereas the present study indicates a direct positive relationship between social support and increased pre-surgery anxiety. The discrepancy may be due to differences in study populations, types of surgeries, or cultural perceptions of support and anxiety. Similarly, the finding of this study does not support the results of Kapikiran and Bulbuloglu (2022), who examined the effect of perceived social support on psychological resilience and surgery anxiety in surgery oncology patients. Their study found that an increase in perceived social support enhanced psychological resilience, which in turn reduced anxiety of surgery. The present study, however, suggests that higher social support may be linked to heightened pre-surgery anxiety, possibly due to the emotional weight of expectations from supportive networks or the stress of confronting the reality of surgery through increased discussions. Furthermore, the finding of this study contradicts the results of Sharma and Gharti (2019), who found a negative correlation between preoperative anxiety and social support. Their study revealed that as social support increased, preoperative anxiety decreased, indicating that supportive relationships helped alleviate surgery anxiety. In contrast, the present study suggests that social support may contribute to increased anxiety, which could be attributed to the way patients in Akwa Ibom State interpret and respond to social interactions before surgery.

In addition, the findings that religiosity positively predicted pre-surgery anxiety among patients awaiting surgery in Akwa Ibom State. This implies that religiosity is a predictor of pre-surgery anxiety among patients awaiting surgery. This is true in real-life situations, as heightened religious beliefs can lead individuals to experience increased anxiety and uncertainty before undergoing surgery. While religion is often perceived as a coping mechanism, it can sometimes amplify concerns about mortality, divine intervention, and the outcome of medical procedures, thereby increasing anxiety levels. Patients with strong religious beliefs may become more reflective about their fate, potential suffering, or spiritual consequences, which can heighten their preoperative distress.

The finding of this study is consistent with the findings of Karačić et al. (2023), who reported that religiousness significantly predicted greater surgery anxiety among elective surgery patients in Croatia. Their study found that both non-organizational religious activity and intrinsic religiosity were weak but significant predictors of heightened surgery anxiety. Additionally, when controlling for demographic factors such as age, gender, and type of surgery, all three dimensions of religiosity (organizational, non-organizational, and intrinsic) independently contributed to increased anxiety. This aligns with the present study's findings, indicating that religious individuals may experience heightened anxiety as they turn to their faith during stressful medical situations.

Similarly, the finding of this study also supports the findings of Rybarski et al. (2023), who reported that the centrality of religiosity had a non-linear effect on death anxiety among cancer patients. Their study found that religious struggles weakened the positive impact of religious comfort, suggesting that while some individuals find solace in their faith, others experience increased anxiety due to religious doubts or anxiety about divine judgment. This supports the argument that religiosity does not always provide relief from anxiety and, in some cases, may exacerbate it, particularly in the context of pre-surgery stress.

Furthermore, the finding of this study aligns with the work of Kalkhoran and Karimollahi (2007), who examined the relationship between religious beliefs and preoperative anxiety. Their study found that although most patients had high levels of religiosity, their anxiety levels were moderate, and the inverse relationship between religiosity and anxiety was not statistically significant. While their study suggested that religious beliefs might provide reassurance for some patients, the lack of statistical significance indicates that other factors influence preoperative anxiety. The present study expands on this by showing that for some patients, religiosity may increase rather than reduce pre-surgery anxiety.

However, the finding of this study contrasts with the study of Farag and Behzadi (2017), who did not find a significant correlation between religiosity and psychological distress among surgery inpatients. Their pilot study suggested that while religiosity was a common coping mechanism, it did not significantly impact levels of psychological distress. The difference in findings may be due to variations in sample size, cultural factors, or methodological approaches. Nevertheless, the present study supports the idea that religiosity can, in certain contexts, heighten anxiety rather than alleviate it.

6. Implications of the findings

The findings of this study reveal that self-esteem, perceived social support, and religiosity each positively predicted pre-surgery anxiety among patients awaiting surgery in Akwa Ibom State. These results have important psychological, clinical, and social implications for healthcare providers, mental health professionals, and caregivers working with surgical patients.

Firstly, the positive relationship between self-esteem and pre-surgery anxiety suggests that individuals with higher self-worth may exhibit increased concern about the potential risks and outcomes of surgery. This implies that rather than serving as a protective factor, self-esteem in this context may heighten awareness and worry about personal well-being. Healthcare professionals should therefore be cautious in assuming that patients with high self-esteem are emotionally prepared for surgery. Psychological screening and tailored counseling should be considered, even for those who appear confident or self-assured.

Secondly, the finding that perceived social support also positively predicts pre-surgery anxiety highlights the complex role of interpersonal relationships in patient well-being. While social support is generally associated with emotional relief, it may, in this context, increase anxiety by reinforcing the perceived seriousness of the surgical procedure. Patients who receive frequent attention and concern from loved ones may become more anxious about possible complications or outcomes. This underscores the need for structured pre-surgery education that includes both patients and their support systems, aiming to balance empathy with reassurance and factual understanding.

Lastly, the positive link between religiosity and pre-surgery anxiety indicates that higher religious commitment may be associated with heightened emotional reactions before surgery. Although religiosity is often viewed as a coping resource, it may also reflect deeper existential concerns or fear of suffering and mortality. This calls for integrating culturally sensitive spiritual care into pre-operative support services. Chaplaincy services or religious counseling can be incorporated into hospital care to address spiritual concerns and reduce anxiety among religious patients.

