

FAMILY SUPPORT AND SELF ESTEEM AS PREDICTORS OF RELAPSE AMONG PATIENTS WITH MENTAL ILLNESS IN KADUNA METROPOLIS, KADUNA STATE

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ABSTRACT

Relapse cases among mentally ill patients are a significant public health concern, with an estimated 1 in 8 people experiencing mental disorders each year. It is on this basis that this study examined family support and self-esteem as predictors of relapse among mentally ill patients in Kaduna Metropolis, Nigeria. A cross-sectional survey design was employed where a total of 90 participants comprising of (76 male and 14 females) with age ranging from 16 to 70 years participated in the study. Purposive sampling technique was used to select patients receiving care at the 44 Nigerian Army Reference Hospital Kaduna and the Federal Neuropsychiatric Hospital Kaduna. Data was collected using standardized questionnaire comprising of the Index of Family Relations (IFR), the Rosenberg Self-Esteem Scale (RSES), and the Management of Early Warning Signs of Relapse Questionnaire (MEWSReQ). Data was analyzed using descriptive and inferential statistics such as Pearson correlation, independent samples t-test, and multiple regression analysis. Three hypotheses were tested and result of hypothesis one indicated no statistical significant difference in relapse between soldiers ($M = 39.22$) and civilian patients ($M = 38.47$), ($t[88] = -0.47$, $p = .642$). Result of hypothesis two showed that family support did not significantly predict relapse ($\beta = .025$, $p = .811$). Result of hypothesis three showed that self-esteem significantly predicted relapse positively ($\beta = .396$, $p < .001$) with lower self-esteem associated with higher relapse risk. Result of hypothesis four showed that family support and self-esteem significantly predicted relapse ($F(2, 87) = 8.574$, $p < .001$); the two predictors accounted for approximately 16.5% of the variance in relapse scores. The researcher concluded that self-esteem is a critical psychosocial determinant of relapse in this population. It is recommended that mental health facilities in Kaduna incorporate a structured self-esteem intervention into routine treatment of all patients with mental illness.

Keywords: Family Support, Self-esteem, Relapse and Mentally ill patients

Introduction

Globally, relapse cases among mentally ill patients is a significant public health concern, with an estimated 1 in 8 people experiencing mental disorders each year (World Health Organization, 2022). Conditions such as depression, anxiety, bipolar disorder, and schizophrenia are prevalent worldwide, and the risk of

relapse remains a critical challenge in their management. Studies indicate that approximately 50% of individuals with major depression experience a relapse within two years of recovery, and relapse rates are even higher for disorders like schizophrenia and bipolar disorder (Gitlin, 2006). Factors such as inadequate access to mental health services, social stigma, and the absence of continuous care contribute to these high relapse rates.

In Africa, the burden of mental illness is exacerbated by a lack of resources, cultural stigma, and insufficient mental health infrastructure. The African continent accounts for a significant portion of the global mental health burden, yet many countries in the region have limited access to mental health care, with only one psychiatrist available per million people in some areas (Sankoh et al., 2018). These limitations lead to high relapse rates, as individuals who initially receive treatment often lack ongoing support, medication, and therapy necessary for sustained recovery. The societal stigma surrounding mental illness in many African cultures also discourages individuals from seeking help, increasing the likelihood of untreated conditions leading to relapse.

In Nigeria, mental health care faces similar challenges, with the Northern region, including Kaduna state, being particularly affected by inadequate mental health services and high relapse rates. Kaduna state, a significant State in Nigeria, has recorded a rising incidence of mental health disorders, yet the State's mental health infrastructure is insufficient to meet the growing demand (Gureje et al., 2015). Relapse cases among patients in Kaduna are often attributed to factors such as the discontinuation of treatment due to financial constraints, social stigma, and a lack of awareness about mental health. Efforts to address these issues include community-based mental health programmes and increased investment in mental health services, but the region still faces significant obstacles in reducing relapse rates and improving overall mental health outcomes.

Despite the challenges, family support plays a crucial role in the management and recovery of individuals with mental illness, significantly impacting relapse rates. Strong family support systems provide emotional stability, encouragement, and practical assistance, which are essential in helping individuals adhere to treatment plans and cope with the challenges of mental health conditions (McCann et al., 2011). Research has shown that individuals with mental illness who receive consistent family support are less likely to experience relapse, as their families often help monitor symptoms, ensure medication adherence, and offer a supportive environment conducive to recovery (Perlick et al., 2016). Conversely, a lack of family support can lead to increased stress, social isolation, and neglect of treatment, all of which contribute to higher relapse rates. Thus, the involvement of family in the care process is vital for improving long-term outcomes for individuals with mental health disorders.

Similarly, self-esteem which is defined as an individual's overall sense of self-worth or personal value, plays a critical role in mental health and the risk of relapse in mental illness. Low self-esteem is frequently associated with various

mental health disorders, including depression, anxiety, and substance abuse, as individuals with poor self-esteem may struggle with feelings of inadequacy, self-doubt, and hopelessness (Mann et al., 2004). These negative self-perceptions can exacerbate symptoms of mental illness and hinder recovery efforts. Conversely, individuals with high self-esteem are more likely to possess resilience and coping strategies that protect against relapse. Therefore, improving self-esteem is often a key focus in therapeutic interventions for mental health disorders, as it can significantly reduce the likelihood of relapse and support sustained recovery (Sowislo & Orth, 2013).

The interplay between family support and self-esteem is crucial in understanding relapse in mental illness. Family support, which includes emotional, financial, and social assistance, provides a safety net that can significantly buffer against the challenges of mental illness. When individuals receive strong family support, they often experience higher self-esteem, as the validation and encouragement from loved ones reinforce their sense of self-worth (Corrigan & Phelan, 2004). High self-esteem, in turn, enhances resilience, enabling individuals to better cope with stressors and reducing the likelihood of relapse. Conversely, a lack of family support can erode self-esteem, leaving individuals more vulnerable to the recurrence of mental health issues. The mutual reinforcement between family support and self-esteem underscores their combined importance in preventing relapse and promoting sustained recovery in mentally ill patients (Windle et al., 2011).

