Outcomes of Nurse-Led Psychological Reassurance Towards Reducing Post-Operative Pains among Patients in Selected Hospitals in Ibadan Oyo State

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ABSTRACT

Postoperative pain affects a significant proportion of surgical patients globally and remains a major challenge in post-surgical care, with a substantial number of patients developing persistent pain. Although psychological preparation for surgery has been shown to improve surgical outcomes, limited evidence exists on the effectiveness of nurse-led psychological reassurance in reducing postoperative pain and anxiety among surgical patients in Nigerian hospital settings.

This study investigated the effect of nurse-led psychological reassurance on postoperative pain and surgery preparedness among surgical patients in selected hospitals in Ibadan, Oyo State. A quasi-experimental research design involving experimental and control groups was adopted. Four hospitals were selected, comprising two experimental and two control sites. A total of 102 surgical patients were randomly selected, including 67 in the experimental group and 35 in the control group. Data were collected using a self-developed, structured questionnaire which was validated by experts in nursing and behavioural sciences. The instrument demonstrated acceptable internal consistency with a Cronbach's alpha reliability coefficient of 0.78. Data were analysed using descriptive statistics and inferential statistics, with the t-test conducted at $p \leq 0.05$.

The results showed that following the intervention, the proportion of patients who were well prepared for surgery increased significantly in the experimental group (79.1%), while only 4.5% remained poorly prepared. Psychological reassurance also improved significantly, with only 6.4% of respondents reporting high levels of worry. There was a statistically significant improvement in surgery preparedness ($t = 2.282$, $p = 0.026$) and psychological reassurance ($t = 2.005$, $p = 0.049$) following the intervention. It was concluded in this study that nurse-led psychological reassurance significantly improved surgical patients' psychological preparedness and reduced postoperative pain-related anxiety. The study therefore recommends the integration of structured psychological reassurance into routine nursing care for surgical patients as a complementary approach to postoperative pain management, with reduced reliance on opioid analgesics.

Keywords: Nurse-led psychological reassurance; Post-operative pain; Surgical patients; Selected hospitals

INTRODUCTION

Postoperative pain is a significant therapeutic challenge and a complex experience that is not easily communicated and a major stressor facing hospitalized patients (Ramira et al., 2019). It is a public health epidemics placing burdens on those experiencing it as well as society more broadly (Gao et al., 2023; Horn et al., 2024). A Survey done in 2020 from 10 developed and 7 developing countries suggests that the point prevalence of postoperative pain among adults is 41% and 37% respectively. A study indicated that more than 50 million American adults have chronic or severe pain (National Institutes of Health, 2021). Furthermore, the global burden of postoperative pain reported that at least 10% of the world's population is affected by a chronic pain condition, and every year, an additional 1 in 10 persons develops chronic pain (Jackson, 2021).

Postoperative pain is estimated to affect over 100 million adults and at any given time, and it is among the leading causes of reduced quality of life, and carries direct and indirect cost of over $600million dollars annually in the U. S alone (National Institute of Health, 2021). In Africa, it is reported that acute pain on its own or along other complaints, is a common reason for seeking emergency care in the pre-hospital and hospital emergency department setting (Andrit, 2019). Pain is a major stressor facing hospitalized patients. There is a growing awareness on the etiology of pain, together with the advancement of pharmacological management of pain. Despite this awareness and pharmacological advancement, patients still experience intolerable pain which hampers the physical, emotional, and spiritual dimension of the health. Postoperative pain remains and considered a form of acute pain due to surgical trauma with an inflammatory reaction and initiation of an afferent neuronal barrage, it is a combined constellation of several unpleasant sensory, emotional and mental experience precipitated by the surgical trauma and associated with autonomic, endocrine-metabolic, physiological and behavioural responses. Reassurance has a great positive influence in reducing inappropriate pain and pain behaviour, encouraging proactive healthy behaviour also decreasing their stress and anxiety (Ben et al., 2017).

