MEDICATION ADHERENCE AND PSYCHOLOGICAL WELL-BEING AMONG PSYCHIATRIC OUT-PATIENTS IN SELECTED TERTIARY HEALTH INSTITUTIONS IN BENUE STATE: THE MEDIATING ROLE OF SELF-CONTROL

Nguemo Agatha Hemba[1], Moses Denen Chiahemba[2],
Samuel Terzungwe Anhange[1], & Joyce Mcivir Terwase,[1]
hembanguemoagatha@gmail.com&lifecaveg@gmail.com 07062073447
1. Department of Psychology, Rev. Fr. Moses Orshio Adasu University Makurdi.
2. Mental Health and Psychosocial Rehabilitation Center, Department of Psychiatry, Benue State University Teaching Hospital, Makurdi

Abstract

The poor state of psychological well-being among psychiatric out-patients poses significant challenges to their daily functioning. The study investigated medication adherence, self-control on and psychological well-being among psychiatric out-patients in selected tertiary health institutions in Benue State Nigeria. The study employed a cross-sectional survey design where two hundred and twenty-five (225) psychiatric out-patients; 125 (55.6%) males and 100 (44.4%) females were sampled for the study with the mean age of 39 years. Four hypotheses were formulated and tested using linear regression,hayes process macro mediation analysisand standard multiple regression. The findings indicated that there was a significant influence of medication adherence on psychological well-being among psychiatric outpatients in selected tertiary health institutions in Benue State Nigeria. The second finding indicated a significant positive influence of self-control on psychological well-being among psychiatric outpatients in selected tertiary health institutions in Benue State Nigeria. The third finding showed that self-control significantly mediated the relationship between medication adherence andpsychological well-being. The fourth finding revealed there is statistically significant joint influence of medication adherence and self-control on psychological wellbeing among psychiatric outpatients in selected tertiary health institutions in Benue State Nigeria. It was concluded that medication adherence and self-control are independent and joint significant influencers of psychological wellbeing among psychiatric outpatients in selected tertiary health institutions in Benue State Nigeria. The study recommended that tertiary health institutions should employ integrated intervention approach with multidisciplinary programmes that concurrently address medication adherence and self-control enhancement, fostering synergistic effects on patients' psychological wellbeing.

Keywords: Medication Adherence, Self-control, Psychological Well-being, Psychiatric Outpatients, Tertiary Health Institutions.

Introduction

Psychological well-being remains a global public health challenge and increasingly among psychiatric patients as mental health conditions affect more than one billion people worldwide (World Health Organization, WHO, 2025). Despite growing recognition, most individuals do not receive adequate care, particularly in low- and middle-income countries where systemic barriers persist which has affected the efforts on reducing stigma, expanding access, and embedding mental health into universal health coverage to ensure equitable outcomes across diverse populations (World Health Organization, 2022).In Nigeria, the well-being of psychiatric patients remains a pressing public health concern in Nigeria, affecting their patient optimal daily functioning; job, school and interpersonal relations (WHO, 2022). In Benue State, tertiary health institutions play a crucial role in providing psychiatric care, yet patients' well-being is influenced by socio-demographic and systemic factors that shape their recovery and quality of life. Understanding these dynamics is essential for designing interventions that strengthen mental health systems and improve patient outcomes (Fadele et al., 2024; World Health Organization, 2020).

Medication adherence determines psychiatric out-patients' treatment outcomes. Poor adherence leads to relapse, hospitalization, and reduced quality of life, underscoring its importance in effective disorder management (Shehu et al., 2023). It refers to the extent to which patients take their prescribed medications consistently and correctly as directed by health professionals. Poor adherence has been widely documented as a major barrier to effective management of psychiatric disorders, often resulting in relapse, hospitalization, and reduced quality of life. Recent studies in Nigeria confirm that non-adherence continues to undermine treatment effectiveness, highlighting the need for interventions that promote adherence (Omolabi et al., 2024; Shehu et al., 2023).

Self-control refers to the ability to regulate one's thoughts, emotions, and behaviors in pursuit of long-term goals and plays a significant role in medication adherence. Psychiatric patients with higher self-control are more likely to comply with treatment regimens, avoid impulsive behaviors, and maintain healthier coping strategies. Conversely, poor self-control may exacerbate non-adherence, leading to deterioration in psychological well-being (Elsharkawy et al., 2023; Kottapalli, 2024).