Given this context, this study is crucial because it explores how these two factors may differentially impact relapse rates in military personnel compared to civilians. Soldiers often face unique stressors, such as trauma from combat or the demands of military life, which can profoundly affect their mental health and the role of family support and self-esteem in their recovery process. Understanding these dynamics could inform tailored interventions that address the specific needs of both groups, ultimately improving mental health outcomes and reducing relapse rates.

Statement of the Problem

The high rates of relapse among mentally ill patients remain a significant challenge in mental health care, with profound implications for individual well-being and public health. Relapse among patients with mental illness remains a significant challenge in Nigeria, with evidence indicating a high burden across different settings. A systematic review of African studies, including Nigeria, reported a pooled relapse prevalence of about 60.6%, suggesting that more than half of individuals with mental illness experience relapse after initial improvement (BMC Psychiatry, 2025). Nigerian hospital-based studies, particularly among patients with schizophrenia, have reported relapse rates ranging from 23% to over 70%, largely influenced by factors such as poor medication adherence, duration of illness, and inadequate social support (Bayero Journal of Nursing and Health Care, 2022). In North-Western Nigeria, a multi-centre study found marked regional variation, with Kaduna State recording a

relatively lower relapse prevalence of 14% among patients with schizophrenia in 2020, compared with much higher rates in Kano and Sokoto States (Balarabe et al., 2022).

Research has consistently shown that factors such as family support and self-esteem play crucial roles in the recovery process, yet there is limited understanding of how these factors influence relapse rates, particularly when comparing distinct populations such as soldiers and civilians. Soldiers, due to the unique stressors associated with military life, may experience different dynamics in family supports and self-esteem compared to civilians. However, the existing literature does not adequately address how these differences might affect the likelihood of relapse in mental illness. This gap in knowledge presents a critical issue, as effective intervention strategies may differ significantly between these two groups. Therefore, it is essential to investigate how family supports and self-esteem predict relapse in mentally ill patients, with a focus on the comparative impact between soldiers and civilians. Addressing this problem will not only enhance our understanding of relapse predictors but also inform the development of tailored interventions aimed at reducing relapse rates and improving long-term mental health outcomes in these populations.

Research Questions

The following questions shall guide this study

- i. What is the difference in relapse between soldiers and civilian patients suffering from mental illness in Kaduna metropolis?
- ii. How does family support influence relapse among mentally ill patients in Kaduna metropolis?
- iii. How does self-esteem predict relapse among mentally ill patients in Kaduna metropolis?
- iv. How do family support and self-esteem jointly influence relapse among mentally ill patients in Kaduna metropolis?

Aim and Objectives of the Study

The primary aim of this study is to investigate the role of family support and self-esteem as predictors of relapse among mentally ill patients. Specifically, the following objectives will be investigated:

- i. Determine whether there is a significant difference in relapse between soldiers and civilian patients suffering from mental illness in Kaduna metropolis.
- ii. Assess the extent to which family support significantly influences relapse among mentally ill patients in Kaduna metropolis.
- iii. Examine the extent to which self-esteem significantly predicts relapse among mentally ill patients in Kaduna metropolis.
- iv. Investigate the joint influence of family support and self-esteem on relapse among mentally ill patients in Kaduna metropolis.

Hypotheses

The study postulates the following hypotheses:

- i. There will be a significant difference in relapse between soldiers and civilian patients suffering from mental illness in Kaduna metropolis.
- ii. Family support will significantly influence relapse among mentally ill patients in Kaduna metropolis.
- iii. Self-esteem will significantly predict relapse among mentally ill patients in Kaduna metropolis.
- iv. Family support and self-esteem will jointly have a significant influence on relapse among mentally ill patients in Kaduna metropolis.

METHODS

Design

A cross-sectional design was employed in this study. This is a research method that involves collecting data from a specific population or a representative subset at one point in time. It allows researchers to examine the relationships between different variables without manipulating them, making it useful for identifying patterns, correlations, and potential associations between factors. This design is cost-effective and efficient for capturing a "snapshot" of a population, though it does not allow for the establishment of causal relationships.

Setting

The setting of this study is Kaduna metropolis, a major urban center in Kaduna State, Nigeria. Kaduna is one of the largest cities in Northern Nigeria, serving as a political, cultural, and economic hub in the region. The metropolis is characterized by a diverse population with various ethnic groups, religions, and socioeconomic backgrounds. The city is home to both civilian and military populations, as it hosts several military institutions, including the Nigerian Defence Academy (NDA) and other military formations, making it an ideal location for comparative studies involving both civilian and military personnel.

Kaduna Metropolis provides an appropriate setting for this study because it uniquely accommodates both a large military (soldier) population and a diverse civilian population within the same urban environment. The metropolis, which includes Kaduna North, Kaduna South, Chikun, and parts of Igabi, hosts major military formations such as the Nigerian Defence Academy and 1 Division Nigerian Army, where soldiers are often exposed to occupational stressors, strict command structures, and frequent separation from family, factors that may weaken family support and self-esteem and increase relapse risk. In contrast, civilian patients largely rely on family-based care and community support systems, which are influenced by socio-economic conditions, stigma, and family cohesion. Examining both soldiers and civilians

in Kaduna Metropolis allows for a comparative understanding of how family support and self-esteem predict relapse within differing social and occupational contexts.

In this study, mentally ill patients were recruited from 44 Nigeria Army Reference Hospital Kaduna (NARHK) and Federal Neuro-Psychiatric Hospital (FNPH) Kaduna. These facilities provide services to both civilian and military populations, allowing for the examination of the research variables (I.e, family support, self-esteem, and relapse) in different groups. The city's healthcare infrastructure includes both public and private mental health services, providing a range of care for individuals with various mental health conditions. The inclusion of both military and civilian mental health patients in the study is particularly significant, as it allows for a comparative analysis of how these two groups experience mental health challenges and how family support, and self-esteem contribute to mental illness relapse in the Kaduna metropolis context.