Proper postoperative pain management is crucial because excessive postoperative pain can not only hinder the healing and recovery process but can also lead to chronic pain. Every patient has the right to be free of pain, effective pain relief not only provides physical comfort for patients, but also, improves their quality of life and facilitates more rapid return to everyday life, it reduces the duration of hospital stay and ultimately cuts the cost of healthcare (Horn et al., 2024). Psychological preparation for surgery has been demonstrated to improve outcomes. In a review, psychological preparation was found to be beneficial for a range of outcome variables that included negative effect, pain, pain medication, length of hospital stays, behavioural recovery, clinical recovery, physiological indices and satisfaction (Karimian et al., 2023). In developed countries psychological reassurance is highly effective in the management of pain. Pain can be considered as the medium of communication from our body to us, bringing to our notice a part of our body needs attention. Reassurance is said to have been successful if a patient responds to a clinical consultation with less fear and concern about their illness. Chronic pain statistics worldwide show that adults with less than a high school education make up 28% of pain sufferers, almost 24% of non-Hispanic white people report chronic pain (Rikard et al., 2023)

Psychological reassurance interventions aim to enable the person to regulate or manage their feelings or emotions. Psychological reassurance methods include: enabling the discussion, expression or acceptance of emotions; facilitating contextualization and enabling the understanding of emotions that is giving them meaning. Providing procedural information is expected to reduce anxiety because it helps the patient to know what to expect when they undergo surgery. It reduces uncertainty, and ensures that concern is not caused by events that are part of normal hospital procedures. Pain management post operatively can be through pharmacological and non- pharmacological means; pharmacological method involves the use of drugs to relief pain such drug include opioid analgesics and non-opioid analgesics, while Non-pharmacological method does not depend on medication example include encouraging patients, providing instructions, changing positions, using deep mouth breathing techniques, and exercises providing psychological support performing sacral massage, acupuncture and bathing ball (Alorfi, 2023). Therefore, there is a need to investigate outcomes of nurse-led psychological reassurance towards reducing post-operative pain among patients in selected hospitals at Ibadan, Oyo state.

The Specific objectives were to:

1. Assess the pre and post-intervention level of patient's preparedness for surgery towards reducing postoperative pain in the intervention and control groups
2. Determine the baseline psychological assurance status of patients on management of postoperative pain in the intervention and control groups; and
3. Assess the post-intervention psychological assurance status of patients on management of postoperative pain in the intervention groups

METHOD

The study is a quantitative research that adopted a two group quasi-experimental method (one intervention group and one control group) that assessed the outcome of an intervention programme on the experimental group.

This study was carried out in four selected hospitals at Ibadan in Oyo State. The intervention study was conducted at Jericho Specialist Hospital (JSH), Adeoyo Maternity Teaching Hospital (AMTH), Jericho Nursing Home (JNH) and Ring Road State hospital (RRSH) all in Ibadan. All are secondary health care facilities owned by Oyo State government. The average surgeries done in the four hospitals in a month are 314 with average admission rate of about 92 on the whole in the four selected hospitals at any point in time. Participants were eligible for inclusion in the study if they were adult surgical patients admitted to the selected hospitals, scheduled for elective surgery, and willing to participate in the study with informed consent.Patients were excluded from the study if they had contraindications to anaesthesia, died intra-operatively or post-operatively, or developed severe mental disorders following surgery that could interfere with psychological assessment.

The sample size for this study was determined using a quasi-experimental design formula for comparing two groups at a 5% level of significance. Based on the average monthly surgical patient turnout in the selected hospitals and allowing for possible attrition, a total of **102 surgical patients** was considered adequate for the study. This comprised **67 participants in the**

experimental group and **35 participants in the control group**. A two-stage sampling technique was employed for participant selection Stage One: Purposive sampling method was adopted; the researcher considered the research setting with high monthly turnout of surgical patient for intervention group (Jericho Specialist hospital and Adeoyo Maternity Teaching hospital) while the settings with low monthly turnout of surgical patients were considered for control group (Jericho Nursing Home and Ring Road State hospital). Stage Two: Simple random sampling method was adopted to select daily available surgical patients till the number required for the study was completed. The selection was monitored to avoid double counting in such a way that no patient was captured twice. The random selection of surgical patients adopted lottery method where Yes was written on piece of paper and rolled and the same for No to make the total number of 314. The number of Yes was total sample required (102) while the rest was No. All patients who picked Yes was included in the study while those patients who picked No were excluded from the study.

