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Demographic Variables and Emotional Well-Being among Patients' Caregivers in Selected Tertiary Health Institutions in Makurdi, Nigeria

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Abstract

This study examined demographic variables and emotional well-being among patients' caregivers in selected tertiary health institutions in Makurdi, Nigeria. The study adopted cross-sectional survey design using 384 patients' caregivers currently supporting patients at the Federal Medical Centre Makurdi and Benue State University Teaching Hospital Makurdi. They were sampled using Accidental sampling technique. They comprised of 74 (19.3%) males and 310 (80.7%) females. Their ages ranged from 21-54years with a mean age of 31.02 years (SD=12.901). Data were collected using the emotional well-being scale. Two-way ANOVA was used for statistical analyses. The results indicated that there was a significant effect of education on emotional wellbeing among patients' caregivers. The result also showed that there was a significant effect of duration of care on emotional wellbeing among patients' caregivers. The result further indicated that there was a significant interaction effect of education and duration of care on emotional wellbeing among patients' caregivers. It was recommended that patients should endeavour to seek the support of educated and experienced caregivers who would support them while undergoing treatment. This is because they were found to have high emotional wellbeing and by implication more likely to commit themselves to support patients at the hospital.

Keywords: *Education, Duration of Care, Emotional Wellbeing, Caregivers*

Introduction

Globally, there is also high levels of emotional disorders among caregivers relative to the general population. Specifically, caregivers who care for people with severe illness experience chronic stress as indicated by physiological and emotional markers such as elevated cortisol profiles and emotional outbursts (Barker, 2022). It is vital to examine the emotional well-being experienced by these caregivers. Caregivers who face social and emotional burdens related to caregiving have more health-risk behaviours such as alcohol use, suicide ideation, depression, physical fatigue and proneness to infections/diseases. Also, caregivers are often predisposed to numerous factors that affects their emotional well-being and in the long-run the well-being of the ill-patient (Himes & Reidy, 2020).

Generally, some of the factors that affect the emotional well-being of caregivers are the unceasing workload associated with patient care, patients' attitudes and reactions to caregivers, unavailable social resources especially in public hospitals, pre-existing poor living conditions, environmental contexts and lack of financial resources (Young et al., 2020). Stepping into the caregiving role can mark a transformative experience for the caregiver. With profound responsibility, for others there is less time and energy for self-care, career pursuit, education, paid labour, and leisure activities.

More so, caregivers frequently encounter difficulties in balancing their caregiving duties with other responsibilities, such as work, household tasks, and child-rearing, which can contribute to role strain, role conflict and economic challenges (Asif et al., 2022). Apparently, there is need to identify the predicting and enhancing factors of emotional well-being among caregivers, with the aim of promoting these factors to improve the ever-neglected welfare of caregivers especially those supporting patients in public hospitals in Benue State. Some of the factors considered in this study include educational level and duration of care.

Education and Emotional Wellbeing

Jareebi and Alqassim (2024) assessed potential causal relationships using Mendelian randomization (MR). Two-sample MR analysis was conducted using genetic instruments for education, smoking, body mass index, and physical activity from published genome-wide association studies. Inverse variance weighted regression determined associations between exposures and mental health outcomes. Increased educational attainment was causally associated with reduced risks of depression (odds ratio [OR] = 0.99 per year, 95% confidence interval) and anxiety in both cohorts. Smoking initiation conferred higher risks of depression and anxiety. Likewise, maternal smoking history associated with greater depression and anxiety susceptibility. Higher body mass index elevated depression risk in both cohorts. Physical activity showed no clear associations.

Hogberg et al. (2024) investigated temporal changes in the association between academic achievement or educational attainment and subsequent inpatient treatment for internalizing disorders among Swedish youths. The positive association between inpatient treatment for internalizing disorders and both low compulsory school achievement and non-completion of upper secondary school became stronger in more recent cohorts. The results were completely driven by girls and native-born youth. Low compulsory school achievements and failure to complete upper secondary school has become more important risk factors for inpatient treatment for internalizing disorders, particularly in native-born youth and girls. More research was needed to establish whether youth with internalizing disorders increasingly fail in school or whether low achievement has become more harmful for mental health.

Xiong et al. (2024) examined the relationship between educational attainment, lifestyle, self-rated health, and depressive symptoms among Chinese adults. Their findings showed that educational attainment is associated with higher levels of self-rated health and lower levels of depressive symptoms. More importantly, educational attainment also indirectly affected

individuals' self-rated health and depressive symptoms through lifestyle. These findings revealed health interventions to develop education further and improve its quality.