Participants

The participants of this study were mentally ill patients receiving treatment at the 44 Nigerian Army Reference Hospital (NARHK) and the Federal Neuropsychiatric Hospital Kaduna (FNPHK) in Kaduna metropolis. The study included both civilian and soldier patients receiving treatment at the two facilities.

Inclusion Criteria

Participants were included in the study if they met the following conditions:

- i. Had been formally diagnosed with a mental illness by a qualified mental health professional.
- ii. Had experienced at least one episode of relapse in the past.
- iii. Were currently receiving treatment as inpatients or outpatients at either 44 NARHK or FNPHK.
- iv. Were willing and able to provide informed consent (or assent where applicable).

Exclusion Criteria

Participants were excluded from the study if they:

- i. Had no history of relapse.
- ii. Were experiencing an acute psychotic episode that impaired their ability to provide reliable responses.
- iii. Had severe cognitive impairment or intellectual disability that would hinder comprehension of the questionnaire.
- iv. Declined to participate or withdrew consent during the study.

The sample comprised 90 participants drawn from two major psychiatric facilities in Kaduna Metropolis. The majority were male ($n = 76$, 84.4%), with only 14 females (15.6%), reflecting the predominantly male composition of the patients included in the study. In terms of age, most participants fell within the 31–45 years bracket ($n = 42$, 46.7%), followed by the 16–30 age group ($n = 37$, 41.1%), with the smallest proportion being those aged 46–70 years ($n = 11$, 12.2%). The sample was nearly evenly split between Muslims ($n = 49$, 54.4%) and Christians ($n = 41$, 45.6%). Regarding educational attainment, over half of the participants held tertiary-level qualifications ($n = 47$, 52.2%), and the majority were employed ($n = 54$, 60.0%). More than half of the participants were single ($n = 47$, 52.2%), while 42.2% were married. The sample consisted of slightly more civilians ($n = 49$, 54.4%) than soldiers ($n = 41$, 45.6%). With respect to psychiatric diagnosis, depression was the most common diagnosis ($n = 31$, 34.4%), followed by schizophrenia ($n = 23$, 25.6%) and Substance Use Disorder ($n = 15$, 16.7%), with PTSD, bipolar disorder, seizures, and dementia accounting for the remaining cases.

Sample Size and Sampling Technique

The target population for this study consisted of mentally ill patients admitted to the 44 Nigerian Army Reference Hospital (NARHK) and the Federal Neuropsychiatric Hospital Kaduna (FNPHK) in Kaduna metropolis, with an estimated combined population of approximately 400 patients. The sample size for this study was determined based on Green's (1991) recommendation for multiple regression analysis. Green suggested a minimum sample size of $N > 50 + 8k$, where k represents the number of predictors in the model. With two independent variables (family support and self-esteem) in the multiple regression, the minimum required sample size is 66 participants.

From the population, 105 participants were selected using purposive sampling technique. A total of 105 questionnaires were administered and retrieved. After screening, 15 questionnaires were excluded due to incomplete responses or improper filling, resulting in a final sample of 90 participants. The final sample of 90 exceeds this threshold, providing adequate statistical power to examine the predictive roles of family support and self-esteem on relapse.

Instruments

The instrument for data collection was a questionnaire which comprised of four sections as follows:

Section A -Demographic Data: This section consisted of eight items covering the following variables: gender, religion, age, level of education, occupation, marital status, professional status, and diagnosis.

Section B- Index of Family Relations: Index of Family Relations (IFR) developed by Hudson (1982). The IFR is a standardized self-report instrument designed to measure the quality of interpersonal relationships within the family system, particularly the extent of support, cohesion, and conflict experienced by

an individual within their family environment. The scale conceptualizes family relationships along a continuum ranging from healthy, supportive, and cohesive interactions to distressed, conflictual, and dysfunctional patterns (Hudson, 1982).

The IFR consists of 25 items that assess respondents' perceptions of their family relationships. Items are rated on a Likert-type scale, typically ranging from "rarely or none of the time" to "most or all of the time." The instrument includes both positively and negatively worded items reflecting dimensions such as emotional closeness, communication, support, and conflict within the family. Negatively worded items are reverse scored, and all responses are summed to yield a total score. Higher scores indicate greater levels of family distress, which in the context of the present study implies lower perceived family support, whereas lower scores reflect healthier and more supportive family relationships (Hudson, 1982).

The IFR has demonstrated strong psychometric properties. Hudson (1982) reported a high level of internal consistency, with a Cronbach's alpha coefficient of approximately .95, indicating excellent reliability. The scale has also shown good construct validity through its associations with related measures of psychological functioning and interpersonal adjustment. Its ability to discriminate between clinical and non-clinical populations further supports its validity as a measure of family relational problems (Hudson, 1982).

Given its robust psychometric properties, the FSS is particularly suitable for this study, as it provides a reliable and valid means of examining how family support contributes to self-esteem and relapse among mentally ill patients within the military and civilian populations in Kaduna Metropolis.

Section C- Rosenberg Self-Esteem Scale (RSES): The Rosenberg Self-Esteem Scale (RSES) was developed by Rosenberg (1965), it is a widely used psychometric instrument designed to assess an individual's self-esteem. The scale has become a standard measure in psychological research due to its simplicity, reliability, and validity. The RSES focuses on global self-esteem, capturing both positive and negative feelings about oneself, making it particularly relevant for studies exploring the relationship between self-esteem and mental health outcomes, including relapse in mentally ill patients. The RSES consists of 10 statements that respondent's rate on a four-point Likert scale, ranging from I "strongly agree" to I "strongly disagree." Five of the items are positively phrased (e.g., "I take a positive attitude toward myself"), while the other five are negatively phrased (e.g., "At times, I think I am no good at all"). The scores are summed, with higher total scores indicating lower self-esteem. This straightforward format makes the RSES easy to administer and interpret in both clinical and research settings.

