Social Capital, Functional Health Status, and Quality of Life among Adults in Rural South-West Nigeria

ABSTRACT

The health and well-being of adults are crucial public health concerns globally, particularly in developing countries where both social capital and health are key for development. This study examined the associations between structural social capital, functional health status, and quality of life among 922 adults in rural southwest Nigeria. Data were collected between June and August 2020 across three states. Health and well-being measures were adapted from the WHO's global ageing and adult health study, while social capital was assessed using the Short Social Capital Assessment Tool (SASCAT). Using Structural Equation Modelling (SEM) via AMOS v.23, the study found that social capital significantly affects quality of life (b=0.198, t=3.060, p=0.002). Moderation analysis indicated that education level impacts the relationship between social capital and health status (p=0.047) and between health status and quality of life (p<0.001). The association between health status and quality of life was significant for age (p=0.028). Mediation analysis showed that social capital does not mediate the relationship between health status and quality of life (p=0.471). Interventions to enhance quality of life in these rural settings should consider social capital, age, education level, and health status, focusing on younger adults and those with lower education levels.

Introduction

Social capital refers to the benefits individuals gain from their social connections and influences health and outcomes at multiple levels—national, regional, community, and individual (Álvarez & Romaní, 2017). It can promote healthy behaviors, facilitate access to services, and improve quality of life by serving as a crucial social determinant of health (Akinyemi et al., 2021). High

social capital enhances community engagement and health promotion, acting as a protective factor for quality of life (Himanshu et al., 2019). While it's positive impact on health is well-documented in developed countries (Berry & Welsh, 2010), there is limited research on this relationship in developing nations like Nigeria (Okafor & Rihan, 2023).This study aims to fill this gap by examining how social capital affects the quality of life among adults in rural Southwest Nigeria and identifying demographic and socioeconomic factors that influence this relationship.

Methods

This study explored the relationship between social capital, health status, and quality of life among adults aged 18 and above in rural Southwest Nigeria. Using a cross-sectional survey conducted from June to August 2020, data were collected from three states—Ogun, Oyo, and Ekiti—using cluster sampling. A structured questionnaire captured demographic information, health status, quality of life, healthcare use, and social capital, with adaptations from the WHO's Global Ageing and Adult Health Study and a modified Short Social Capital Assessment Tool (SASCAT). Trained fieldworkers conducted interviews, adhering to ethical standards and COVID-19 protocols. Data were managed using the REDCap platform, and ethical approval was obtained from the University of Ibadan/University College Hospital Institutional Ethics Committee.

Variables

The study focused on quality of life as the outcome variable, measured through indicators like satisfaction with health, self, daily activities, relationships, living conditions, energy levels, and overall life satisfaction. Health status and social capital were treated as endogenous variables, with health status assessed through overall health, mobility, self-care, pain, cognition, interpersonal activities, vision, and sleep and energy. Social capital was evaluated across five dimensions: group membership, community involvement, support sources, individual trust, and social trust. Exogenous variables included age, sex, education, marital status, ethnicity, media exposure, migration status, and household wealth.

Analysis

The analysis utilized descriptive statistics and Structural Equation Modeling (SEM) with AMOS 23 to examine relationships among social capital, health status, and quality of life. Model fit was evaluated using indices such as the Comparative Fit Index (CFI), Normed Fit Index (NFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root

Mean Square Residual (SRMR), with established thresholds for acceptability. Reliability and validity were confirmed through composite reliability, maximal reliability, and Average Variance Extracted (AVE). Moderation and mediation analyses identified demographic and socioeconomic factors influencing the effects of social capital on health status and quality of life.

Results

Descriptive Statistics

The study included 922 adults aged 18 to 101 years (mean age 37.0, SD 15.8), with 41.4% men and 58.6% women. Most participants were aged 20–29 years (30.5%), and 17.9% were 50 years and older. Nearly half had secondary education (46.5%), and a majority were married (72.9%). Around 49.1% were immigrants, 65.8% identified as Christians, 29.5% had electronic media exposure, and 28.4% had travelled outside their domicile in the past year.

Factor Loadings and Model Fit

The model fit indices indicated an adequate fit: CMIN/df = 4.327, CFI = 0.936, GFI = 0.918, TLI = 0.925, SRMR = 0.0585, and RMSEA = 0.060. All factor loadings were above the acceptable threshold of 0.5. Construct reliability was confirmed, with composite reliability ranging from 0.852 to 0.888, and maximal reliability exceeding 0.70. While convergent validity was generally acceptable, the Average Variance Extracted (AVE) for Social Capital was slightly below 0.50. Despite this, the overall reliability and validity of the constructs were deemed satisfactory.

Structural Model Assessment

Social capital had a positive and significant impact on quality of life (b = 0.198, t = 3.060, p = 0.002). The model explained 40% of the variance in quality of life.

Results for moderation and mediation analysis

The moderation analyses indicated that education level significantly influenced the relationship between social capital and health status (p=0.047), as well as the relationship between health status and quality of life (p<0.001). Age group also played a significant role in moderating the relationship between health status and quality of life (p=0.028). However, the mediation analysis revealed that social capital does not mediate the relationship between health status and quality of life (b=0.002, p=0.471).

DISCUSSION

The study found a significant positive association between structural social capital and quality of life, aligning with Christian et al. (2020). This underscores the crucial role of community networks and formal organizations in enhancing well-being, highlighting the value of strengthening social capital in rural settings. Education was found to significantly moderate the relationship between health status and quality of life, consistent with Gil-Lacruz et al. (2020). Higher education levels often lead to better access to resources and improved quality of life. However, the effect of education on the relationship between structural social capital and health status was significant only for individuals with lower education, contrasting with Zhang et al. (2019). No significant moderation effect of education was observed on the relationship between social capital and quality of life, suggesting a complex role of education that warrants further investigation. Gender did not significantly moderate the relationships between social capital, health status, and quality of life, contrary to findings from Lu et al. (2019) and others. This suggests that gender may not be a crucial factor in these dynamics within this context, though further research is needed. Age exhibited varying effects: it did not moderate the relationships between social capital and health status or between health status and quality of life. However, age significantly moderated the relationship between social capital and quality of life, with younger adults showing a more pronounced effect. This contrasts with Lee et al. (2022), who found significance for older adults. Younger individuals may benefit more from social capital due to their active community engagement, highlighting the need for age-tailored interventions. The mediation analysis revealed that social capital did not mediate the relationship between health status and quality of life, contrary to the hypothesis and previous studies (Nurtakor et al., 2023). This suggests that the role of social capital as a mediator may be context-dependent, influenced by cultural norms and community characteristics. (Ladin et al., 2015)

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