Carreño-Flores et al. (2024) explored the relationship between emotional well-being and attitudinal learning among university students, focusing on how emotional health influences academic performance, attitudes towards learning, and engagement in educational activities. The findings revealed significant positive correlations between emotional well-being and attitudinal learning, including the affective, cognitive, and behavioral components. These results indicated that higher emotional well-being is associated with better attitudes towards learning, enhanced cognitive abilities, and positive behavioral engagement. The discussion emphasized the need for integrating emotional education into university curricula to support students' academic success and personal development.

N-yelbi and Awuku-Larbi (2024) examined postgraduate students' psychological well-being as correlate of their academic achievement in Ghanaian public universities. The study reported a strong positive correlation between the psychological well-being and academic achievement. The study further reported that gender differences exist in psychological well-being and academic achievement. Findings revealed a statistically significant correlation existed between psychological well-being and academic achievement. Also, the study reported a statistically significant gender difference in psychological well-being and academic achievement.

Verma and Parmar (2024) explored the relationship between psychological wellbeing and academic achievement among 9th-grade students. Analysis revealed a significant positive correlation between psychological wellbeing and academic achievement. No significant gender differences were found in psychological wellbeing. This underscores the importance of considering students' mental health alongside academic success. The conclusion drawn emphasized the pivotal role of education in unlocking individuals' latent abilities and enhancing their quality of life through formal, informal, and non- formal channels. It highlighted how education promotes rational behavior, social inclusion, and national development.

Lee and Yang (2022) examined educational attainment and emotional well-being in adolescence and adulthood. Findings from fixed effects models showed that attaining a college degree was associated with greater emotional well-being. However, interactions with gender indicate that the positive association with emotional well-being was primarily for women, although a small negative association between completing college and depressive affect was found for men. These findings point to unmeasured confounding factors as motivating some of the association between educational attainment and emotional well-being among adolescents and adults.

Clarke et al. (2022) examined whether operationalizing wellbeing as overall, life satisfaction, or eudaimonia, derived different associations with academic attainment. Structural equation models demonstrated adolescents reporting higher eudaimonia and overall wellbeing had significantly higher academic attainment in school-based examinations (General Certificate

in Secondary Education, England). Life satisfaction was not significantly related to academic attainment. Findings suggested that eudaimonia has developmental significance during adolescence, requiring greater attention.

Kondirolli and Sunder (2022) analyzed the role of education as a determinant of mental health. They leveraged the age-specific exposure to an educational reform as an instrument for years of education and find that the treated cohorts gained more education. This increase in education had an effect on mental health more than 2 decades later. An extra year of education led to a lower likelihood of reporting any symptoms related to depression (11.3%) and anxiety (9.8%). More educated people also suffered less severe symptoms – depression (6.1%) and anxiety (5.6%). These protective effects were higher among women and rural residents. The effects of education on mental well-being potentially mediated through better physical health, improved health behavior and knowledge.

Munoz and Santos-Lozada (2021) tested whether this pattern extends to measures of serious psychological distress (SPD) and individual symptoms by using data from the National Health Interview Survey (NHIS, 1997–2018) and a series of logistic regression models. Further stratified analysis by sex revealed that this result for feeling sad was driven by women. In terms of associate degrees, their models show that adults with a vocational/technical associate degree have statistically similar odds of SPD and reporting four out of six symptoms (exceptions were feeling hopeless and sadness), while those with an academic associate degree have significantly lower odds in all outcomes. The robustness of the models used was supported by an extensive sensitivity analysis.

Duration of Care and Emotional Wellbeing

Bongelli et al. (2024) examined factors affecting the psychological well-being of family caregivers of dependent older adults in Italy. A significant negative correlation was found between caregiving burden and psychological well-being, with caregiving burden being a significant predictor of psychological well-being reduction. A threshold value of 2 (on a 1–4 scale) was identified, where caregiving burden predicted a significant reduction in psychological well-being. Conversely, greater perceived social support was positively correlated with better psychological well-being and was a significant predictor of it. Support from social and health services had the most notable impact on psychological well-being. Moreover, social support mitigated the negative impact of caregiving burden on psychological well-being. The study confirmed that high caregiving burden adversely affects caregivers' psychological well-being, while social support plays a protective role.

