ISSN: 2408-5405 (Print)
ISSN: 2635-3806 (Online)

NIGERIAN PSYCHOLOGICAL RESEARCH

Published by the Nigerian Psychological Association

Social Support Resilience and Psychological Well-being among Patients with Low Vision Attending an Eye Care Centre in Akwa-Ibom Nigeria

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Abstract

Low vision is a global health problem, and the worldwide number of individuals who experience this condition is increasing, due to an expanding and aging population. In Nigeria for instance, a significant number of ophthalmic patients present with low vision, with possible psychological consequences. Previous research has focused more on ophthalmic determinants, ignoring the role that psychosocial factors play in wellbeing of patients diagnosed with low vision. This study therefore, examined the predictive role of perceived social support and resilience on psychological wellbeing of patients with low vision in Nigeria. A cross-sectional design was adopted to purposively recruit patients with low vision (visual acuity < 6/ 12 in the better eye) at an Eye Centre in Nigeria. Multidimensional scale of perceived social support, Ego resiliency and Wellbeing Affectometer-2 scales were used to collect data from participants. The study comprised 129 participants (mean age=49.10 years). Hierarchical multiple regression showed that social support (β= .05, t= 0.55; p <.05) and resilience (β= .23, t= 2.28; p <.05) were significant predictors of psychological wellbeing [$F_{(2, 126)}$ =3.402; R^2=.09; p <.05].Results indicate that low vision has a significant impact on wellbeing, while enhanced social support and resilience have beneficial effects on wellbeing among patients with low vision. Ophthalmologists and other low vision specialists must therefore provide support and encourage same from families and relatives of their patients to help the patients deal with the impact of vision loss on wellbeing.

Keywords: ***Visual acuity, Psychological well-being, Low vision, Social support, Eye care, Nigeria***

Received: 12th December, 2021
Revised: 26th March, 2022
Accepted: 8th April, 2022

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Introduction

Low vision and blindness are among some of the major public health problems globally and the rate of individuals who present with these conditions are increasing especially in developing nations (Joshi, Persad & Farnon, 2020). It has been estimated that in 2015 alone, more than 253 million people suffered from visual impairment, out of which 36 million were completely blind (Bourne, Flaxman & Braithwaite, 2017). Among developing nations, recent findings have shown that more than 36% of ophthalmic patients experience low vision (Joshi et al., 2020). The reported major causes include cataract (52 m), followed by age-related macular degeneration (8.4 m), glaucoma (4 m), and diabetic retinopathy (2.6 m). Apparently, this indicates a serious problem considering the negative impact low vision exert on functional daily activities that significantly impact emotional and social well-being of these individuals and their families.

Low vision (visual acuity that cannot be corrected to better than 6/12 in the better eye) is a chronic stressor that continuously cause substantial stress on the emotional and social life of patients, significantly affecting their psychological well-being (Bakkar, Alzghoul & Haddad, 2018). Research has shown that people who experience low vision often feel inferior, are generally unhappy and tend to feel inadequate because of their lack of social acceptance in the environment. Many also experience concentration problems during reading, feel hopeless about the future and are generally sad (Linely & Joseph, 2005). These behaviours are capable of affecting positive activities that promote functional well-being and societal adaptation to vision loss.

Nigeria is one of leading African countries with visually impaired population including low vision (Abdul et al., 2009). Based on figures from the Nigerian National Blindness and Visual impairment survey, it is estimated that approximately 800,000 individuals have functional low vision in Nigeria (Entekume, Patel, Sivasubramaniam Gilbert, Ezelum, Murthy, Rabiu, 2018). Many patients with these conditions have also been found to experience anxiety and depression (Ademola-Popoola, et al., 2010). This is disturbing because foreign studies have shown that visually impaired individuals with psychological morbidity such as anxiety and depression are two times likely than the normal population to experience poor well-being (Mabuchi, Yoshimora & Kashiwagi, 2012; Zhou, Qian & Wu, 2013). However, while the number of patients who experience distress associated with low vision continue to increase, there are limited studies within the Nigerian setting that specifically assessed the role of psychological factors on low vision patients' well-being. As a result, ophthalmic management for the blind and visually impaired has exclusively been restricted to basic medical care without much regard to patients' overall well-being. Suffice to say that it is only when patients are psychologically healthy and well that they can adhere to medical care and also engage in functional daily activities that optimize effective and efficient ophthalmic management (Lim, Fan, Yon, Wong & Yip 2016).

