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INFLUENCE OF PAIN PERCEPTION ON QUALITY OF LIFE AMONG ORTHOPAEDIC PATIENTS AT 44 NIGERIAN ARMY REFERENCE HOSPITAL KADUNA

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ABSTRACT: Orthopaedic patients often face significant challenges not only due to the physical limitations caused by their injuries or conditions but also due to the psychological and emotional impact of pain and recovery. This study explores the influence of pain perception on the quality of life of orthopaedic patients at 44 Nigerian Army Reference Hospital Kaduna. A total of 150 orthopaedic patients at the 44 Nigerian Army Reference Hospitals in Kaduna were selected through purposive sampling as participants, and a questionnaire comprising two scales, namely, The Pain Belief Questionnaire (PBQ) and The World Health Organization Quality of Life Scale (WHOQOL-BREF scale) were used to collect data. The data collected was analysed using SPSS version 27. The result from the hypothesis indicates a correlation analysis revealed that pain perception demonstrated a significant negative correlation with Psychological Health (r=−.230, p=.004), further highlighting the link between lower psychological health and higher pain perception but a negative correlation with Environmental Wellbeing (r=−.247, p=.002), suggesting that while greater functional impact is associated with stronger social ties, it may also be linked to lower perceptions of environmental wellbeing. Environmental Wellbeing was positively associated with Social Relationships (r=.247, p=.002) but did not significantly correlate with other variables. It was concluded and recommended that there is a significant influence of pain perception and resilience on quality of life among orthopaedic patients at 44 Nigerian Army Reference Hospital Kaduna. Healthcare providers at the 44 Nigerian Army Reference Hospital Kaduna should prioritize addressing and managing pain perception effectively among orthopaedic patients.

Keywords: Pain Perception, Resilience, Quality of Life and Orthopaedic Patients.

INTRODUCTION

Quality of life (QOL) is an important issue for the large number of patients who may need to adapt to severe and chronic disabilities due to joint stiffness or other orthopaedic conditions. Evidently, the loss of mobility in the joints makes a patient more dependent on others, which affects quality of life (McCaffrey et al., 2016). Research has shown that the loss of the ability to live independently in the community has a considerable detrimental effect on the quality of life of orthopaedic patients. McCaffrey et al. (2016). It follows that a reduction in the incidence of fractures will not only save lives but will prevent a significant reduction in their quality of life (Chaitanya & Kumar, 2015). Quality of life has emerged as a concept that refers to many subjective experiences, including well-being and daily functions. Quality of life measures are instruments

that describe how patients who experience chronic conditions perceive the impact of the disease. Besides the symptoms such as pain, disturbances of sleep, and limitation of mobility, there are measured emotional distress and severe restrictions over multitude of days (Kersebaum et al., 2020). Over time, the most frequent diagnosis that had the benefit of the quality-of-life surveys was osteoarthritis. Total hip and knee arthroplasty were followed by surveys with a duration ranging from seven days to seven years, describing results at six and twelve months (Braimah et al., 2017).

However, the goal of any surgical, operatory procedure performed is to relieve the pain and limitation in movement during functional tasks and also to improve quality of life. This has led to considerable morbidity after the completion of the treatment. Joint stiffness is one of the important fallouts of such injuries. Upper extremity fractures may result in ankylosis of the joints, such as the shoulder, elbow or hand, which may be quite disabling at times. This stiffness may hamper routine movements as well as certain other activities. Cooper, et al. (2016) affirmed that coping is a behaviour that could protect people from being psychologically harmed by problematic social experiences. He further added that coping protects by eliminating or modifying stresses, perpetually controlling the meaning of stressful experiences, thus neutralising their problematic character and keeping emotional consequences within manageable bounds (Cooper, et al., 2016).