Kalra and Tung (2024) investigated the correlation between non-modifiable factors, such as the age and gender of caregivers, as well as the duration of caregiving, and the QoL of caregivers of individuals with AUD. For this purpose, data were gathered from 128 caregivers of AUD patients in two psychiatric hospitals located in the Amritsar district of the Punjab province. A demographic questionnaire was employed to collect the data, and a chi-square analysis was utilized for data analysis. The study findings did not show any significant

connection between the age and gender of caregivers and the duration of caregiving with their QoL.

Fertelli et al. (2023) examined the relationship between caregiver burden and psychological well-being in caregivers of patients with heart failure. It was found that caregivers of individuals with heart failure had a moderate level of care burden and psychological well-being. A moderately significant negative correlation was found between caregiving burden and psychological well-being.

Kolodziej et al. (2022) estimated the causal impact of intensive caregiving, defined as providing at least 80 h of care per month, and work on the mental health of caregivers while considering possible sources of endogeneity in these relationships. They examined 2 measures used to screen for depression (PHQ-2, psychodiagnostic test) and anxiety (GAD-2, generalized anxiety disorders screening instrument), a composite measure that combines these measures (PHQ-4), and positive well-being variables to ascertain possible gains from caregiving. Providing at least 80 h of care per month to a parent compared to less intensive caregiving increases the PHQ-4 scale for anxiety and depression disorders. This is driven by the screening score for anxiety and not psycho-diagnostic test scores for depression. Relationship quality decreases substantially for intensive caregivers, and intensive caregiving leads to less satisfaction that the care recipient is well-cared for. They did not find offsetting mental health gains for intensive caregivers compared to non-intensive caregivers.

Xu et al. (2017) examined grandparent caregiving and psychological well-being among Chinese American older adults and tested whether caregiving burden or pressure from adult children moderated such association. Caregiving time had a significantly negative association with depressive symptoms, but not with quality of life. The association between grandparent caregiving and depressive symptoms was moderated by the perception of caregiving burden. No moderating effect of caregiving pressure from adult children was found. More time spending on grandparent caregiving is generally beneficial to Chinese American grandparents' psychological well-being, thus supporting role enhancement theory.

Lamers et al. (2012) synthesized studies on emotional well-being as predictor of the prognosis of physical illness, while in addition evaluating the impact of putative moderators, namely constructs of well-being, health-related outcome, year of publication, follow-up time and methodological quality of the included studies. Meta-analytically combining these studies revealed a Likelihood Ratio of 1.14, indicating a small but significant effect. Higher levels of emotional well-being are beneficial for recovery and survival in physically ill patients. The findings showed that emotional well-being predicts long-term prognosis of physical illness.

Hypotheses

i. There will be a significant difference in education on emotional well-being among patients' caregivers in selected tertiary health institutions in Makurdi, Nigeria.

ii. There will be a significant difference in duration of care on emotional well-being among patients' caregivers in tertiary health institutions in Makurdi, Nigeria.

iii. There will be a significant main and interaction effect of education and duration of care on emotional wellbeing among patients' caregivers in selected tertiary health institutions in Makurdi, Nigeria.

Design

The study adopted cross-sectional survey design to examine perceived social support, hardiness and emotional well-being among patients' caregivers in selected tertiary health institutions in Makurdi. This design was deemed fit because it availed the room for the views and opinions of caregivers to be collected at one point, analyzed and inferences drawn. The independent variables were education and duration of care while the dependent variable was emotional well-being.

Population

The current total number of patient-caregivers in Federal Medical Centre Makurdi and Benue State University Teaching Hospital Makurdi is not known. This is because health institutions do not keep records of caregivers and also, the population changes with new admission and discharges on daily basis. This makes it difficult to estimate or ascertain the current total population.

Sample Size Determination

Given the inestimable nature of the population of caregivers, this study used the formula for unknown population to estimate a representative sample of caregivers in Federal Medical Centre Makurdi and Benue State University Teaching Hospital Makurdi for the study. The formular is as seen below:

$$n = \frac{z^2pq}{e^2}$$

$$n = \frac{(1.96)^2 0.5(0.5)}{(.05)^2}$$

$$n = \frac{3.84 \times 0.25}{0.0025}$$

$$n = \frac{0.96}{0.0025}$$

$$n = 384$$

Therefore, the sample for the study was 384 caregivers.

Sampling Technique

This study used accidental sampling technique to draw a sample of caregivers for the present study. This technique was deemed fit because it allows the researcher to assess caregivers whom they meet accidentally at the hospital.