According to the Ryff's theory of psychological well-being, which identifies six dimensions: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance (Ryff, 1989; Ryff & Keyes, 1995). Medication adherence directly influences these dimensions by reducing symptom severity and enabling patients to function effectively in daily life, thereby fostering environmental mastery and personal growth (Aoki et al., 2023). Meanwhile, self-control, a critical psychological trait, aligns with Ryff's emphasis on autonomy and purpose in life, since individuals with higher self-control are better able to regulate behaviors, follow

treatment regimens, and sustain meaningful goals (He et al., 2023; Zhao et al., 2022). This framework provides a holistic lens for understanding psychiatric out-patients' recovery in Benue State.

Studies have highlighted interventions targeting self-control and adherence behaviours to improve treatment outcomes and enhance overall psychological well-being among individuals with psychiatric disorders (Syrnyk & Glass, 2023; Aoki et al., 2023). Meanwhile, self-control has consistently been associated with psychological well-being across diverse populations (He et al., 2023; Zhao et al., 2022). This underscores the importance of exploring its role among psychiatric outpatients. The present study is motivated by the need to understand how self-control influences psychological well-being and whether it mediates the relationship between medication adherence and psychological outcomes. By examining these dynamics, the study aims to provide insights into how self-control can enhance adherence and foster improved psychological well-being among psychiatric out-patients in the Nigerian healthcare context.

Statement of the Problem

The poor state of psychological well-being among psychiatric out-patients poses significant challenges to their daily functioning. Many patients struggle to maintain stability in schooling, employment and interpersonal associations which demoralizes their social integration and productivity. Impaired psychological well-being often manifests in reduced motivation, poor coping skills, and diminished self-control, further complicating recovery. These difficulties are compounded by low levels of medication adherence, which is critical for symptom management and relapse prevention. Consequently, understanding the interplay between psychological well-being, self-control, and adherence is vital for improving outcomes among psychiatric patients (World Health Organization, 2022; Fadele et al., 2024).

The well-being among psychiatric outpatients undermines their ability to function effectively often leading to reduced motivation, poor coping skills, and diminished self-control. These challenges are further compounded by low medication adherence, which is essential for symptom management and relapse prevention. Although existing studies emphasize adherence in psychiatric care, little attention has been paid to its psychological dimension in Nigeria (Fadele et al., 2024) Specifically, the mediating role of self-control in the relationship between adherence and psychological well-being remains underexplored in Benue State. Addressing this gap is crucial for developing targeted interventions that enhance recovery outcomes.

Research Questions

The following research questions were formulated.

i. How would medication adherence influence psychological well-being among psychiatric outpatients in selected tertiary health institutions in Benue State Nigeria?
ii. What influence will self-control have on psychological well-being among

psychiatric outpatients in selected tertiary health institutions in Benue State Nigeria?

iii. How does self-control mediate the relationship between medication adherence and psychological well-being among psychiatric outpatients in selected tertiary health institutions in Benue State Nigeria?

iv. To what extent will medication adherence and self-control jointly influence psychological well-being among psychiatric outpatients in selected tertiary health institutions in Benue State Nigeria?

Research Hypotheses

The following hypotheses were formulated for the study.

i. Medication adherence will have a significant influence on psychological well-being among psychiatric outpatients in selected tertiary health institutions in Benue State Nigeria.

ii. Self-control will have significant influence on psychological well-being among psychiatric outpatients in selected tertiary health institutions in Benue State Nigeria.

iii. Self-control will significantly mediate the relationship between medication adherence and psychological well-being among psychiatric outpatients in selected tertiary health institutions in Benue State Nigeria.

iv. There will be a significant joint influence of medication adherence and self-control on psychological well-being among psychiatric outpatients in selected tertiary health institutions in Benue State Nigeria.

Method

Design

This study employed a cross-sectional survey design to examine medication adherence and self-control on psychological well-being among psychiatric out-patients in selected tertiary health institutions in Benue State, Nigeria. The design is suitable for observing relationships without manipulation, collection of data at one point in time (Shindi, 2017).

Setting of the Study

The setting of the study is Benue State. While, the study specific institutions where data was collected were Federal Medical Centre, Makurdi, and Benue State University Teaching Hospital, Makurdi located within the State Capital, Makurdi. The choice of the institution remains the fact that they are the major referral and teaching hospitals in Benue State, centrally located in Makurdi, with high patient turnout, diverse case profiles, skilled personnel, ensuring representative and comprehensive data collection for the study within the state capital.