According to Kobal, et al. (2022) quality of life (QoL) is a broad concept that includes subjective evaluations of various aspects of life, including (but not limited to) employment, housing, community, and health. While all of these domains are important, there is one that stands above the rest when it comes to assessing the overall quality of life, which is the health of an individual (van Leeuwen, et al., 2019). As the saying goes, “health is your greatest wealth”, and without it, the ability to fully experience other aspects of an individual’s life is hindered. Studies on QoL provide an estimation of the impact of treatment on chronic diseases for which improvement in functional status and well-being can be regarded as an essential outcome (Al Salmi, et al., 2021). An improved QoL and the resultant ability of the patient to resume normal life, including supporting their families and working productively, will encourage long-term sustenance of treatment (Egan, et al., 2017). However, if QoL is poor, it negatively impacts life-long adherence to medication (Bosch et al., 2015). Quality of life also serves as an indicator of prognosis among patients with HIV, as those from lower quartiles of physical and mental scores have a higher incidence of mortality (Akinboro, et al., 2014). Quality of life in patients is important to help reduce the consequence of an underlying health condition and to improve the response of patients to the recovery process and treatments as well. When these issues are considered, patients are less vulnerable to health problems that might develop as a result of poor response to an existing health issue, such as anxiety, aggressive disorders, and other mental health challenges. According to Dwivedi, et al. (2022) the importance of making solid reference to the quality of life for patients is that the cost of treatments is reduced greatly, and the health system remains more efficient. To improve the quality of life of patients, it has been advised that patients should eat a nutrient-rich diet and incorporate supportive supplements as well as engage in physical activities that improve their QoL. Chaturvedi et al. (2021) suggested that regular exercising is key when it comes to maintaining good energy, building muscle, managing patients’ weight, warding off chronic disease, and keeping their joints lubricated. Health workers are advised to discuss with patients to choose a type of activity that they enjoy, whether it’s walking, swimming, dancing, or doing yoga.

Several factors may determine the quality of life of patients. For instance, it has been discovered that social support promotes mental health and acts as a buffer against stressful life events (Margolis et al., 2019). Social support is derived from a network of people drawn from family, friends and community (Awang et al., 2014). Lack of social support is a determinant of mental health problems, including depressive symptoms among university students (Bukhari & Afzal, 2017) and exerts a negative impact on the quality of life for students (Dafaalla et al., 2016).

According to Crofford (2015), pain can be perceived as a terrible emotion that is usually brought on by anything either severe or very destructive to the body. According to the International Association for the Study of Pain (IASP) (2020), pain is "an unpleasant sensory and emotional experience linked with, or approximating that associated with actual or prospective tissue injury." Although most of the pain disappears after the painful stimuli are withdrawn and the body has recovered, it is possible for the pain to continue even after the stimulus has been removed and the body seems to have healed (Casoni et al., 2019). Sometimes, pain may be experienced in the absence of any discernible stimuli, injury, or sickness. Pain severity and unpleasantness may be altered by mental elements such as cognitive behavioural therapy, enthusiasm, or distraction, among other things (Desbordes et al., 2015). Hence, people respond to pain differently. For orthopaedic patients, response to pain could take the form of anxiety regarding when the pain will be over.

A study by Adeyemo et al. (2015) on Health-related quality of life and perception of stigmatisation in adolescents living with sickle cell disease in Nigeria: A cross-sectional study on a total of 160 teenagers, 80 of whom had sickle cell disease and 80 of whom did not have the condition. A questionnaire that had previously been evaluated was used to capture socio-demographic as well as clinical data. The Short Form (SF-36v2) Health Survey was used in order to conduct the research on Health-Related Quality of Life (HRQoL). An altered version of a stigma questionnaire was used to examine people's perceptions of the stigma associated with sickle cell disease. Except for mental health, adolescents who have sickle cell disease SCD have a significantly lower HRQoL than their peers in all of the most important aspects of HRQoL, including physical functioning, physical roles limitation, emotional roles limitation, social functioning, bodily pain, vitality, and general health perception. Subsequent hospitalisation, as well as a complication due to sickle cell disease, contributed to additional decreases in HRQoL ratings. More than seventy percent of teenagers diagnosed with SCD report having a moderate to high degree of stigmatisation perception in their community. There was a substantial and inverse relationship between HRQoL and hospitalisation, complications of sickle cell disease, and stigma associated with sickle cell disease. During the first stage of orthodontic treatment, Gao et al. (2021) compared pain perception, anxiety, and the effects on oral health-related quality of life (OHRQoL) in adult patients who received either transparent aligners or fixed appliances. The findings indicated that a comparison of pain perception, anxiety, and impacts on oral health-related quality of life (OHRQoL) between adult patients receiving clear aligners and fixed appliances during the initial stage of orthodontic treatments revealed that adult patients receiving clear aligners experienced less pain than those receiving fixed appliances.