The RSES has demonstrated excellent reliability, with Cronbach's alpha coefficients typically exceeding 0.90, indicating high internal consistency (Rosenberg, 1965). Test-retest reliability studies also show stability over time,

confirming that the scale produces consistent results across different administrations. In terms of validity, the RSES has been shown to correlate significantly with other established measures of self-esteem and related constructs, such as life satisfaction and depression (Crocker et al., 2003). Numerous studies have affirmed its construct validity, establishing a robust relationship between self-esteem levels and various mental health outcomes, including anxiety and depressive symptoms (Sowislo & Orth, 2013). The Rosenberg Self-Esteem Scale is a valuable tool for assessing self-esteem and its implications for mental health. Its strong reliability and validity make it an ideal instrument for this study, particularly in examining the predictive role of self-esteem on relapse among mentally ill patients in Kaduna metropolis.

Section D - Management of Early Warning Signs of Relapse Questionnaire (MEWSRQ): The Management of Early Warning Signs of Relapse Questionnaire (MEWSRQ) was developed and validated by Abu-Sabra (2023) to measure relapse risk and related self-management abilities among mentally ill patients. It is an adapted self-report questionnaire specifically designed to assess patients' and caregivers' ability to identify early warning signs of relapse, employ coping mechanisms, and reflect on relapse history, thereby supporting early intervention and relapse prevention in psychiatric care.

The MEWSRQ consists of 15 items divided into three theoretically derived subscales of five items each:

- i. Early Warning Signs (items 1-5) - assesses changes in mood, behaviour, sleep, motivation, and physical symptoms that may signal impending relapse.
- ii. Coping Mechanisms (items 6-10) - evaluates the use of proactive strategies such as having a management plan, practising stress-reduction techniques, utilising social support, challenging negative thoughts, and engaging in physical activity.
- iii. Relapse History (items 11-15) - explores past relapse experiences, identification of triggers, history of hospitalisation, distress/impairment and family history of mental health conditions.

Respondents rate each item on a 5-point Likert-type scale ranging from 1 = Strongly Disagree to 5 = Strongly Agree. The questionnaire is straightforward, self-administered, and suitable for both clinical and research settings with mentally ill populations. Subscale scores are obtained by summing the five items in each domain (range: 5-25 per subscale). The total score is the sum of all 15 items, ranging from 15 (minimum) to 75 (maximum). Higher scores on the "Early Warning Signs and Relapse History" subscales indicate greater relapse risk, while higher scores on the "Coping Mechanisms" subscale reflect stronger protective factors. For the purpose of this study, a composite relapse-risk total was computed by reversing the Coping Mechanisms subscale and adding it to the Early Warning Signs and Relapse History subscales. This ensures that higher overall risk scores consistently reflect greater vulnerability to relapse, aligning with the instrument's clinical interpretation guidelines (Abu-Sabra, 2023). T

he MEWSRQ demonstrates strong psychometric properties. The original validation study reported excellent internal consistency alpha ($\alpha = 0.92$) and satisfactory construct validity, confirming its suitability for assessing self-management of early warning signs in individuals with mental illness.

Procedure

The researcher first obtained a letter of introduction from the Department of Psychology, Nigerian Defence Academy (NDA), which was used to apply for ethical approval from the ethical committees of the Federal Neuropsychiatric Hospital, Kaduna (FNPHK), and the 44 Nigerian Army Reference Hospital, Kaduna (44 NARHK). Ethical approval was obtained from both institutions before the commencement of data collection. Following approval, participants were recruited from the two selected mental health facilities within Kaduna metropolis namely FNPHK and 44 NARHK. Collaboration with mental health professionals and administrative staff in these facilities facilitated the identification of eligible participants who met the inclusion criteria, specifically patients diagnosed with a mental illness and with a history of at least one relapse episode.

A purposive sampling technique was employed to recruit participants who met the study criteria. Recruitment was carried out within the clinical settings, and potential participants were approached with the assistance of healthcare personnel. The study included both soldiers and civilian patients receiving care in the selected facilities. Participation was voluntary, and no strict proportional allocation was imposed across any groups; rather, inclusion was based on eligibility and willingness to participate. Prior to data collection, informed consent was obtained from all participants. Each participant was provided with an information sheet detailing the purpose of the study, procedures involved, potential risks and benefits, and their rights, including the right to withdraw at any time without consequences. The consent form was presented in clear and simple language to ensure comprehension, and participants were given the opportunity to ask questions before providing written consent. Only those who consented voluntarily were included in the study.

Data were collected using a structured questionnaire comprising three standardized instruments: the Index of Family Relations (IFR) for assessing family support, the Rosenberg Self-Esteem Scale (RSES) for measuring self-esteem, and the Management of Early Warning Signs of Relapse Questionnaire (MEWSRQ) for assessing relapse vulnerability. The instruments were administered in a quiet and conducive environment within the facilities to ensure privacy and minimize distractions. Two trained research assistants assisted in administering the questionnaires and provided clarification where necessary to enhance accurate responses.

A total of 105 questionnaires were administered; upon retrieval, the questionnaires were screened for completeness and accuracy. Fifteen (15) questionnaires were excluded due to incomplete or improperly responses, resulting in a final sample of 90 valid cases used for analysis. The collected data were coded a

nd entered into the Statistical Package for the Social Sciences (SPSS-26.0) version 26.0 for analysis. All responses were anonymized to ensure confidentiality. Each participant was assigned a unique identification number, which enabled data tracking without revealing personal identities.