Social support represents a significant subjective factor that, when sufficient, can influence well-being and societal adjustment in low vision individuals. The emotional and social challenges associated with vision loss require continuous support from family, friends and significant others. Generally, individuals with visual disabilities require adequate emotional and instrumental assistance to enable them adapt effectively in the society. Research indicates that social support is an important factor among individuals experiencing stressful events (Curtis et al.,2014). Lack of social support has been related with higher risk of depression and poor psychological well-being in non-clinical (Koizumi, Awata, Kuriyama, Ohmori, Hozawa, et al., 2005) and clinical population (Alotaibi, 2015). Among visually impaired adults, Cimarolli and Boerner (2005) reported that less-optimal wellbeing is liked with experience of low support and receiving negative support. There is however, available evidence revealing that overprotection for the visually impaired affects their adjustment to vision loss (Cimarolli, Sussman-Skalka, & Goodman, 2014), which also may hamper psychological well-being.

Social support is particularly an important factor especially in the Nigerian context considering the significant role that family members and friends play in providing care (Bassey & Ellison, 2020), towards the recovery and well-being of patients with disabilities. The implication of this is that social support may play a crucial role in psychological well-being among patients diagnosed with low vision, but this has not been empirically verified.

In addition, evidences suggest that having the ability to function effectively or positively in adverse circumstances can promote well-being and social adaptation (Egeland, 1993; Schoon, 2006). Resilience is the capacity that people demonstrate in highly stressful or traumatic situations, enabling them to enhance functioning and adaptive flexibility (Egeland et al., 1993). As a result, resilient individuals are more likely to experience positive affect and demonstrate high confidence in managing potentially traumatic situations, which could in turn, promote psychological wellbeing (Block and Kremen, 1996). Low vision is a chronic stressor that requires high level of competence and capacity to manage. Thus, when confronted with the challenges of low vision, patients with high disposition to withstand the challenges may experience less distress, thereby achieving better adaptation and well-being.

Suffice to say that there are few studies (Mabuchi, et al., 2012; Zhou, et al., 2013; Ogunsemi, Bodunde, Afe, Onabolu & Abasiubong, 2018) that have examined well-being among ophthalmic patients. However, many of these studies have focused on how very low visual acuity, poor educational background, lower socioeconomic class, age, type of eye disorder, higher education, etc., affect psychological well-being (Mabuchi, 2012; Zhou,2013; Ogunsemi, et al., 2018). These factors are objective and/or slow to change. However, social support and resilience are subjective factors that can be enhanced through societal intervention to improve well-being of individuals with low vision. Therefore, considering the paucity of studies on predictors of psychological wellbeing among individuals with low vision in Nigeria and the potential negative impact it portends to the management of this condition, there is a need to carefully direct research efforts to examining relevant but apparently ignored psychological factors that may impact the psychological well-being of people with low vision. Consequently, we hypothesized that: (H1) Social support will significantly predict better psychological well-being among patients with low vision; and (H2) Resilience will significantly predict better psychological well-being among patients with low vision.

Method

Design and Setting

The study used a cross-sectional design. Three primary measures were established: resilience, social support and psychological well-being. The study was conducted at the Eye Centre of Mercy Hospital, Abak. Mercy Hospital is a renowned Missionary Health Facility in Southern Nigeria which provides Eye Care services to patients with different eye disorders. The centre is manned by some renowned ophthalmologists assisted by visiting doctors. The eye centre acts as a major referral centre and primary care unit for patients of varied eye disorders within the Southern region of Nigeria.

Participants

One hundred and twenty-nine participants were recruited from the Eye Centre of Mercy Hospital, Abak, Nigeria. The eligibility criteria were: best corrected visual acuity <6/12 in the better eye, greater than 18 years of age, had no record of cognitive impairment or any other major medical condition and demonstrates capacity to respond to the questionnaire in English.

Of the 129 participants, 69 (53.5%) were patients with low vision who were males, while 60 (46.5%) were female patients. Majority of the patients were 50 years and above (72.1%) and married (74.4%) with primary (37.2%) and secondary school education (39.5%). Surprisingly, majority of the patients 69 (53.5%) claimed to be of high socioeconomic status.

All the participants were diagnosed with low vision and their mean age was (M=49.10; SD+15).
The overall prevalence of low psychological wellbeing in the study population was 46.5%, and the prevalence was higher (37.6%) among patients who lost vision in two eyes than patients who lost vision in only one eye 9.10%. Overall, glaucoma was the major cause of visual loss (42.6%), followed by cataract (14.8%), retinal detachment (13.3%) and corneal opacity (11%).