Statement of the Problem

The intersection of pain perception and resilience represents a vital research area, especially for orthopaedic patients. Patients often face not only physical limitations but also psychological burdens associated with chronic pain. This combination can lead to a decreased quality of life, hindering their ability to participate in social, professional, and personal activities. The goal of this study is to investigate how pain perception and resilience influence quality of life, in order to generate insights that could guide effective interventions for these patients. Literature in this area includes studies on patient satisfaction following total knee, hip replacement, and lumbar spine surgeries (King et al., 2020). Additionally, research has examined satisfaction with upper extremity surgeries (Matar et al., 2021), highlighting relationships between satisfaction and factors like opioid use, demographic characteristics, treatment settings, and expectations (Kelly et al., 2018). Other studies indicate that patient satisfaction after knee surgery is influenced by psychological conditions (anxiety and depression), surgical techniques, perioperative care, physiotherapy, the quality of medical care, and patient demographics (Lizaur-Utrilla et al., 2019).

Despite existing studies, the evidence regarding quality of life among orthopaedic patients remains contradictory. There is a notable lack of research specifically addressing the influence of pain perception and resilience on quality of life. While the importance of examining patient quality of life is widely recognized, there is a deficiency in multidimensional studies of patient satisfaction (Graham et al., 2016). This research is motivated by a commitment to contribute empirical evidence to orthopaedic treatment in Nigeria.

Objective of the Study

The following was the objective of the study:

i. Examine the influence of pain perception on the quality of life on (physical health, psychological health, social relationships, environmental well-being) among orthopaedic patients at 44 Nigerian Army Reference Hospital Kaduna.

Hypotheses

The following hypothesis was tested

i. Pain perception will significantly influence the quality of life of (physical health, psychological health, social relationships, environmental well-being) among orthopaedic patients at 44 Nigerian Army Reference Hospital Kaduna.

METHOD

Design

This study adopted a cross-sectional survey. This is a research design that describes existing conditions without actively manipulating any variable. Concerning this study, the researcher used

the design to investigate the quality of life as experienced by orthopaedic patients. It also seeks to determine whether the perception of pain and resilience influence the quality of life of these individuals. while, the two independent variables are pain perception and resilience while dependent variable is the quality of life among orthopaedic patients at Nigerian Army Reference Hospital, Kaduna

Participants

Out of three hundred (300) military and civilian orthopaedic patients admitted or receiving treatment at 44 Nigeria Army Reference Hospital Kaduna, one hundred and sixty-nine (169) were selected using the purposive sampling technique. Both military and civilian patients. Their demographic characteristics were described.

a) Inclusion Criteria: The inclusion criteria of participants included the following:

i. Patients must consent to the study in the inclusion criteria
ii. Patients must be admitted in 44NARHK the time the study is conducted.
iii. Patients who are 18 years old and above.

b) Exclusion Criteria: The exclusion criteria of participants will include the following:

i. Patients who are not admitted in 44NARHK.
ii. Individuals who are above 17 and below years of age.

Sample Size and Sampling Techniques

There were three hundred (300) military and civilian orthopaedic patients admitted or receiving treatment at 44 Nigeria Army Reference Hospital at the time of the study.

Formula for sample size

Mugenda and Mugenda (2003) defined sampling as the process of selecting a number of individuals for study in such a way that the characters selected represent the large group from which they were selected. This implies that a sample is a small proportion of a population selected for observation and analysis. To get the required sample for this study, Yamane's formula was employed

Yamane's formula is $n = \frac{N}{1+N(e)2}$

n= desired sample size

N=the population size

e=error

In this study the population size was

$$n = \frac{300}{1+300(0.5)2} = 169$$

n=169

Therefore, based on the results of the sample size computation, this study arrived at the sample of 169 participants for the study.

Instruments

A structured questionnaire was used to collect data, comprising three sections. Section A - Socio-Demographic Information: In this section, items were those included pertaining to the participant's age, gender, and marital status.

Section B- The Pain Belief Questionnaire (PBQ) (Cleland, 1984): The Pain Belief Questionnaire (PBQ) is a tool developed by Cleland (1984) to measure an individual's beliefs and attitude towards pain. The PBQ consists of 21 items that assess four aspects of pain beliefs, which are as follows: Perception of Pain: Understanding pain as a warning signal; Controllability of Pain: Beliefs about the ability to manage or control pain, Impact on Daily Functioning: How pain affects everyday activities and quality of life and Perceived Effectiveness of Treatments: Attitudes towards the effectiveness of various pain treatments. The response format for the PBQ is a Likert-type scale, where participants rate their level of agreement with each statement on a scale of 1 to 5. Responses are scored so that higher scores indicate stronger beliefs in the constructs being measured, such as greater fear-avoidance beliefs or lower perceived control over pain.