Participants

The participants for this study were 384 patients' caregivers currently supporting patients at the Federal Medical Centre Makurdi and Benue State University Teaching Hospital Makurdi. They were composed of 74 (19.3%) males and 310 (80.7%) females. Their ages ranged from 21-54years with a mean age of 31.017 years (SD=12.901). In terms of their ethnic groups, 220 (57.3%) were Tiv, 104 (27.1%) were Idoma while 60 (15.6%) were from other ethnic groups. As for their religion, 286 (74.5%) were Christians, 84 (21.9%) were Muslims while 14 (3.6%) were practicing other religions. Concerning their educational levels, 77 (20.1%) had primary education, 255 (66.4%) had secondary education while 52 (13.5%) had tertiary education. Considering their duration of care, 144 (37.5%) were caregivers for less than a year, 231 (60.2%) were caregiving for 1-10years while 9 (2.3%) were caregiving for more than 10years.

Instrument

This study used the emotional well-being scale, multidimensional scale of perceived social support, and the hardiness scale to collect data.

Demographic Variables: The demographic variables assessed include: sex, age, ethnic group, religion, education, duration of care and type of illness and name of hospital.

Emotional Well-being Scale: Emotional well-being was measured using the Emotional Well-being Scale developed by Portia and Shermila (2015). This scale is a 26-item scale with four dimensions; Emotional stability (items 1, 5, 9, 13, 17, 21), Emotional resilience (items 2, 6, 10, 14, 18) Emotional health (items 3, 7, 11, 15, 19, 22, 23, 25, 26) and Emotional happiness (items 4, 8, 12, 16, 20, 24). Items 11, 13, 17, 21 and 22 are reverse scored. It is measured on a 3-point format of 1 (disagree) to 3 (agree). The scale has an overall alpha coefficient of .90, while that of the dimensions range from .75 - .86. In the present study, the scale had an overall reliability coefficient of .80 while the subscales had .82, .76, .80 and .71 for the emotional stability, emotional resilience, emotional health and emotional happiness respectively. Sample of items include; "I am a contented person", "I find it little difficult to adjust with others".

Procedure

This study was carried out among patients' caregivers in Federal Medical Centre Makurdi and Benue State University Teaching Hospital Makurdi. The researchers obtained approval from the Chief Medical Directors of the two targeted hospitals. After approvals were obtained, the researchers sought the consent of the caregivers to participate in the study. Those who willingly

accepted to participate were assured of how confidential the data they provide and their identity would be treated. They were assured that the study would not constitute any form of harm to them. It took an average time of 20 minutes for each respondent to fill the questionnaire and a total of 2 months to complete the entire administration process. After administering 384 copies, a 100% return rate was observed and considered for data analysis.

Data Analysis

Descriptive statistics such the mean, standard deviation, frequencies and simple percentages was used to describe the participants. Two Way ANOVA was used for hypothesis one, two and three.

Results

Table 1: Summary of Two-Way ANOVA showing the main and interaction effects of education and duration of care on emotional wellbeing among patients' caregivers in selected health institutions in Makurdi, Nigeria.

Source of Variation	SSQ	df	MSQ	F	Sig.
Intercept	1703100.862	1	1703100.862	304832.802	.000
Education	1460.746	2	730.373	130.727	.000
Duration of Care	17401.935	2	8700.968	1557.360	.000
Education * Duration	2324.013	4	581.003	103.992	.000
Error	2117.434	379	5.587		
Total	2205116.000	384			
Corrected Total	19238.958	383			

The result presented in table 1 indicated that there was a significant effect of education on emotional wellbeing among patients' caregivers; $F(2,379)=130.727$, $p<.001$. The result further indicated that patients' caregivers with primary education (M=78, SD=1.781) had high emotional wellbeing than those with secondary education (M=72.5, SD=1.322) and those with tertiary education (M=76.5, SD=1.902). The results further indicated that the mean difference between those having primary education and those with secondary education was (MD=5.500, $p<.001$). The mean difference between those with primary education and those with tertiary education was (MD=1.500, $p<.001$). The mean difference between those with secondary education and those with tertiary education was (MD=4.000, $p<.001$).