Table 1 Statistics of surgical patients in male and female surgical ward of the four selected Hospitals in Ibadan

HOSPITAL	GROUP	AMS	AAR
Jericho Specialist Hospital	Intervention	103	33
Adeoyo Maternity Teaching Hospital	Intervention	104	34
Jericho Nursing Home	Control	17	6
Ring Road State Hospital	Control	90	29
Total		314	102

AMS; Average monthly surgeries

AAR ; Average Admission Rate at any point in time

Instrument for Data Collection: A self structured questionnaire was developed by the researchers, It was divided into four (4) sections

Procedure for Data Collection: Surgical patients attending the four selected facilities were randomly selected adopting lottery method where Yes was written on piece of paper and rolled and the same for No to make the total number of 314. The number of Yes was total sample required (102) while the rest was No. All patients who picked Yes was included in the study while those patients who picked No were excluded from the study.

Data Analysis: Data were entered and analyzed using **Statistical Package for the Social Sciences** (SPSS) version 25. Descriptive statistics such as frequencies, percentages, tables, and charts were used to summarize demographic and study variables. Hypotheses were tested at a 5% significance level using the independent t-test and chi-square test to determine associations between variables.

Ethical Considerations: Ethical approval was obtained from the University Research Ethics Committee, Ladoke Akintola University of Technology, Ogbomoso. Official permission was also secured from the four selected hospitals. Written informed consent was obtained from all participants after explaining the study's objectives, procedures, and voluntary nature.

Participants were assured of confidentiality and informed of their right to withdraw at any stage without penalty.

Intervention Module: The intervention was implemented in a setting separate from the control group to minimize contamination and was delivered by the researcher. It consisted of nurse-led sessions conducted twice weekly over a period of six weeks, resulting in a total of twelve sessions. Each session lasted approximately two hours and combined didactic teaching with experiential exposure.

During each session, approximately one hour was devoted to face-to-face physical teaching, which included structured health education, interactive discussions, and reassurance aimed at improving psychological preparedness for surgery. Content focused on self-awareness, emotional regulation, pain coping strategies, and effective communication with healthcare providers. Teaching methods included verbal explanations, visual aids, demonstrations, and opportunities for participants to ask questions and share concerns.

The remaining one hour of each session involved guided exposure to the operating theatre environment. Participants were taken to the theatre to familiarize them with the physical setting, surgical equipment, instruments, and gadgets. The researcher explained the purpose of the high level of illumination, the function of various instruments, and the surgical team's mode of dressing and aseptic practices. This exposure was designed to demystify the surgical environment, reduce fear of the unknown, and build confidence by increasing familiarity with perioperative procedures.

Overall, the intervention combined educational, emotional, and experiential components to enhance psychological readiness, reduce preoperative anxiety, and improve patients' coping capacity prior to surgery.

RESULTS

Socio-Demographic Characteristics of Participants

A total of 102 respondents participated in the study. As shown in Table 1, the mean age of the respondents was 33.9 ± 16.3 years, with the highest proportion (34.3%) within the 20–29 years age group. The majority of the respondents were female, while most were married. With respect to educational attainment, a greater proportion had attained at least secondary education. Most respondents were employed, and a considerable number reported having undergone previous surgical procedures.

Table 1

Socio-Demographic Characteristics of Respondents (n = 102)

The mean age of respondents was 33.9 ± 16.3 years. Most participants were females (68.6%), married (53.9%), and of Yoruba ethnicity (82.4%). Over half (58.8%) had tertiary education and 52% were employed, mainly in private establishments. About one-third (34.3%) had a history of previous surgery, predominantly caesarean section.

Preparedness for Surgery

Table 2 presents respondents' preparedness levels before and after the intervention. The proportion of participants classified as "very prepared" increased from 73.1% pre-intervention to 79.1% post-intervention, while those "less prepared" decreased from 16.4% to 4.5%. This improvement suggests that the nurse-led psychological reassurance sessions enhanced patients' knowledge, confidence, and emotional readiness for the surgical procedure.