The psychometric properties of the PBQ have been extensively studied to ensure its reliability and validity as a measure of pain beliefs. One of the most commonly used measures of reliability is Cronbach's alpha, which assesses the internal consistency of the items in a questionnaire. A high Cronbach's alpha value indicates that the items in the questionnaire are measuring the same underlying construct consistently. Several studies have examined the reliability of the PBQ using Cronbach's alpha. For example, in a study by Cleland et al, (2007), the PBQ was found to have good internal consistency, with a Cronbach's alpha coefficient of 0.78. This suggests that the items in the PBQ are measuring a consistent set of beliefs about pain. In addition to reliability, the validity of the PBQ has also been demonstrated through correlations with other measures of pain beliefs, pain intensity, and disability. For example, Cleland (1984) found that scores on the PBQ were significantly correlated with measures of pain intensity, disability, and psychological distress, providing evidence of convergent validity.

Furthermore, the PBQ has been shown to be sensitive to change in response to pain interventions. For example, in a study by McParland et al. (2016), patients who participated in a pain management program showed significant improvements in their beliefs about pain as measured by the PBQ after the intervention. Further, in a study by Childs et al. (2005), the PBQ was used to compare pain beliefs in individuals with chronic low back pain and healthy controls. The results

showed that individuals with chronic low back pain had significantly different beliefs about pain compared to healthy controls, indicating that the PBQ is sensitive to differences in pain beliefs across populations.

Section C - WHO Quality of Life Scale (WHOQOL-BREF 1995): Quality of life as a variable in this study will be measured using the World Health Organization Quality of Life-BREF (WHOQOL-BREF) a self-report measure developed by the World Health Organization (WHO) in 1996 to assess an individual's overall quality of life (QoL) across four domains: physical health, psychological health, social relationships, and environment. The WHOQOL-BREF consists of 26 items, with each item rated on a 5-point Likert scale, 1(Not at all), 2 (Not much), 3 (Moderately), 4 (A great deal), 5(Completely) with higher scores indicating better QoL. The WHOQOL-BREF is a brief version of the WHOQOL 100, which is made up of 100 items. It has been translated into more than 150 languages and has been used in many countries around the world, including Nigeria. The WHOQOL-BREF consists of 26 items, which are grouped into four domains: Physical health (7 items) - Assessing physical well-being, pain, energy, and sleep, Psychological health (6 items) - Assessing psychological well-being, self-esteem, and negative feelings, Social relationships (3 items) - Assessing social support, personal relationships, and sexual activity, Environmental well-being (8 items) - Assessing physical safety, access to healthcare, and access to transportation, among other things. The WHOQOL-BREF has been found to have good reliability and validity. Studies have been conducted in Nigeria using the WHOQOL-BREF scale. The factor analytical study conducted by Ohaeri and Al-Abassi (2004) in Nigeria revealed that the short version of the World Health Organization quality of life instrument was found to be suitable and relevant within the cultural context of the study. The researchers concluded that no modifications to the existing items or inclusion of additional items were required. Studies have found that the WHOQOL-BREF is positively correlated with other measures of QoL and well-being, such as the Short Form-36 Health Survey (SF-36) and the EuroQol-5D (EQ-5D). These instruments were selected for this study because they have been widely used and validated in previous research and have been found to be reliable and valid measures of the quality of life among orthopaedic patients at 44 Nigeria Army Reference Hospital Kaduna.

Procedure

The researcher obtained a letter of introduction taken to the ethical committee of the hospital seeking permission to conduct research in their organization. Upon obtaining approval from the 44NARHK ethical committee, the researcher then proceeded to the facility where the study was be conducted. Participants will be explicitly briefed about the purpose and objectives of the study. The instruments (questionnaire) were administered to the participants (military and civilian patients) admitted or receiving treatment at 44 Nigeria Army Reference Hospital with the help of the research assistant. Before data collection, the researcher sought the consent of the participants (patients) and was able to make it clear to the participants (patients) instructions on how to go about filling the questionnaire. Participants were adequately assured that filling research questionnaire was not compulsory and room for withdrawal will be given without any penalty at any point in the course of filling the questionnaire. The participants were given sufficient time to ask questions as regards the research where necessary and also on statements that are not clear to them on the questionnaire and in turn a reliable answer and assistance was rendered by the

investigator. At the end of the administration, a vote of thanks was given to the participant and the Hospital management and staff.