Procedure

Researchers sought and obtained permission from the management of Mercy Hospital, Abak before embarking on this study. The procedure for data collection followed standard ethical principles contained in the declaration of Helsinki. The nature and objectives of the study were clearly explained to the participants. We ensured that all information provided by the participants was entirely anonymous, and we did not record any identifying information on our data collection format. We also provided psychological counselling to some interested patients. Data was obtained from one hundred and twenty-nine patients at the out-patient department (OPD) and surgical wards by the use of questionnaires. In order to control for possible confounding factors, we excluded patients with other medical conditions that might have some level of influence on patients' wellbeing.

Measures

Demographic characteristics: The study collected participants' data on age, sex, marital status, educational attainment, type and severity of visual loss and whether they had other significant medical conditions that could impact wellbeing. All participants comprised patients diagnosed with low vision, with the level of impairment classified as mild (<6/12–6/ 18), moderate (<6/18–6/60), or severe (<6/60).

Psychological Resilience

Resilience was assessed using the Ego Resiliency Scale (Block and Kremen, 1996). This is a 14-item inventory that assesses (trait-based) psychological resilience defined as the capacity of the individual to effectively adjust to frustrating or stressful life events. Questions require a response on 4- point scale ranging from 1, with the answer "does not apply at all," to 4 with the answer "applies very strongly". The maximum score can be 56. All items of the scale are positively scored. Those who score low on this measure are expected to experience more emotional distress or problems compared to those who score high when adversity is controlled. The Ego Resiliency scale has been used among visually impaired population and found to have acceptable reliability with Cronbach alpha of 0.81 (Aslam & Mohammad,2013; Farkas & Orosz, 2015). In Nigerian setting, reported reliability for the ERS among youth population ranged between .76 to .85 (Bacchi 2017; Oladipo & Idemudia, 2015). Before embarking on the main study, the researchers conducted a pilot study and found acceptable alpha of 0.65.

Psychological Wellbeing

Psychological well-being was assessed using the 39-item wellbeing Affectometer-2 Scale (Kammann &Flett, 1983). This is a valid and reliable measure of wellbeing in terms of general happiness, based on negative and positive feelings. The scale consists of two basic parts. Part 1 comprised of 19 statements and part II consists of 20 objective items. Range of scores of wellbeing scale is in between 39 to 195. The scale has been used in clinical population and found to have acceptable psychometric properties. For example, Naheed (1997) reported alpha coefficient of 0.88, while preliminary result in this research found Cronbach alpha of .78.

Social support

The 12-item multidimensional scale of perceived social support (PSS) (Zimet et al., 1990) was used to assess patients' level of social support. The PSS is an extensively used and well validated measure of social

support across different groups and settings including clinical populations (Rees, Xie, Holloway, Sturrock, 2013). Studies indicate that MSPSS has a good internal reliability, test-retest reliability, and strong factorial validity. In addition, good construct validity of the significant other, family, and friend subscales has also been demonstrated (Tonsing, Zimet &Tse, 2012; Bruwer, Emsley, Kidd, Lochner &Seedat, 2008). In Nigeria, the scale has been widely used among different population with stressful experience (Mohammad, Al Sadat, Loh, & Chiina,2015). MSPSS was pilot tested and found to have acceptable reliability (0.79) before it was adopted in the present study.

Statistical Analyses.

Statistical Package for Social Sciences (SPSS Version 23) was used to analyse data. Descriptive statistics (mean, frequency and percentages) were used to analyse demographic data, while Multiple Linear Regression was used to test the influence of social support and resilience on psychological wellbeing. Socioeconomic status and the degree of low vision were added in the regression model as control variables to statistically control their influence on the outcome measure. These are variables with the potential to influence wellbeing but which are not of interest to the present study.

Results

Table 1: Zero-Order Correlation Showing Relationship among Study Variables.

Variable	1	2	3	4
Socioeconomic Status	-			
Social support	.71**	-		
Resilience	.65*	.63**	-	
Psychological wellbeing	-.19*	.28*	-.07*	-

** Correlation is significant at 0.05 level (2tailed)

In order to determine the influence of social support and resilience on psychological well-being, it was necessary to establish the level of inter-relationship that exist among the study variables. Consequently, a zero-order correlation matrix was adopted. As can be seen in table 1, socioeconomic status has a significant inverse relationship with psychological wellbeing ($r=-.19$; $p<.05$); implying that as the patients' socioeconomic status improves, their psychological well-being will become low. Conversely, results indicated a significant positive association between social support and psychological well-being ($r=.28$; $p<.05$), meaning that when these patients are given sufficient support, it will significantly improve their well-being. Finally, there was a significant negative relationship between resilience and psychological well-being ($r= -.07$; $p<.05$), indicating that higher demonstration of resilience will lead to better wellbeing.