Method of Data Analyses

Data analyses for this study involved both descriptive and inferential statistical methods to examine the relationships between family support, self-esteem, and relapse risk among mentally ill patients. Initially, descriptive statistics was computed to summarize the demographic characteristics of the participants, including age, gender, etc. Following the descriptive analysis, inferential statistics was employed to test the study's hypotheses. Independent samples t-tests was conducted to test hypothesis one which explore differences in relapse risk between civilian and soldiers participants. Correlation analyses was conducted to test hypotheses two and three which assess the relationships between family support, self-esteem, and relapse risk. Multiple regression analyses was performed to test hypothesis four which evaluate the predictive roles of family support and self-esteem on relapse risk, allowing for the examination of the unique contributions of each variable. All statistical tests were conducted at a significance level of $p < 0.05$, and effect sizes were reported to determine the practical significance of the findings.

Ethical Considerations

The study adhered to strict ethical considerations to ensure the protection and well-being of participants. Some of the ethical considerations include:

- i. Informed consent obtained from all participants, and the study's purpose, procedures, potential risks, and benefits was clearly explained.
- ii. Participants' confidentiality and anonymity were safeguarded by coding data and securely storing it.
- iii. Voluntary participation ensure that the study avoided any form of coercion, ensuring voluntary participation with the right to withdraw at any time without repercussions.
- iv. Ethical approval was obtained from ethical committees of FNPHK and 44 NARHK, this was done in compliance with ethical guidelines for research involving vulnerable populations.
- v. Benevolence and Risk was employed to ensure that care was taken to minimize emotional distress by providing access to mental health support if needed during or after participation.

RESULTS

Descriptive Statistics

Table 1: Demographic Characteristics of Participants (N = 90)

Variable	Frequency (n)	Percentage (%)
Gender		
Male	76	84.4
Female	14	15.6
Total	90	100%
Age Group		
16-30 years	37	41.1
31-45 years	42	46.7
46-70 years	11	12.2
Total	90	100%
Religion		
Christianity	41	45.6
Islam	49	54.4
Total	90	100%
Level of Education		
Primary	3	3.3
Secondary	40	44.4
Tertiary	47	52.2
Total	90	100%
Occupation		
None	5	5.6
Student	13	14.4
Employee	54	60.0
Private Business	18	20.0
Total	90	100%
Marital Status		
Single	47	52.2
Married	38	42.2
Divorced	4	4.4
Widowed	1	1.1
Total	90	100%
Participant Status		
Civilian	49	54.4
Soldier	41	45.6
Total	90	100%
Psychiatric		

Variable	Frequency (n)	Percentage (%)
Diagnosis		
Seizures	5	5.6
PTSD	7	7.8
Bipolar Disorder	8	8.9
Substance Use Disorder (SUD)	15	16.7
Schizophrenia	23	25.6
Dementia	1	1.1
Depression	31	34.4
Total	90	100%

Note. N = 90. SUD = Substance Use Disorder; PTSD = Post-Traumatic Stress Disorder.

The sample comprised 90 participants drawn from two major psychiatric facilities in Kaduna Metropolis. The majority were male (n = 76, 84.4%), with only 14 females (15.6%), reflecting the predominantly male composition of the patients included in the study. In terms of age, most participants fell within the 31–45 years bracket (n = 42, 46.7%), followed by the 16–30 age group (n = 37, 41.1%), with the smallest proportion being those aged 46–70 years (n = 11, 12.2%). The sample was nearly evenly split between Muslims (n = 49, 54.4%) and Christians (n = 41, 45.6%). Regarding educational attainment, over half of the participants held tertiary-level qualifications (n = 47, 52.2%), and the majority were employed (n = 54, 60.0%). More than half of the participants were single (n = 47, 52.2%), while 42.2% were married. The sample consisted of slightly more civilians (n = 49, 54.4%) than soldiers (n = 41, 45.6%). With respect to psychiatric diagnosis, depression was the most common diagnosis (n = 31, 34.4%), followed by schizophrenia (n = 23, 25.6%) and Substance Use Disorder (n = 15, 16.7%), with PTSD, bipolar disorder, seizures, and dementia accounting for the remaining cases.

This section presents the means, standard deviations, and intercorrelations among all study variables, including demographic variables and the three primary study variables: family support, self-esteem and relapse.

Table 4.1: Means, Standard Deviations, correlations

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. Gender	1.16	.36	-										
2. Religion	1.54	.50	-.16	-									
3. Age	1.71	.67	.14	-.13	-								
4. Education	2.49	.57	.12	-.04	-.04	-							
5. Occupation	2.94	.76	-.05	-.13	.03	-.02	-						
6. Marital Status	1.54	.64	.02	.12	.53*	-.09	.09	-					
7. Part. Status	1.46	.50	-.27*	-.06	.13	-.24	.07	.38*	-				
8. Diagnosis	4.90	1.88	.06	.11	-.04	.22*	-.08	-.18	-.27**	-			
9. Family Support	56.29	18.34	-.10	-.03	-.01	-.03	-.15	.08	.12	-.18	-		
10. Self-Esteem	21.09	4.42	.10	-.06	.06	-.05	-.09	.07	.09	-.06	.36*	-	
11. Relapse	38.81	7.57	.06	.06	.13	.06	-.11	.15	.05	-.06	.17	.41**	-



Note. N = 90. Part. Status = Participant Status. Values represent Pearson correlation coefficients. *p < .05 (two-tailed). **p < .01 (two-tailed).

As shown in Table 4.1, the mean relapse score was $M = 38.81$ ($SD = 7.57$), the mean family support score was $M = 56.29$ ($SD = 18.34$), and the mean self-esteem score was $M = 21.09$ ($SD = 4.42$). Among the demographic variables, participant status (civilian vs. soldier) showed a significant negative correlation with gender ($r = -.27$, $p < .05$) and education ($r = -.24$, $p < .05$), suggesting that soldiers in this sample were more likely to be male and had relatively higher educational levels. Marital status was significantly correlated with age ($r = .53$, $p < .01$) and participant status ($r = .38$, $p < .01$), indicating that older participants and soldiers were more likely to be married. Education was significantly correlated with diagnosis ($r = .22$, $p < .05$), and participant status showed a significant negative correlation with diagnosis ($r = -.27$, $p < .01$).