Table 2

Comparison of Preparedness for Surgery Among Respondents Before and After Intervention (n = 67)

The table shows a notable improvement in surgical preparedness following the nurse-led psychological reassurance intervention. The proportion of respondents classified as "very prepared" increased from 73.1% to 79.1%, while those "less prepared" declined from 16.4% to 4.5%. This indicates that psychological support enhanced participants' confidence, understanding, and readiness for surgery.

Then preparedness was compared between the control and experimental groups at post-intervention (*Table 3*), a slightly higher proportion of participants in the experimental group (79.1%) were "very prepared" compared to the control group (77.1%). Conversely, a lower percentage of the intervention group were "less prepared" (4.5%) compared to the control group (8.6%). These findings suggest that the nurse-led reassurance sessions were effective in improving patients' preoperative preparedness.

Table 3

Comparison of Preparedness for Surgery Between Control and Experimental Groups at Post-Intervention (n = 102)

The experimental group exhibited slightly higher preparedness levels (79.1%) compared to the control group (77.1%) following the psychological reassurance intervention. Fewer respondents in the intervention group were classified as "less prepared," suggesting that the nurse-led sessions effectively improved preoperative confidence and readiness.

Psychological Assurance Status

As shown in Table 4, respondents demonstrated marked improvement in psychological assurance following the intervention. The percentage of participants who were "very worried" about surgery declined significantly from 40.3% to 6.0%, whereas those who were "less worried" and "not worried" rose to 47.8% and 22.4%, respectively. These findings indicate that the intervention was effective in reducing preoperative anxiety and fostering a sense of emotional control and trust in the healthcare team.

Table 4: Psychological Assurance Status of Respondents Before and After Intervention (n = 67)

Following the intervention, respondents demonstrated reduced levels of anxiety and concern regarding surgery. The proportion of those "very worried" dropped sharply from 40.3% to 6%, while those "less worried" and "not worried" increased to 47.8% and 22.4%, respectively. This suggests that the psychological reassurance module was effective in promoting calmness, emotional stability, and trust in healthcare providers prior to surgery.

A comparison between control and experimental groups in *Table 5* further highlights this improvement. In the control group, 28.6% of respondents remained "very worried," whereas only 6% of the intervention group reported similar concern. In contrast, nearly 70% of the intervention group fell within the "less worried" and "not worried" categories, compared with only 25.7% in the control group. This demonstrates that the psychological reassurance program substantially enhanced emotional stability and trust among the experimental participants.

Table 5: Psychological Assurance Status Between Control and Experimental Groups at Post-Intervention (n = 102)

After the intervention, the experimental group displayed markedly higher psychological assurance levels. The proportion of "very worried" respondents decreased from 28.6% in the control group to 6% in the intervention group, while "less worried" and "not worried" categories rose substantially. This reflects the effectiveness of the psychological reassurance program in reducing fear and anxiety among surgical patients.

Descriptive Statisticss

Results of the paired *t*-test, presented in Table 6, revealed a statistically significant improvement in preparedness for surgery following the intervention ($t = 2.01$, $p = .049$). This confirms that the nurse-led psychological reassurance program significantly enhanced both preparedness and psychological assurance among surgical patients.

Table 6: Pre- and Post-Intervention Test Statistics for Preparedness and Psychological Assurance (n = 67)

A paired t-test revealed a statistically significant improvement (p = .049) in respondents' preparedness and psychological assurance following the nurse-led intervention. This finding supports the hypothesis that structured psychological reassurance contributes positively to preoperative readiness and postoperative pain management.

DISCUSSION OF FINDINGS

Demographically, about one-third of respondents were aged 20–29 years (mean age = 33.9 ± 16.29). Females predominated, with most participants being Yoruba and Christian. Slightly over half were married, and about three-fifths had tertiary education. Half were employed, mostly in private establishments. One-third reported previous surgical experience, mainly caesarean section.

Preparedness for Surgery

The high proportion of participants in the intervention group who reported receiving effective patient-centred reassurance before surgery indicates that nurse-led psychological reassurance substantially improved preparedness for surgery. Improved preparedness may reflect enhanced understanding of surgical procedures and postoperative pain management, which can increase patients' confidence and emotional stability. Adequate preoperative information and reassurance have been shown to reduce uncertainty and promote adaptive coping, thereby improving patients' readiness for surgery (Sjöling et al., 2015).