The result further showed that there was a significant effect of duration of care on emotional wellbeing among patients' caregivers; $F(2,379)=8700.968$, $p<.001$. The result further indicated that patients' caregivers supporting for 1-10years (M=80.667, SD=1.670) had high emotional wellbeing than those supporting for more than 10years (M=69, SD=1.043) and those supporting for less than a year (M=65, SD=1.536). The results further indicated that the mean difference between those supporting for less than 1 year and those supporting 1-10years was (MD=15.667, $p<.001$). The mean difference between those supporting less than 1 year and those

supporting for more than 10years was (MD=4.000, p<.001). The mean difference between those 1-10years and supporting more than 10years was (MD=11.667, p<.001).

The result further indicated that there was a significant interaction effect of education and duration of care on emotional wellbeing among patients' caregivers; F(4,379)=581.003, p<.001. The result further indicated that patients' caregivers who have primary education and have been supporting for 1-10years (M=78.066, SD=1.322) had high emotional wellbeing than those having primary education and supporting for less than 1year (M=65.809, SD=1.710) and those having primary education and supporting for more than 10years (M=56.792, SD=1.216). It also revealed that those having secondary education and supporting for 1-10years (M=80.541, SD=1.734) had higher emotional wellbeing than those having secondary education and supporting less than 1year (M=65.554, SD=1.099) and those having secondary education and supporting for more than 10years (M=34.812, SD=1.019). Lastly, those with tertiary education and supporting for 1-10years (M=84.068, SD=1.320) had higher emotional wellbeing than those having tertiary education and supporting for less than 1year (M=73.809, SD=1.338) and those having tertiary education and supporting for more than 10years (M=69.450, SD=1.050).

Discussion

Hypothesis one was tested to find out if there will be a significant difference in education on emotional wellbeing among patients' caregivers in selected health institutions in Makurdi, Nigeria. Findings indicated that there was a significant difference in education on emotional wellbeing among patients' caregivers. This finding agrees with Lee and Yang (2022) who revealed that attaining a college degree was associated with greater emotional well-being.

Hypothesis two was tested to find out if there will be a significant difference in duration of care on emotional wellbeing among patients' caregivers in selected health institutions in Makurdi, Nigeria. Findings indicated that there was a significant difference in duration of care on emotional wellbeing among patients' caregivers. The finding agrees with Kondirolli and Sunder (2022) who revealed that an extra year of education led to a lower likelihood of reporting any symptoms related to depression and anxiety.

Hypothesis three was tested to find out if there will be a significant main and interaction effect of education and duration of care on emotional wellbeing among patients' caregivers in selected health institutions in Makurdi, Nigeria. Findings indicated that there was a significant main and interaction effect of education and duration of care on emotional wellbeing among patients' caregivers. This finding agrees with Lee and Yang (2022) who revealed that attaining a college degree was associated with greater emotional well-being. Also, Javed et al. (2016) revealed that significant difference was found between various dimensions of well-being of educated and non-educated women. Also, Lamers et al. (2012) found that higher levels of emotional well-being are beneficial for recovery and survival in physically ill patients. The finding indicated that emotional well-being predicts long-term prognosis of physical illness. Lastly, Kolodziej et al. (2022) revealed that providing at least 80 hours of care per month

compared to less intensive caregiving increases the chances for anxiety and depression disorders.

Recommendations

Based on the conclusions drawn from the present study, the following recommendations were made for research and practice:

i. There is need for all patient-caregivers in tertiary health institutions in Benue State to be given training on hardiness skills by psychologists as they initiate support services to their patients at the hospitals. This can be feasible with the support of clinical psychologists across the studied hospitals. The effort will go a long way to ensure that the emotional wellbeing of these caregivers is not compromised.
ii. Clinical psychologists should assess the social needs of caregivers on periodic basis and ensure that their emotional, informational and interactional forms of supports from family and friends are availed to these caregivers for their optimal emotional wellbeing.
iii. In line with the findings of this study, both researchers and clinicians should use social support interventions for caregivers whose care burden and other personal factors are affecting their emotional wellbeing. Social support should be tested further in intervention studies and policies made at the organizational levels of each hospital to support caregivers during their caregiving process.

Contributions to Knowledge

This study has made the following contributions to knowledge and the practice of clinical psychology:

i. Since caregivers are often an over-looked population in terms of research and also their wellbeing, this study reiterates the need for more attention to be paid to the emotional needs of patient-caregivers. The study thus, has shown gaps in clinical support, data and literature among patient-caregivers.
ii. Secondly, the study reiterates the need for social support from family, friends and significant others to be directed to the needs of caregivers as well since they experience a lot of care burden and daily demands in the caregiving process.

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