Regarding the primary study variables, self-esteem demonstrated a moderate and statistically significant positive correlation with relapse ($r = .41$, $p < .01$), indicating that lower self-esteem were associated with higher relapse risk. Family support showed a weak, non-significant positive correlation with relapse ($r = .17$, $p = .118$). Family support and self-esteem were significantly and positively correlated with each other ($r = .36$, $p < .01$). None of the demographic variables showed a statistically significant correlation with relapse.

Test of Hypotheses

This section presents the results of the statistical tests conducted to evaluate each of the four study hypotheses.

Hypothesis One states that there will be a significant difference in relapse between soldiers and civilian patients suffering from mental illness in Kaduna metropolis. Independent samples t-test was conducted and the result is presented in table 3.

Table 3: Independent Samples t-test showing difference in Relapse between Civilian and Soldier Patients with Mental Illness in Kaduna Metropolis, Kaduna State.

Group	n	M	SD	SE	t	df	p	Mea n Diff.	95% CI
Civilian	4	38.4	7.4	1.0					
n	9	7	1	6					
Soldier	4	39.2	7.8	1.2	-0.88	88	.64	-0.75	[-3.95,

Group	n	M	SD	SE	t	df	p	Mea	95% CI
								n	Diff.
1	2	4	2	47	2				2.45]

Note. Levene's test for equality of variances: $F = .002$, $p = .967$. Equal variances assumed. CI = Confidence Interval for the mean difference.

The results revealed no statistically significant difference in relapse scores between civilian patients ($M = 38.47$, $SD = 7.41$) and soldiers ($M = 39.22$, $SD = 7.84$); $t(88) = -0.47$, $p = .642$, mean difference = -0.75 , 95% CI $[-3.95, 2.45]$. Levene's test for equality of variances confirmed that the assumption of equal variances was met ($F = .002$, $p = .967$). Hypothesis one is therefore not supported. The findings indicate that relapse vulnerability did not differ significantly between soldier and civilian patients in this sample. The mean relapse scores for both groups were nearly identical, and the non-significant t-value suggests that participant status (civilian vs. soldier) does not independently account for differences in relapse risk within this population.

Hypothesis two states that family support will significantly influence relapse among mentally ill patients in Kaduna metropolis. Simple regression analysis was conducted and the result is presented in table 4.

Table 4: Simple Regression Analysis showing Family Support Predicting Relapse among Patients with mental illness in Kaduna Metropolis, Kaduna State.

Predictor	B	SE	β	t	p
(Constant)	37.24	2.69		13.84	.000
Family Support	.010	.043	.025	.239	.811

Note. $N = 90$. Dependent variable: Relapse. $R^2 = .003$, $F(1, 88) = .057$, $p = .811$.

The regression coefficient for family support was not statistically significant ($B = .010$, $SE = .043$, $\beta = .025$, $t[88] = .239$, $p = .811$). Hypothesis 2 is therefore not supported. These results indicate that family support, as measured by the Index of Family Relations (IFR), did not significantly predict relapse risk among the study participants. The near-zero standardized coefficient ($\beta = .025$) and high p-value ($p = .811$) confirm that family support contributed negligibly to explaining variance in relapse scores in this sample.

Hypothesis three states that self-esteem will significantly predict relapse among mentally ill patients in Kaduna metropolis. Simple regression analysis was conducted and the result is presented in table 5.

Table 5: Simple Regression Analysis showing Self-Esteem Predicting Relapse among Patients with Mental Illness in Kaduna Metropolis, Kaduna State.

Predictor	B	SE	β	t	p
(Constant)	24.61	3.64		6.76	.000
Self-Esteem	.679	.180	.396	3.779	< .001

Note. N = 90. Dependent variable: Relapse. $R^2 = .164$, $F(1, 88) = 14.28$, $p < .001$.

Results from the regression analysis showed that self-esteem was a statistical significant predictor of relapse ($B = .679$, $SE = .180$, $\beta = .396$, $t[88] = 3.779$, $p < .001$). Self-esteem emerged as a significant individual predictor of relapse in this study. For every one-unit increase in self-esteem score, relapse scores increased by approximately .68 points ($B = .679$). It is important to note the scoring direction of the Rosenberg Self-Esteem Scale (RSES), where higher scores indicate lower self-esteem; accordingly, this positive association implies that patients with lower self-esteem reported higher relapse risk scores.

Hypothesis three states that Family support and self-esteem will jointly have a significant influence on relapse among mentally ill patients in Kaduna metropolis. Multiple regression analysis was conducted and the result is presented in table 6.

Table 6: Multiple Regression Analysis showing how Family Support and Self-Esteem Jointly Predicting Relapse among Patients with Mental Illness in Kaduna Metropolis, Kaduna State.

	R	R^2	Adj. R^2	F	df	p
Model	.406	.165	.145	8.574	2, 87	< .001

Note. N = 90. Dependent variable: Relapse.

The overall regression model was statistically significant, $F(2, 87) = 8.574$, $p < .001$, $R^2 = .165$, adjusted $R^2 = .145$. The combined model accounted for approximately 16.5% of the variance in relapse scores ($R^2 = .165$). Hypothesis 4 is therefore supported.

Inspection of the individual regression coefficients within the model reveals that self-esteem ($\beta = .396$, $p < .001$) was the significant driver of the effect. Family support, however, did not contribute independently to the prediction of relapse within the combined model ($\beta = .025$, $p = .811$). These findings suggest that while the combined model is statistically significant, the predictive power is primarily attributable to self-esteem.

Discussion

The study investigated family support and self-esteem as predictors of relapse among patients with mental illness in Kaduna Metropolis, Kaduna state. In addition, the study examined the differences in relapse risk between military patients with mentally illness and civilian patients.