Sampling (Sample Size Determination / Sample Size)

Purposive sampling was employed to select hospitals and participants. Psychiatric out-patients from Federal Medical Centre and Benue State University Teaching Hospital who were available, willing to complete the questionnaires and stable. Purposive sampling was preferred in view of the difficulty in using probability sampling techniques, considering that, the participants were receiving treatment on out-patient

basis.

The sample size was derived using the Raosoft online sample size calculator at www.raosoft.com. The online sample size calculator has specifications into which figures were imputed as follows:

Margin of error	-	5%
Confidence level	-	95%
Population size	-	574
Response distribution	-	50%
Sample size	-	231

Participants

Participants for the study comprise of 231 psychiatric outpatients, drawn from the population of 574 fromFederal Medical Centre Makurdi and Benue State University Teaching HospitalMakurdi. One hundred and sixty-six (166) participants were sampled from Federal Medical Center, Makurdi while sixty-five (65) participants from the Benue State University Teaching Hospital, Makurdi.

Instruments

The study used the following instruments:

Medication Adherence Rating Scale (MARS) is a 10 - item self-report inventory, developed by Thomson, et al., (2002). The Scale assesses medication adherence using a response pattern of "Yes" or "No". It is scored by assigning a numerical value of two (2) to all “Yes” responses, while all “No” responses carry a numerical value of one (1). The authors of the scale reported a reliability Cronbach alpha of 0.75 and validity of 0.61 for the Medication Adherence Rating Scale (MARS) for the original scale. Total scores on the MARS ranges from 0 to 20, with a higher score indicating better medication adherence and lower scores showing poor adherence to medication.

The Brief Self-Control Scale is a 13-item instrument developed by Tangney, et al. (2004). The scale measures self-control in two dimensions of: Self-discipline (Items 2, 3, 4, 5, 7, 9, 10, 12, and 13) (reversed scored), and Impulse control (Items 1, 6, 8, and 11) using a 5-point response pattern that ranges from 1 = Not at all, to 5 = Very Much. The scale has an internal consistency Cronbach alpha reliability score of .83. It is scored by summing up the items, and the higher the score, the greater the self-control and vice versa.

The Ryff Psychological Well-being Scale was developed by Ryff and Keyes (1995), as a shortened version of the original Ryff Psychological Well-being Scale. The scale contains 18-items, and measures psychological well-being using a 7-point scale such as: 1 = strongly agree; 2 = somewhat agree; 3 = a little agree; 4 = neither agree or disagree; 5 = a little disagree; 6 = somewhat disagree; and 7 = strongly disagree.

The Scale has six subscales which are: Autonomy; Environmental Mastery; Personal Growth; Positive Relations with Others; Purpose in Life; and Self-acceptance. The scale has a reliability Cronbach alpha of 0.88 for the entire scale. The following reliability was recorded for its subscales: Autonomy = .70; Environmental Mastery = .72; Personal Growth = 0.81; Positive Relations with Others = 0.75; Purpose in Life = 0.77; Self-Acceptance = 0.75. Lee, et al.,

(2019) reported a positive correlation between perceived health and the 18-item psychological well-being scale (r = .20, p<.001), indicating adequate criterion validity. In terms of scoring, items 1, 2, 3, 8, 9, 11, 12, 13, 17, and 18 will be reversed-scored. Higher scores indicate higher levels of psychological well-being, while lower scores mean poor psychological well-being.

Procedure

The researcher obtained a letter of introduction from the Head of Department of Psychology, Benue State University, Makurdi, which facilitated permission for the pilot study and access to Federal Medical Centre and Benue State University Teaching Hospital. Ethical approval was secured, and trained research assistants assisted in administering questionnaires, including interpreting items for non-English speakers. Rapport was established with participants, and informed consent was obtained, emphasizing voluntary participation and the right to withdraw without consequences. Confidentiality was assured by excluding names on forms. Questionnaires were administered only to willing psychiatric outpatients, retrieved afterward, and prepared for data analysis.

Data Analysis

Data collected were coded and analyzed using IBM SPSS version 23. To test hypotheses, inferential statistics were applied; linear regression for hypotheses one and two, and standard multiple regression for hypothesis three, ensuring robust evaluation of variable relationships within the study framework.