Data Analysis

Data collected in this study was subjected to the statistical packages for social sciences (SPSS) version 27.0, Data collected on the demographic characteristics of the participants was analysed using descriptive statistics; frequency, simple percentage, mean and standard deviation. The Multiple Regression was employed as inferential statistics to test the hypotheses.

Ethical Considerations

As the tradition demands, it is important for the researcher to adhere strictly to these procedures that govern the conduct of research. The participants were informed about the objectives of the research. This was to enable the researcher obtain their consent and cooperation in other for them to participate willingly. Participants were deceived or forced into participation. All the participants were treated with dignity as humans and were assured them of their anonymity and confidentiality of any information given. To those who gave their consent, copies of questionnaire were administered to them to fill with due consideration and observance of the following ethical principles:

Informed Consent: After briefing the participants about the objectives of the study, the researcher sought the consent of the participants for the administration of the questionnaire to them.

Voluntary Participation: The study gave the participants the opportunity to indicate voluntarily without being forced or pressured.

Confidentiality: Participants were assured of their confidentiality and right to withdraw from the study at any time without adverse consequences against them.

Beneficence: The benefits of the study to the participants were discussed in terms of sharing information related to what the purpose of the research is, Also, if any of them had any misconceptions about the study, the researcher took steps to correct those misconceptions. The debriefing was equally done to let the participants know that if any one of them was physically or emotionally harmed in any way, the researcher identified and addressed such issues. Finally, the participants were notified of their right to withdraw from the study at any time should in case they feel harm.

Risk Management: The participants were informed that the study did not constitute any physical harm to them.

RESULTS

Demographic Variables

Table 1: Demographic distribution of Participants

Variable	N	Percentage	Mean	SD
Gender				
Male	123	80.90%	1.3618	2.20940
Female	27	19.10%		
Total	**150**	**100.00%**		
Marital status				
Single	43	28.30%	1.7987	0.58100
Married	93	61.20%		
Divorce	14	10.50%		
Total	**150**	**100.00%**		
Age				
18	1	0.70%	34.9533	14.41864
19	3	2.00%		
20	5	3.30%		
21	6	3.90%		
22	2	1.30%		
23	10	6.60%		
24	3	2.00%		
25	10	6.60%		
26	2	1.30%		
27	1	0.70%		
28	4	2.60%		
29	16	10.50%		
30	7	4.60%		
31	17	11.20%		
32	2	1.30%		
33	1	0.70%		
34	3	2.00%		
35	6	3.90%		
36	1	0.70%		
37	1	0.70%		
38	2	1.30%		
39	3	2.00%		
40	5	3.30%		
44	9	5.90%		
45	1	0.70%		

46	2	1.30%
48	1	0.70%
50	3	2.00%
54	1	0.70%
55	3	2.00%
56	1	0.70%
58	3	2.00%
59	1	0.70%
60	1	0.70%
66	5	3.30%
67	3	2.80%
68	2	1.30%
70	2	1.30%
77	1	0.70%
Total	**150**	**100.00%**

The sample consisted of 150 participants. Gender distribution revealed that the majority of participants were male (n=123, 80.9%), while females constituted a smaller proportion (n=27n = 27n=27, 19.1%). The mean gender variable score was 1.36 (SD=2.21). Most participants were married (n=93, 61.2%), followed by single individuals (n=43n = 43n=43, 28.3%), and divorced individuals (n=14, 10.5%). The mean marital status score was 1.80 (SD=0.58). The ages of participants ranged from 12 to 77 years. The most frequently reported age was 30 years (n=17, 11.2%), followed by 28 years (n=16, 10.5%). Other age groups each represented a smaller percentage of the sample, with the least frequent ages (e.g., 12, 36, and 77) each having only one participant (0.7%).

Test of hypothesis

Hypothesis 1

Pain perception will significantly influence the quality of life (physical health, psychological health, social relationships, environmental well-being) among orthopaedic patients at 44 Nigerian Army Reference Hospital Kaduna.

Table 2: Zero Order Correlation Matrix Showing relationship between variables.