The present findings also suggest that nurses' empathy, communication, and physical presence play a central role in fostering trust and a sense of safety among surgical patients. This interpretation is consistent with previous reports indicating that preoperative education and supportive nurse–patient interactions are associated with reduced anxiety, lower perceived pain, and higher satisfaction with care (Lemay et al., 2020; Sjöling et al., 2015). The results therefore reinforce the importance of nurse-led psychological reassurance as a key component of perioperative care aimed at improving surgical preparedness.

Psychological Assurance

The finding that nearly three-quarters of participants reported little or no worry about postoperative pain following the intervention suggests that nurse-led psychological reassurance was effective in improving psychological assurance among surgical patients. This supports earlier evidence that adequate preoperative information and emotional support can reduce anxiety and fear related to surgery and pain management. Studies have shown that patients who receive structured preoperative education and reassurance tend to demonstrate better psychological adjustment and coping, which may positively influence their perception of postoperative pain and recovery (Sjöling et al., 2015; Oyelowo et al., 2022).

The improvement observed in this study may be attributed to the close and continuous interaction between nurses and patients, which allows for clarification of concerns, reassurance, and emotional support. Nurses' attitudes and communication style have been identified as key determinants of patients' psychological responses to surgery, with positive nurse–patient interactions linked to reduced worry and increased confidence in care (Akeju et al., 2021). The present findings therefore reinforce the role of nurse-led psychological reassurance as an important non-pharmacological approach to improving psychological outcomes in surgical patients.

Associated Factors

The findings of this study showed that nurse-led psychological reassurance significantly improved participants' preparedness for surgery and psychological assurance toward postoperative pain management. This outcome is consistent with previous studies which reported that structured psychological support delivered by nurses reduces anxiety and enhances patients' coping abilities before surgery (Akeju et al., 2021; Oyelowo et al., 2022). Psychological reassurance helps patients better understand surgical procedures, reduces fear and uncertainty, and promotes a sense of control, all of which are known to positively influence psychological readiness and pain perception.

In contrast, socio-demographic variables such as age, gender, marital status, educational level, employment status, and previous surgical experience were not significantly associated with psychological assurance in this study. This finding aligns with reports by Amponsah et al. (2021), who observed that demographic characteristics did not significantly influence psychological outcomes when patients received adequate information and emotional support. The lack of association suggests that nurse-led psychological reassurance may be effective across diverse patient groups, regardless of socio-demographic differences, thereby reinforcing its relevance as a universal component of perioperative nursing care.

CONCLUSION

From the study it could concluded that post-operative adult patients that were given information about post-operative pains, and who received optimal psychological reassurance by nurses during the intervention had lower current pain 24 hours after the surgery and higher levels of pain relief. Conversely, a larger percentage of the patients at the intervention showed lower preoperative state of anxiety and increased satisfaction compared to the patients at the control group.

Recommendations

Based on the findings of this study, the following recommendations are made:

1. Integration of psychological reassurance into routine nursing care: Nurse-led psychological reassurance should be formally integrated into perioperative nursing care for surgical patients, as the study demonstrated significant improvements in surgery preparedness and psychological reassurance following the intervention.
2. Preoperative psychological preparation protocols: Hospitals should adopt structured preoperative psychological preparation programmes led by nurses to reduce anxiety and improve patients' readiness for surgery, particularly in surgical wards where postoperative pain is a common concern.
3. Capacity building for nurses: Continuous professional development programmes should be organised to equip nurses with skills in psychological reassurance and patient-centred communication, given their demonstrated impact on patients' psychological outcomes in this study.
4. Reduction of over-reliance on pharmacological pain management: Nurse-led psychological reassurance should be used as a complementary approach to postoperative pain management to minimise excessive dependence on opioid analgesics, in line with the study's findings on improved psychological outcomes.
5. Institutional support for nurse-led interventions: Hospital management should support and encourage the implementation of nurse-led non-pharmacological interventions, such as psychological reassurance, as part of standard perioperative care to improve surgical patient outcomes.
6. Future research focus: Further studies using larger sample sizes and multiple settings are recommended to evaluate the long-term effects of nurse-led psychological reassurance on postoperative pain and recovery outcomes.

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