EXPLORING THE INTERRELATIONSHIP BETWEEN MENTAL AND PHYSICAL HEALTH AMONG ADULTS IN ABUJA MUNICIPAL AREA COUNCIL (AMAC). A HOLISTIC PERSPECTIVE

BY

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Abstract

This paper employs a secondary data meta-analytical design to synthesize findings from existing systematic reviews, meta-analyses, and large-scale empirical studies published between 2019 and 2025. It investigates the interrelationship between mental and physical health among adults residing in the Abuja Municipal Area Council (AMAC) of Nigeria's Federal Capital Territory. Evidence reveals a significant bidirectional relationship, indicating that adults with chronic physical illnesses are 1.46 times more likely to experience depression, while those with depressive symptoms have a 1.22 times greater likelihood of developing chronic diseases such as diabetic nephropathy (Fang et al., 2022). Similarly, research across 32 European nations shows that serious mental disorders contribute to 27–67% excess physical health burdens, representing millions of additional preventable cases (Wienand et al., 2024). Data from 247 mediation studies further highlight the role of physical activity, social support, and emotional regulation in moderating this interrelationship (White et al., 2024). Drawing insights from these secondary sources and contextualizing them within AMAC, this study underscores that adult health outcomes are shaped by intertwined biological, psychological, and social determinants. It concludes that integrating mental and physical health interventions at the community level yields better health outcomes compared to fragmented treatment systems. The paper calls for policies in AMAC that strengthen multidisciplinary collaboration, promote holistic adult health, and leverage secondary data to inform local healthcare strategies.

Keywords: Mental–physical comorbidity, biopsychosocial model, psychoneuroimmunology, chronic illness, holistic health, integrated care

1.0 Introduction

The relationship between mental and physical health has gained increasing attention as researchers and practitioners recognize that the two are inseparable components of overall well-being. Mental health disorders can worsen physical illnesses, while chronic diseases often increase the risk of psychological distress. This reciprocal relationship significantly affects productivity, treatment adherence, and quality of life. In Nigeria's Abuja Municipal Area Council (AMAC), rapid urbanization, rising living costs, and limited access to integrated care have amplified health vulnerabilities among adults. Conditions such as hypertension, diabetes, and depression are increasingly prevalent, yet health services continue to address them separately. This disjointed system undermines recovery and increases comorbidity rates. Therefore, this study analyses secondary data to explore how the interplay between mental and physical health manifests among adults in AMAC and how integrated, holistic approaches can improve their well-being.

2.0 Statement of the Problem

Although global research supports the interconnection between mental and physical health, AMAC healthcare structure remains largely fragmented. Mental health services are often underdeveloped, while physical health receives disproportionate attention. The absence of integrated health strategies contributes to delayed diagnoses, chronic disease progression, and heightened emotional distress among adults. Furthermore, many health professionals in AMAC lack adequate training in psychosocial interventions, which are critical to managing chronic conditions effectively. As a result, the adult population experiences preventable complications arising from the disjointed management of mental and physical health. There is thus a pressing need to contextualize global findings through secondary data analysis to provide a framework for holistic healthcare within AMAC.

3.0 Objectives of the Study

Primary Objective:

To investigate the interrelationship between mental and physical health among adults in Abuja Municipal Area Council (AMAC) using secondary data sources.

Specific Objectives:

1. To examine secondary data on the bidirectional relationship between mental and physical health among adults in AMAC.
2. To identify the biological, psychological, and social factors influencing this interrelationship within the adult population.
3. To evaluate existing integrated health models applicable to AMAC healthcare context.
4. To highlight the research and policy gaps that hinder holistic adult health management in AMAC.

4.0 Conceptual Review

Health is a multifaceted concept encompassing the physical, mental, and social dimensions of human well-being. The World Health Organization (2024) defines health as a state of complete well-being, rather than merely the absence of disease. Contemporary scholars argue that biological and psychological mechanisms—such as inflammation, oxidative stress, and hypothalamic–pituitary–adrenal axis dysregulation—link mental and physical health outcomes. Behavioural and lifestyle factors further mediate this connection; unhealthy coping mechanisms, physical inactivity, and poor diet can worsen both mental distress and chronic illnesses (White et al., 2024). Within AMAC, socio-economic inequalities, unemployment, and stress from urban living exacerbate these risks. Consequently, an integrated care approach that treats mental and physical

health as interdependent aspects of well-being is essential for improving adult health outcomes.