Overall, the study implies that interventions aimed at reducing pre-surgery anxiety should not only target patients perceived as psychologically vulnerable but also consider those with strong self-esteem, robust social networks, or deep religious faith. A more holistic and individualized approach to pre-surgical care is essential for improving patient outcomes and emotional well-being.

7. Contribution of the study

This study contributes significantly to the growing body of knowledge on psychological factors influencing pre-surgery anxiety, particularly within the Nigerian healthcare context. By establishing that self-esteem, social support, and religiosity positively predict pre-surgery anxiety among patients in Akwa Ibom State, the study challenges conventional assumptions that these variables uniformly serve as protective factors against anxiety. Instead, it reveals that under certain conditions, these psychosocial factors may contribute to heightened emotional distress in the preoperative phase.

Specifically, the finding that self-esteem positively predicts anxiety expands the understanding of how self-perception interacts with health-related stressors. While self-esteem is often associated with resilience and emotional stability, this study suggests that individuals with high self-esteem may exhibit greater anxiety due to an increased awareness of personal value and the potential loss or disruption posed by surgery. This detailed perspective offers a fresh direction for future psychological research in clinical settings.

Additionally, the study provides new insights into the role of social support in healthcare outcomes. Contrary to the widely held belief that social support always reduces stress, the finding that increased social support correlates with higher anxiety levels before surgery suggests that well-meaning attention from family and friends may inadvertently increase patients' worries. This adds a new dimension to existing models of social support by highlighting its potential dual role, depending on context and perception.

The study also contributes to understanding the complex relationship between religiosity and health anxiety. While religiosity is typically seen as a buffer against psychological distress, this research shows it may, in some cases, intensify anxiety due to spiritual concerns, fear of death, or heightened moral contemplation. This finding broadens the scope of religious coping theory and underscores the need for culturally and spiritually sensitive approaches in patient care.

Overall, this study enriches psychological and medical literature by presenting context-specific evidence from a sub-Saharan African setting. It lays the groundwork for future studies to further explore the paradoxical roles of these psychosocial variables and calls for the development of more tailored, culturally appropriate interventions to address pre-surgery anxiety.

8. Limitations and suggestions for further studies

Despite the valuable insights provided by this study, it is not without limitations. One major limitation is the reliance on self-reported data, which may be subject to social desirability bias or inaccuracies in patients' self-assessment of their self-esteem, social support, religiosity, and anxiety levels. Additionally, the study was conducted in Akwa Ibom State only, which may limit the generalizability of the findings to other regions with different cultural, religious, and healthcare contexts.

Another limitation is the cross-sectional design of the study, which restricts the ability to establish causality between the predictors and pre-surgery anxiety. The direction of influence may be more complex or even reciprocal than the analysis suggests. Furthermore, the study focused only on three psychosocial variables, leaving out other potential contributors to pre-surgery anxiety such as prior surgical experience, personality traits, or the severity of the health condition.

Based on these limitations, future studies are encouraged to adopt a longitudinal design to better capture the dynamics of pre-surgery anxiety over time. Expanding the study to include more diverse populations and regions would also enhance the applicability of the results. Moreover, incorporating qualitative methods could provide deeper insights into the personal and cultural meanings attached to self-esteem, social support, and religiosity in the context of surgery. Future researchers should also explore the interactive effects of these

variables with other psychological and situational factors to build a more comprehensive understanding of what drives pre-surgical anxiety.

9. Conclusion

The study investigated how psychosocial variables (self-esteem, perceived social support, and religiosity) predict pre-surgery anxiety among patients awaiting surgery in Akwa Ibom State. The findings revealed that all three variables (self-esteem, perceived social support, and religiosity) positively and significantly predicted pre-surgery anxiety. This suggests that, contrary to conventional expectations, higher levels of these psychosocial factors may be associated with increased anxiety rather than reduced psychological distress prior to surgery.

The study provides empirical evidence that individuals with higher self-esteem may experience heightened pre-surgery anxiety, possibly due to a stronger sense of self-worth and fear of adverse outcomes. Similarly, increased perceived social support was linked to more anxiety, which may be attributed to amplified awareness of the seriousness of the surgery and heightened concern for loved ones. Religiosity also showed a positive relationship with anxiety, indicating that patients' spiritual reflections and concern over divine outcomes might intensify their emotional responses before undergoing surgery.

These findings contribute to a better understanding of the psychological dynamics involved in the preoperative phase and underscore the complexity of anxiety predictors. Rather than functioning as buffers, self-esteem, social support, and religiosity might, in certain contexts, intensify emotional concerns among patients. Based on these findings, the following is recommended:

- First, pre-surgery assessments and interventions should be more detailed, recognizing that well-meaning support systems and personal beliefs may sometimes elevate rather than alleviate stress.
- Also, healthcare professionals should take a more individualized approach when addressing patients' psychological needs before surgery.
- Preoperative counseling programs should assess how patients interpret their self-esteem, perceived social support, and religious beliefs, and offer tailored emotional support that addresses these underlying concerns.

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