Table 2: Summary of hierarchical multiple regression analysis indicating the role of social support and resilience in psychological wellbeing of ophthalmic patients with low vision

MODEL I								
Predictor								
	β	***t***	***p***	***R***	R^2	ΔR^2	***F***	***p***
Socioeconomic Status	.214	2.46	<.05					
Degree of Low Vision	.06	.98	>.05	.22	.05	.05	.3.471	>.05
MODEL III								
Socioeconomic Status	.17	1.98	<.05					
Degree of Low Vision	.09	1.52	>.05					
Perceived Social Support	-.05	-0.55	<.05	.31	.09	.047	3.402	<.05
Resilience	.23	2.28	<.05					

$^{*}p<.05$; $^{**}p<.01$

In the analysis presented on Table 2, we began by introducing two control variables that have the capacity to affect wellbeing in people with low visual acuity. Thus, the degree of visual damage and socioeconomic status were introduced in the model (Model I) to ascertain their level of influence on wellbeing. From the results, the degree of low vision was found to have no significantly influence on wellbeing (β= .06, t= .98; *p* >.05), while having high socioeconomic status was a significant factor to the wellbeing of patients who presented with low vision at the hospital. Degree of low vision and high socioeconomic status however, did not exert significant joint influence on patients' wellbeing.

With this result, we introduced our main variables in the model (Model II), and result showed that social support (β= .05, t= 0.55; *p* <.05) and resilience (β= .23, t= 2.28; *p* <.05) are significant predictors of psychological well-being among patients with low vision [$F_{(2, 126)}$ =3.402; R^2=.09; p <.05], accounting for about 9% of its variance. This means that social support and resilience have significant influence on psychological well-being among patients with low vision in Nigeria.

Discussion

This study investigated the role of social support and resilience on psychological wellbeing among 129 patients who were diagnosed with low vision in an eye centre in Nigeria. Two hypotheses were formulated and tested using multiple linear regression analysis. Findings of hypothesis one indicated that social support is a significant positive predictor of psychological well-being. What this means is that, providing social support to individuals who experience low vision would help to improve their psychological well-being. This also imply that, when social support is lacking, patients with low vision will significantly experience diminished psychological wellbeing. This finding is consistent with the findings of Koizumi et al., (2005), that providing positive social support would enhance wellbeing among individuals experiencing stressful life events. The finding is further supported by Curtis et al., (2014) and Cimarolli and Boerner (2005), that less-optimal wellbeing is linked with experience of low support in ophthalmic patients.

The result further confirmed hypothesis two that stated that resilience will significantly predict better psychological well-being among patients with low vision. From the regression analysis, resilience emerged as a significant predictor of psychological well-being among patients who were diagnosed with low vision. This implies that showing capacity to handle vision-related stress plays a significant role in predicting psychological well-being in visually impaired patients. The result aligns with findings of Bacchi and Licinio (2017) and Eley and Stallman (2014) indicating that resilience is significantly associated and positively impacts well-being in patients and health practitioners exposed to stressful situations.

These findings have potential clinical implications. We recommend that vision specialists incorporate psychological components into the management of ophthalmic patients, particularly those with low vision. As professionals, they should provide and always encourage relatives of patients to show warmth, love and empathy to this special population. In addition, it is recommended that resilience building should be incorporated into the management of low vision so that patients who experience this condition can effectively withstand and adapt effectively thereby experiencing better well-being.

Despite positive findings, the present research has some limitations. Firstly, the study relies on self-report measures, which are open to experience bias and social desirability problems. Other ophthalmic factors that could also influence patients' well-being could not be controlled for. Furthermore, the cross-sectional design utilised in this study may have prevented us from observing these changes over time. Future research should use a larger sample, employ a more sophisticated method of data gathering and possibly adopt a longitudinal design to observe how patients' wellbeing is affected by psychosocial factors over an extended period.

In conclusion, our study found that social support and resilience have significant positive impact on the emotional and social wellbeing of patients diagnosed with low vision in Nigeria. Therefore, Ophthalmologists and other low vision specialists must incorporate psychological components into the management of individuals who present with low vision so that their overall health and well-being can be effectively achieved.

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