5.0 Theoretical Framework

This paper is underpinned by the **Biopsychosocial Model** and the **Psychoneuroimmunology (PNI) Framework**.

The Biopsychosocial Model, proposed by Engel (1977), asserts that health and illness result from interactions among biological, psychological, and social factors. Applied to AMAC, it explains how environmental pressures, mental stress, and physiological responses collectively influence adult health outcomes.

The Psychoneuroimmunology (PNI) Framework complements this model by demonstrating how psychological processes such as stress, emotion, and cognition interact with immune and endocrine systems to influence health (Bower, 2023). This perspective helps clarify how chronic stress and emotional dysregulation can manifest in physical illness or impede recovery.

Together, these theories provide a robust foundation for understanding the interdependence of mental and physical health and justify the need for integrated healthcare approaches among adults in AMAC.

6.0 Methodology

This study adopted a **secondary data meta-analytical review design** to synthesize relevant literature published between 2019 and 2025. The research focused on adults aged 18 years and above residing in Abuja Municipal Area Council (AMAC), Nigeria. The analysis included peer-reviewed meta-analyses, systematic reviews, and epidemiological studies drawn from credible databases such as PubMed, Cochrane Library, PsycINFO, and the WHO Global Index.

Inclusion Criteria:

- Studies involving adult populations (≥18 years) examining the interrelationship between mental and physical health.
- Peer-reviewed publications between 2019 and 2025.
- Research written in English following systematic methodologies (e.g., PRISMA guidelines).
- Studies identifying psychosocial, biological, or behavioural mediators relevant to adult populations.

Exclusion Criteria:

- Non-human or paediatric studies.
- Non-systematic reviews or opinion papers.
- Duplicate, incomplete, or non-empirical reports.
- Studies without quantifiable outcomes.

Extracted data were thematically analysed to identify recurring patterns, mediators, and contextual implications for adult health in AMAC. No primary data were collected.

7.0 Summary of Meta-Analytical Reviews

Study (Year)	**Key Findings**	**Statistical Outcomes**	**Limitations**
Fang et al., 2022	Depression and diabetic nephropathy exhibit a bidirectional association.	OR = 1.46 (DN → Depression); OR = 1.22 (Depression → DN)	Observational design; limited causality.
Liu, 2024	Social and biological mediators explain the diabetes–depression relationship.	Qualitative synthesis.	Methodological variation.

Bower, 2023	Inflammatory and immune–brain communication influence behavioural responses.	Mechanistic synthesis.	Limited sample representation.
White et al., 2024	Physical activity mediates mental–physical health relationships.	12 mediators identified.	Cross-sectional design limitations.
Wienand et al., 2024	Serious mental disorders raise physical health burdens by 27–67%.	Quantitative model.	European-centric data.
Jiang et al., 2025	Identifies global research priorities for mental–physical health comorbidities.	Qualitative synthesis.	Lacks primary data validation.
WHO, 2024	Advocates integrated global mental and physical healthcare models.	Policy synthesis.	No direct statistical data.

7.1 Results and Discussion

Overview of Findings

The synthesis of meta-analytical reviews conducted between 2022 and 2025 reveals a consistent pattern showing that mental and physical health are tightly interconnected through biological, psychological, and social dimensions. The studies collectively affirm a **bidirectional relationship**, meaning chronic physical illnesses increase susceptibility to mental health challenges, while psychological distress intensifies physical ailments. The integrated results and thematic insights are discussed below in relation to adults in the Abuja Municipal Area Council (AMAC).

Bidirectional Association between Mental and Physical Health

Evidence from *Fang et al. (2022)* provides strong statistical validation of a two-way link between depression and diabetic nephropathy. Individuals with diabetic nephropathy are 1.46 times more likely to develop depression, while those with depressive symptoms are 1.22 times more prone to experience the physical illness. This reciprocal association demonstrates how both mental and physical conditions operate within a reinforcing loop. In the context of AMAC, where diabetes, hypertension, and stress-related disorders are prevalent, this interaction implies that health interventions must concurrently target both mental and physical aspects to prevent compounded health deterioration.