Variable	Mean	SD	1	2	3	4	5	6	7	8	9
Pain Perception	18.07	3.080	1								
Physical Health	18.25	8.129	-.225**	-0.005	-0.103	.176*	1				
Psychological Health	17.99	8.834	-.230**	-0.041	-0.111	-0.156	.793**	1			
Social Relationships	16.75	7.906	0.029	0.144	.236**	0.080	-0.013	-0.006	1		
Environmental Wellbeing	17.29	7.312	-0.107	-0.158	-0.050	0.141	0.043	0.008	.247**	1	

**Correlation is significant at the 0.05 level (2-tailed). **Correlation is significant at the 0.01 level (2-tailed).*

The results of the correlation analysis revealed several significant relationships between the variables. Pain Perception demonstrated a significant negative correlation with Psychological Health (r=−.230, p=.004), further highlighting the link between lower psychological health and higher pain perception but a negative correlation with Environmental Wellbeing (r=−.247, p=.002), suggesting that while greater functional impact is associated with stronger social ties, it may also be linked to lower perceptions of environmental wellbeing. Environmental Wellbeing was positively associated with Social Relationships (r=.247,p=.002) but did not significantly correlate with other variables.

DISCUSSION

The study investigated the influence of pain perception on quality of life among orthopaedic patients at 44 Nigeria Army Reference Hospital Kaduna.

The hypothesis stated that pain PERCEPTION will significantly influence the quality of life (physical health, psychological health, social relationships, environmental well-being) among orthopaedic patients at 44 Nigerian Army Reference Hospital Kaduna. The results of the correlation analysis revealed that pain perception demonstrated a significant negative correlation with Psychological Health, further highlighting the link between lower psychological health and higher pain perception but a negative correlation with Environmental Wellbeing, suggesting that while greater functional impact is associated with stronger social ties, it may also be linked to lower perceptions of environmental wellbeing. Environmental Wellbeing was positively associated with Social Relationships but did not significantly correlate with other variables. Thus, the findings from the data analysis of the Pain Belief Questionnaire (PBQ) are consistent with a study by A study by Adeyemo et al. (2015) on Health-related quality of life and perception of stigmatisation in adolescents living with sickle cell disease in Nigeria: A cross-sectional study on a total of 160 teenagers, 80 of whom had sickle cell disease and 80 of whom did not have the condition. A questionnaire that had previously been evaluated was used to capture socio-demographic as well as clinical data. The Short Form (SF-36v2) Health Survey was used in order to conduct the research on Health-Related Quality of Life (HRQoL). An altered version of a stigma questionnaire was used to examine people's perceptions of the stigma associated with sickle cell disease. Except for mental health, adolescents who have sickle cell disease SCD have a significantly lower HRQoL than their peers in all of the most important aspects of HRQoL, including physical functioning, physical roles limitation, emotional roles limitation, social functioning, bodily pain, vitality, and general health perception. Subsequent hospitalisation as well as a complication due to sickle cell disease contributed to additional decreases in HRQoL ratings. More than seventy percent of teenagers diagnosed with SCD report having a moderate to high degree of stigmatisation perception in their community. There was a substantial and inverse relationship between HRQoL and hospitalisation, complications of sickle cell disease, and stigma associated with sickle cell disease. During the first stage of orthodontic treatment, Gao et al. (2021) compared pain perception, anxiety, and the effects on oral health-related quality of life (OHRQoL) in adult patients who received either transparent aligners or fixed appliances. The findings indicated that a comparison of pain perception, anxiety, and impacts on oral health-related quality of life (OHRQoL) between adult patients receiving clear aligners and fixed appliances during the

initial stage of orthodontic treatments revealed that adult patients receiving clear aligners experienced less pain than those receiving fixed appliances.

Conclusion

The influence of pain perception and resilience on quality of life among orthopaedic patients at 44 Nigeria Army Reference Hospital Kaduna has been illuminated by the findings of this study. The study demonstrated the significant influence of pain perception and resilience on quality of life among orthopaedic patients at 44 Nigerian Army Reference Hospital Kaduna.

Recommendations

Based on the findings of this study, the following recommendation is made:

1. Healthcare providers at the 44 Nigerian Army Reference Hospital Kaduna should prioritize addressing and managing pain perception effectively among orthopaedic patients. This can be achieved by adopting a more personalized pain management approach that considers the psychological and emotional factors influencing pain perception.

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