Results

Table 1. Summary Table of Simple Linear Regression analysis showing the influence of Medication Adherence on Psychological Well-being among Psychiatric Out-patients in selected Tertiary Health Institutions in Benue State Nigeria.

Variables	R	R^2	F	df	β	t	P
Constant	.410	.168	44.936	1,224		12.813	<.05
Medication Adherence					.410	6.703	<.05

The result in Table 1 revealed a significant influence of medication adherence on psychological well-being among psychiatric outpatients in selected tertiary health institutions in Benue State Nigeria [R = .410, R^2 = .168; F (1, 224) = 44.936, p< .001]. Meanwhile, medication adherence accounted for 16.8% of the variance on psychological well-being. This implies that an increase in medication adherence, psychological well-being will also increase. The hypothesis was confirmed.

Table 2 Summary Table of Simple Linear Regression Analysis showing the influence of Self-control on Psychological well-being among Psychiatric Out-patients in selected Tertiary Health Institutions in Benue State Nigeria.

Variables	R	R^2	F	df	B	t	P
Constant	.339	.115	28.982	1,224		19.367	<.05
Self-Control					.339	5.384	<.05

The results in Table 2 shows a significant positive influence of self-control on psychological well-being among psychiatric outpatients in selected tertiary health institutions in Benue State Nigeria (R = .339, R2 = .115; F (1, 224) = 28.982, *p*< .001), indicating that self-control meaningfully influence psychological well-being. The R^2 value of .115 shows that self-control accounts for 11.5% of the variance in psychological well-being. This implies that for every one-unit increase in self-control, psychological well-being increases. Based on the results, the hypothesis confirmed

Table 3: Hayes Process Macro Mediation analysis showing the Mediating role of Self-control between Medication Adherence and Psychological Well-being among Psychiatric Out-patients.

Variables	R	R^2	F	df	β	T	Sig.	LLCI	ULCI
Constant	.439	.193	27.246	2,223		11.767	.000	48.631	68.192
Medication adherence					1.705	7.371	.000	2.161	1.250
Self-control					1.076	1.806	.000	.160	.007
Int_1(X * M)					1.705	7.371	.000	2.161	1.249

The result presented in Table 3 revealed that self-control significantly mediated the relationship between medication adherence and psychological well-being among outpatients of selected tertiary health institutions in Makurdi [R^2=.439, F (2,223) =27.246, Int_(X*M) (β=1.705, t=7.371, LLCI=2.161, ULCI=1.249)]. The result further revealed that medication adherence made the highest positive significant contribution to the model (β=1.705, t=7.371, LLCI=2.161, ULCI=1.250; p<.01) with self-control (β=1.076, t=1.806, LLCI=.160, ULCI=.007; p<.01) making least positive contribution to the model. This implies that out-patients who adhere to their medication are more likely to display some level of self-control thereby increasing their psychological well-being. Therefore, the hypothesis three was confirmed.

Table 4. Summary Table of Standard Multiple Regression Analysis showing the joint influence of Medication Adherence and Self-control on Psychological Wellbeing among Psychiatric Outpatients in selected Tertiary Health Institutions in Benue State Nigeria.

Variables	R	R^2	F	df	B	t	P
Constant	.506	.256	38.262	2.222		14.432	<.05
Medication Adherence					.378	6.495	<.05
Self-Control					.299	5.144	<.05

The results in Table 3 revealed that there was statistically significant joint influence of medication adherence and self-control on psychological wellbeing (R = .506, R2 = .256, F (2, 222) = 38.262, p < .05). The result indicated that medication adherence and self-control jointly accounting for 25.6% of the variance in psychological well-being (R^2 = .256). Both medication adherence and self-control had significant individual effects, but medication adherence showed a stronger influence on psychological well-being (β =

.378, t = 6.495, p < .001) compared to self-control (β = .299, t = 5.144, p < .001). This hypothesis was therefore confirmed.