Hypothesis one which state that there will be a significant difference in relapse between soldiers and civilian patients suffering from mental illness in Kaduna metropolis. This hypothesis was not supported. The independent samples t-test produced no statistically significant difference between the two groups, and the mean relapse scores were almost identical — 38.47 for civilians and 39.22 for soldiers. At face value, this finding is somewhat surprising because a substantial body of literature has argued that military life creates unique vulnerability to mental illness relapse. Studies such as those by Dekel and Monson (2020) and Gorman et al. (2021) documented that soldiers are routinely exposed to combat stress, prolonged family separation, and occupational trauma that elevate their overall mental health burden. Similarly, Vogt et al. (2022) noted that the absence of consistent family support among returning service members creates conditions that can trigger relapse.

However, the null finding of this study becomes more understandable when examined through the lens of the Stress-Vulnerability Model (Zubin & Spring, 1977). This model reminds us that neither military service nor civilian life is inherently more damaging; what matters is the interaction between pre-existing vulnerabilities and the specific stressors an individual encounter. In the Kaduna context, both soldiers and civilians live in an environment already marked by insecurity, socioeconomic pressure, religious tension, and limited access to mental health infrastructure (Gureje et al., 2015). These shared environmental stressors may effectively level the playing field, meaning that the specific stressors tied to military life do not add a measurable incremental burden beyond what civilian patients already carry. In practical terms, a civilian patient who is poor, stigmatised, and poorly supported may face a stress load that is just as crushing as that of a soldier dealing with combat-related trauma.

The finding also challenges a common assumption in clinical discourse that military status requires fundamentally different mental health pathways. In settings like Kaduna, where both populations share the same hospitals,

communities, and social challenges, the soldier-versus-civilian distinction may matter less than individual-level factors such as self-perception, coping ability, and the quality of one's immediate social environment. This insight should temper the temptation to design entirely separate relapse prevention programmes for military and civilian patients when the baseline vulnerability of both groups appears comparable.

Hypothesis two which state that family support will significantly influence relapse among mentally ill patients in Kaduna metropolis was not supported. Family support as measured by the Index of Family Relations (IFR) showed a weak non-significant positive correlation with relapse, and its regression coefficient was negligible. This finding stands in contrast to a large volume of literature that has consistently identified family support as a protective buffer against relapse. McCann et al. (2011) argued that family support ensures medication adherence, monitors early warning signs, and creates an emotionally stable recovery environment. Perlick et al. (2016) found that family interventions significantly reduced relapse rates, and Jones et al. (2023) showed that active family participation in treatment plans was associated with better mental health outcomes and fewer relapses.

Why, then, did family support fail to predict relapse in this study? Several explanations deserve consideration. First, the IFR, as designed by Hudson (1982), measures the degree of family distress, meaning that higher IFR scores indicate more conflict and less cohesion. The mean IFR score in this sample was 56.29 out of a possible maximum, suggesting a moderate-to-high level of family distress overall. When the majority of participants are experiencing some level of family dysfunction, variance in family support across the sample narrows, and statistical power to detect an association diminishes. In other words, if most participants report similarly strained family relationships, the instrument cannot differentiate who is better supported and who is not — and therefore cannot explain differences in relapse.

Second, cultural and contextual factors in the Nigerian setting may shape how family support operates in ways that the IFR does not fully capture. In many Northern Nigerian families, support is expressed through physical presence, shared labour, and informal caregiving rather than through the kinds of emotional validation and open communication that Western-developed instruments tend to measure. Nguyen et al. (2020) observed that collectivist cultures express family cohesion differently from individualistic ones, and a scale built on Western norms of emotional expressiveness may systematically underestimate the support that Nigerian families actually provide. If participants are receiving meaningful support that the IFR does not score, the true relationship between family support and relapse would be masked.

In practical terms, this finding does not mean that family support is irrelevant to relapse. Rather, it suggests that the quality and nature of family involvement, and the cultural form it takes, matters far more than simply whether a family is present or absent. Clinicians should therefore move beyond simply asking whether a patient has family around them and instead assess the dynamics of that family relationship, whether it is characterized by warmth and low expressed emotion, or by conflict and hostility.

Hypothesis three which states that self-esteem will significantly predict relapse among mentally ill patients in Kaduna metropolis was supported as self-esteem emerged as the only individual significant predictor of relapse in this study, explaining a meaningful portion of the variance in relapse scores beyond what family support accounts for. This finding aligns robustly with the existing literature. The meta-analysis by Elliott and Richards (2022), drawing on 25 studies, identified a consistent negative association between self-esteem and relapse across multiple diagnostic categories. Martinez et al. (2022) specifically reported that low self-esteem was associated with a 45% higher risk of relapse in patients with major depressive disorder, and Clark and Reynolds (2021) found that patients with low self-esteem were twice as likely to relapse within six months of discharge from a psychiatric hospital. Robinson et al. (2021), in a meta-analysis of 30 studies involving over 3,000 patients, confirmed this pattern as universal across psychiatric conditions.

It is important, however, to note a nuance in interpreting this finding. The Rosenberg Self-Esteem Scale (RSES) is scored such that higher scores indicate lower self-esteem. The positive regression coefficient therefore means that as RSES scores increase — that is, as self-esteem decreases — relapse risk scores also increase. This confirms that patients with poorer self-esteem show greater relapse vulnerability, which is entirely consistent with the theoretical expectations and the empirical literature. Clinically, this result sends a clear and urgent message: how a patient thinks and feels about themselves is not a soft or peripheral concern — it is a measurable, statistically significant predictor of whether they will relapse.

Hypothesis four which states that family support and self-esteem will jointly have a significant influence on relapse among mentally ill patients in Kaduna metropolis was also supported. The combined regression model was statistically significant and accounted for approximately 16.5% of the variance in relapse scores. This means that knowing a patient's family support and self-esteem levels together provides meaningful information for predicting their relapse risk, beyond what could be expected by chance.