Biological Mechanisms and Psychoneuroimmunological Pathways

Findings from *Bower (2023)* and *Liu (2024)* highlight the psychoneuroimmunological mechanisms that link emotional distress to physical dysfunction. Prolonged exposure to stress activates the body's immune and endocrine systems, leading to inflammation, oxidative stress, and hormonal imbalance. These biological mediators can impair the body's capacity to maintain equilibrium, resulting in chronic fatigue, depression, or immune compromise. Within AMAC, adults frequently exposed to socio-economic pressures, traffic congestion, and urban hardship are at higher risk of such physiological imbalances, making integrated interventions critical for sustainable wellness.

Psychosocial and Behavioural Mediators

The work of *White et al. (2024)* underscores the moderating roles of behavioural and psychosocial factors such as physical activity, social support, and emotional regulation in promoting holistic health. These variables serve as buffers, mitigating the intensity of comorbidity between mental and physical illnesses. In the AMAC environment, barriers such as limited recreational infrastructure, social isolation, and sedentary lifestyles amplify health vulnerabilities. Hence, community-level strategies that foster social inclusion,

promote exercise, and strengthen coping mechanisms can play a transformative role in improving adult health outcomes.

Magnitude of the Health Burden

According to *Wienand et al. (2024)*, severe mental disorders contribute to a **27–67% increase in physical health burdens** across European populations. This demonstrates the significant public health cost of neglecting mental health. Although these findings are drawn from high-income regions, their implications apply to AMAC, where resource constraints and weak preventive systems may yield even higher levels of comorbidity. Given AMAC adult population exceeding one million, the potential scale of dual health burdens underscores the urgency for integrated, preventive-oriented healthcare models.

Policy and Research Gaps

Both *Jiang et al. (2025)* and the *World Health Organization (2024)* highlight critical policy and research deficiencies that impede comprehensive care, particularly in low- and middle-income regions. Insufficient funding for mental health, limited cross-sectoral collaboration, and a lack of integrated health data systems hinder progress. In AMAC, these constraints manifest as fragmented care pathways and minimal psychosocial screening in primary healthcare facilities. Addressing these gaps will require capacity-building for health workers, data-driven policy design, and a stronger community engagement framework.

Implications for Integrated Health Systems in AMAC

Collectively, the reviewed evidence reinforces the relevance of the **Biopsychosocial Model** and the **Psychoneuroimmunology Framework** that underpin this paper. Both theoretical perspectives emphasize that optimal well-being depends on synchronized interventions targeting biological, psychological, and social domains. In AMAC, adopting integrated health delivery systems that combine physical treatment with mental health support can significantly enhance recovery, compliance, and quality of life.

Multidisciplinary collaboration—bringing together doctors, social workers, psychologists, and community health advocates—is therefore essential.

Contextual Relevance to AMAC

Rapid urbanization, socio-economic inequality, and limited healthcare resources continue to exacerbate comorbid health conditions in AMAC. The interplay of financial stress, overcrowding, and unemployment produces a psychosocial environment that fuels both physical illness and emotional instability. Applying lessons from the reviewed studies, AMAC requires community-cantered programs that integrate psychosocial education, affordable mental health screening, and public health campaigns addressing both prevention and rehabilitation.

Summary of Discussion

The integrated findings confirm that the interplay of biological, psychological, and social processes shapes adult health outcomes. Untreated emotional distress worsens chronic illnesses, while prolonged physical conditions deepen mental strain. For AMAC, embracing a **holistic, community-based health model** that merges mental and physical care within primary health structures offers a sustainable solution for improving adult well-being. Such an approach aligns with global best practices and WHO recommendations for comprehensive, inclusive healthcare.

8.0 Limitations

The study's reliance on secondary data means the findings are limited by the methodologies of the original studies. Variations in data collection tools, regional demographics, and research focus areas affect comparability. Additionally, most studies reviewed were conducted in high-income regions, which may not fully represent AMAC

socio-economic realities. Despite these constraints, synthesizing global and regional data offers critical insights applicable to AMAC and enhances the evidence base for integrated adult healthcare.

9.0 Conclusion

This meta-analytical review affirms the **strong, bidirectional relationship** between mental and physical health among adults in the Abuja Municipal Area Council (AMAC). The evidence highlights that socio-economic pressures, chronic illness, and psychological distress interact to create complex health challenges within the population. The study concludes that mental and physical health should be addressed concurrently within AMAC healthcare framework. Integrating psychological assessments into physical health services, strengthening community-based interventions, and promoting holistic health education are essential steps toward improving adult well-being. Furthermore, local health policymakers should apply insights from secondary data to design **inclusive and sustainable care models** that reflect the realities of AMAC adult population.

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