Discussion

The study explored medication adherence and self-control on psychological well-being among psychiatric outpatients in selected tertiary health institutions in Benue State, the mediating role of self-control and the findings are discussed based on research hypotheses. The hypothesis one which states that medication adherence will have a significant influence on psychological well-being among psychiatric outpatients in selected tertiary health institutions in Benue State Nigeria was confirmed. This finding supported the work of Syrnyk and Glass (2023) reported that pharmacist-led interventions improved medication adherence among mental health patients, which in turn enhanced treatment outcomes and psychological stability. Their scoping review emphasized that consistent adherence reduces symptom severity and fosters better quality of life, aligning with the present study's finding that adherence contributes positively to psychological well-being.Locally, Shehu et al. (2023) examined medication adherence among patients with schizophrenia in Northwestern Nigeria and found that poor adherence was strongly associated with relapse, impaired functioning, and reduced well-being. Similarly, Omolabi et al. (2024) demonstrated that psychoeducation significantly improved adherence and psychological outcomes among psychiatric outpatients in Lagos. These Nigerian studies corroborate the current result, highlighting that adherence is a critical determinant of psychological well-being in psychiatric populations.

The seconding result aligns with international evidence, such as He et al. (2023), who demonstrated that higher self-control is associated with improved psychological outcomes, including resilience and emotional stability, across diverse populations. Their study emphasized that self-control enables individuals to regulate emotions and behaviors, thereby fostering greater life satisfaction and mental health. Locally, Anyebe et al. (2023) reported that Nigerian psychiatric patients with stronger self-regulation skills were more likely to adhere to treatment and maintain better psychological functioning, reducing relapse and distress. Together, these findings support the present study's conclusion that self-control is a critical determinant of psychological well-being. By enhancing self-control, psychiatric outpatients can improve coping strategies, strengthen adherence, and achieve more positive recovery outcomes in tertiary health institutions in Benue State.

The current study confirmed that self-control significantly mediates the relationship between medication adherence and psychological well-being among psychiatric outpatients in Makurdi. This aligns with recent evidence showing that adherence behaviors foster psychological resilience through self-control. Schnorrerovaet al. (2025) emphasized that structured adherence interventions enhance patient outcomes, while Saguban et al. (2024) highlighted self-control mechanisms as mediators of adherence and emotional well-being.

Together, these findings reinforce that self-control transforms adherence into improved psychological well-being.

The fourth results showed that medication adherence and self-control jointly predicted psychological well-being, accounting for 25.6% of the variance. Although both variables had significant effects, medication adherence exerted a stronger influence. Internationally, Krok and Zarzycka (2022) found that psychological factors such as self-regulation and adherence behaviors significantly improved well-being among patients with chronic illness, reinforcing the importance of both variables in mental health outcomes. Similarly, Eghbali et al. (2022) demonstrated that adherence and self-care behaviors were strongly associated with reduced psychological distress and improved well-being in patients with hypertension. Locally, Anyebe et al. (2023) reported that Nigerian psychiatric patients with better adherence practices experienced fewer relapses and greater psychological stability, while Omotoso et al. (2024) highlighted that self-regulation skills enhanced coping and recovery among psychiatric outpatients. These findings support the present study, showing that adherence and self-control jointly strengthen psychological well-being, with adherence playing the dominant role.

Conclusion

The study established that both medication adherence and self-control are determinants of psychological well-being, accounting for substantial variance among psychiatric outpatients.

Recommendations

Tertiary health institutions should adopt comprehensive strategies to improve medication adherence among psychiatric outpatients. These include patient education on consistent medication use, reminder systems like texts or calls, counseling to address barriers, and family or caregiver involvement, ensuring patients receive support that promotes adherence and psychological well-being.

Psychiatric care should integrate interventions that strengthen self-control capacities. Outpatient protocols must include behavioral and cognitive training focused on impulse regulation, emotional management, and goal-setting. Stress reduction techniques, such as mindfulness, should be emphasized to enhance coping skills, thereby improving psychological well-being and supporting recovery among psychiatric outpatients.

With self-control identified as a significant mediator in the relationship between medication adherence and psychological well-being, clinical interventions should prioritize the assessment and enhancement of self-control among psychiatric outpatients. Tailored approaches targeting individuals with lower self-control may indirectly improve medication adherence and, consequently, psychological wellbeing.

Given the joint influence of medication adherence and self-control, tertiary health institutions should implement multidisciplinary programmes addressing both simultaneously. Such integrated interventions foster synergistic effects, enhancing psychological well-being more

effectively. Combining adherence strategies with self-control training ensures holistic care, reduces relapse, and promotes sustainable recovery among psychiatric outpatients.

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