However, a closer examination of the individual coefficients within the joint model reveals that self-esteem was the engine driving this result, while family support remained non-significant even within the combined model. This pattern

is theoretically consistent with the idea of a mediated or indirect pathway between family support and relapse. Family support may influence relapse not directly, but through its effect on self-esteem. The significant correlation between family support and self-esteem observed in the descriptive data supports this interpretation: patients with more supportive family environments reported higher self-esteem, and higher self-esteem in turn predicted lower relapse risk.

The fact that only 16.5% of the variance in relapse is explained by these two predictors also warrants comment. While statistically significant, this figure indicates that the majority of variance in relapse risk (approximately 83.5%) is attributable to factors not captured in this study. These unmeasured factors likely include medication adherence, severity of illness, access to care, substance use, neurocognitive functioning, socioeconomic conditions, and broader community-level protective factors. This is not a weakness unique to this study; the literature consistently acknowledges that relapse in mental illness is a multidetermined phenomenon (Zubin & Spring, 1977; Falloon & Fadden, 2023). What the present findings contribute is the identification of self-esteem as one of the most influential psychosocial levers available to clinicians in the Kaduna context a variable that is both measurable and changeable through targeted intervention.

Conclusion

This study set out to examine family support and self-esteem as predictors of relapse among mentally ill patients in Kaduna Metropolis, with a comparative focus on soldiers and civilians. Four hypotheses were tested, and the findings yielded a coherent and clinically meaningful picture.

First, the study found no significant difference in relapse vulnerability between soldier patients and civilian patients in this sample. Both groups demonstrated similar relapse risk profiles, suggesting that in the shared sociocultural environment of Kaduna, occupational category alone does not determine how likely a patient is to relapse. Second, family support, as measured by the IFR, did not independently predict relapse. While this contradicts much of the international literature, it is explicable in terms of instrument sensitivity, the cultural form family support takes in Nigeria, and the high baseline level of family distress observed in the sample. Third, and most importantly, self-esteem emerged as a significant and independent predictor of relapse, confirming that how patients perceive their own worth is strongly linked to their risk of experiencing a return of symptoms. Fourth, the combined model of family support and self-esteem significantly predicted relapse, though the predictive power was primarily driven by self-esteem, with family support likely exerting its influence indirectly through its relationship with self-esteem.

These findings underscore that relapse prevention in psychiatric care cannot rest on medication management alone. The inner world of the patient — particularly their sense of self-worth, social acceptance, and personal agency — is a critical terrain for clinical intervention. At the same time, the family environment matters, not only because of its direct effects but because of its capacity to shape and sustain the patient's self-esteem over time. Mental health care in Kaduna, and by extension in similar low-resource environments across Nigeria, must find practical ways to strengthen both of these dimensions if it is to meaningfully reduce the heavy burden of relapse.

Recommendations

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

- i. FNPHK and 44 NARHK should incorporate structured self-esteem-building components into their treatment plans for all patients, not just those who explicitly present with low mood. Cognitive-Behavioural Therapy (CBT) modules targeting negative self-appraisals, psychoeducation sessions that restore patients' sense of agency, and group therapy activities that validate individual worth are all accessible and evidence-based methods that can be incorporated without significant additional resource burden.
- ii. Mental health institutions, in partnership with community leaders, religious organizations, and the media in Kaduna, should invest in sustained public education campaigns that reduce the stigma attached to mental illness. When patients return to communities that treat them with dignity rather than exclusion, their sociometer readings improve, their self-esteem stabilizes, and their resilience to relapse is strengthened.
- iii. Mental health facilities should offer structured family psycho-education programmes that specifically teach family members how to express concern without criticism, support treatment adherence without over-involvement, and maintain open rather than reactive communication. Such programmes could be delivered as brief workshops at the point of discharge or as outpatient group sessions.

Implication of Findings

The findings of this study have important implications for the management of mental health services, particularly for hospital administrators, mental health facility managers, policymakers, and healthcare administrators in Nigeria. The implications as follows:

i. Implications for Clinical Management and Service Delivery

The finding that self-esteem significantly predicts relapse among mentally ill patients implies that mental health service management should adopt a

comprehensive biopsychosocial model of care. Hospital administrators and mental health managers should ensure that psychological interventions, particularly those aimed at improving self-esteem, are integrated into routine psychiatric treatment. Management should establish protocols for regular assessment of patients' self-esteem during admission, treatment, discharge, and follow-up care. This approach will enable early identification of patients who are vulnerable to relapse and facilitate timely psychosocial interventions.

ii. Implications for Human Resource Management and Capacity Building

The findings underscore the need for healthcare management to strengthen multidisciplinary mental health teams. Psychiatric facilities should prioritize the recruitment, training, and continuous professional development of clinical psychologists, psychiatric nurses, social workers, occupational therapists, and counselors. Mental health personnel should be trained in evidence-based interventions that enhance self-esteem, coping skills, and psychosocial functioning. This investment in human resources will improve the quality of mental healthcare services and reduce relapse rates.

iii. Implications for Resource Allocation and Program Development

The study findings suggest that management should allocate adequate financial and material resources to psychosocial rehabilitation programs, psychoeducation services, support groups, and community mental health initiatives. Since relapse contributes to repeated hospital admissions and increased healthcare costs, investing in preventive psychosocial interventions represents a cost-effective management strategy. Hospital management should therefore develop structured relapse prevention programs that address psychological, social, and environmental determinants of mental illness.

Iv Implications for Policy Formulation and Community-Based Mental Health Management

The findings support the need for management and policymakers to strengthen community-based mental health services and family-centered care programs. Mental health administrators should develop policies that promote family involvement, community follow-up services, anti-stigma campaigns, and rehabilitation programs. Furthermore, management should collaborate with governmental and non-governmental organizations to expand mental health services beyond hospital settings, thereby improving continuity of care and reducing the risk of relapse among patients with mental illness.

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