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Predictors of Perceived Social Support, Quality of Life, and Resilience in Pregnancy

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Abstract

Introduction: Many changes that pregnant women experience affect them from different health perspectives, including quality of life. But many studies report mothers with high social support have better psychological states. This brings about the need for a pregnant woman to have an acceptable form of resilience. **Objective:** The study aimed to examine selected variables as predictors of perceived social support, quality of life, and resilience in pregnancy. **Methods:** The study was descriptive and adopted a cross-sectional design. The Multidimensional Scale of Perceived Social Support, Short Form (SF-36) Health Survey 1.0 Questionnaire, and Connor-Davidson Resilience Scale were used for data collection. The population of the study was pregnant women attending antenatal care in the hospital. Systematic sampling was used in selecting the respondents of the study. Data were analyzed using SPSS version 26 and presented as frequencies and percentages, and ordinal logistic regression was used to determine the predictive power of the study's independent variables. **Results:** Most respondents had poor and very-good perceived social support levels (27.2%), respectively. The majority (76.6%) of the respondents had poor quality of life, and 40.3% had outstanding resilience. Family socioeconomic status was the only variable significantly predicting the levels of perceived social support, $P < 0.05$. No variable significantly predicted the quality of life and resilience. **Recommendation:** To boost the social support received by pregnant women and to enhance the quality of life of pregnant women in developing countries, there is a need for the deep involvement of significant people in pregnant mothers' families from conception to delivery.

Keywords: Pregnancy, Pregnant women, Quality of life, Resilience, Social support

INTRODUCTION

Pregnancy constitutes an experience that is critical in women's life (1). It is associated with many tensions (2), and women may be occupied with the thought of its likely unbearable circumstances (3). This makes the prevalence of emotional disturbances among pregnant women significantly higher than in the adult population (4). It is reported that more than 50% of pregnant women have anxiety, among which 8.5–10.5% is generalized anxiety, 1.4–5.2% is panic disorder, 1.2–5.2% is obsessiveness, and 3% is post-traumatic stress disorder (5). These usually make pregnant women require family and social support to adapt to the situation (2).

Social support is the level of assistance given to an individual by other people through appropriate interactions (6). This support can be emotional, like empathy; tangible, like practical help; and informational, like advice (7). Many studies reported that mothers with high social support have better psychological states (8). Many changes that pregnant women experience affect them in different perspectives of their health, including quality of life (QOL) (9). QOL is "the individual's perception of their position in life in the context of the culture and value systems in which they live and about their goals" (10). Resilience is broadly used to describe an interactive and dynamic process of managing, adapting, and negotiating adversity (11). It is a state of becoming relatively resistant to experiences of psychological stress (12). A lack of resilience in a woman could cause symptoms of anxiety during pregnancy to negatively affect fetal growth and development (13).

The changes in pregnancy are regular and interact with other factors, such as stressful events and economic factors, and could affect the pregnant women's health and QOL even if the woman did not have any disease condition before conceiving (14). This brings about the need for a pregnant woman to have an adequate state of resilience. However, research on pregnant women's prenatal psychological state is limited; previous studies' directions were mainly on postnatal period psychological problems (4). Also, studies on pregnant mothers' social support and emotions are very scarce, especially in developing countries like Nigeria. Moreover, pregnant women's concern for psychological problems is probably more in low and middle-income countries (4). These make studies on perceived social support (PSS), QOL, and resilience among prenatal women paramount important.

OBJECTIVE

The study aimed to examine selected variables as predictors of perceived social support, quality of life, and resilience in pregnancy.

METHODS

Design

The study was descriptive and adopted a cross-sectional design in investigating the predictors of PSS, QOL, and resilience in pregnancy.

Sample, Sample size, & sampling technique

The population of the study was pregnant women attending antenatal care (ANC) in the Sir Yahaya Memorial Hospital Birnin-Kebbi. The most visited and biggest hospital in Kebbi State (15). The sample size was 307, determined using Cochran's sample size determination formula. However, the valid retrieved questionnaires were 290. Systematic sampling was used in selecting the study respondents after obtaining the sampling frame from the ANC unit in the maternity section of the hospital. All pregnant women attending ANC in Sir Yahaya Memorial Hospital Birnin-Kebbi were included in the study. Pregnant women

who were not competent enough to answer questions, such as those in pain, semiconscious or unconscious, and mentally affected women, were excluded from the study.

Instruments for data collection

Three instruments were used for data collection as follows:

Multidimensional Scale of Perceived Social Support: The Multidimensional Scale of Perceived Social Support (MSPSS) was adapted from (14). It is a 12-item, five 0ption Likert scales that assess the PSS of the respondents. It has three subscales. The family subscale constitutes items 3, 4, 8, and 11; the friends' subscale includes items 6, 7, 9, and 12; and the significant others subscale constitutes items 1, 2, 5, and 10. The reliability (Cronbach's alpha) of the subscale of the instrument was found to be between 0.75-0.82 (16)**.** Three scholars validated the tool using face and content validity.

Short Form (SF-36) Health Survey 1.0 Questionnaire: Short Form (SF-36) Health Survey 1.0 Questionnaire adapted from RAND (17). The questionnaire is initially a 36-item instrument assessing the QOL of individuals physically, emotionally, and socially. However, to suit this study, it is modified to 19 items. It is five option questionnaire that measures the strength of QOL. The altered items have Cronbach's alpha reliability of 0.77. Its validity was ascertained by face and content validity through three experienced scholars.

Connor-Davidson Resilience Scale: Connor-Davidson Resilience Scale is a test that measures resilience in a stressful event, tragedy, or trauma. It is five option Likert scale adapted from Gonzalez, Moore, Newton, and Galli (18). All 10 items were modified to suit this study; and found to have a reliability of 0.82 using Cronbach's alpha (19). Three scholars validated the instrument using face and content validity. There are different versions of the scale. However, the CD-RISC-10 version was selected for its suitability for this study.

Data collection process

During the ANC visits, data were collected within three months (from January 2021 to March 2021). The research coordinator trained three research assistants on the nature of the research, the questionnaires, and the questioning methods for the respondents who could not read. The questionnaires were administered to the respondents after explaining the nature of the research and the instruments. The interviewer-administered method was used for respondents that could not read. The respondents were not allowed to leave with the questionnaire.

Data analysis

Data were analyzed using SPSS version 26 and presented as frequencies and percentages, and ordinal logistic regression was used to determine the predictive power of the study's independent variables.

Ethical consideration

The ethical approval for the study was obtained from the Kebbi State Health Research Ethical Review Committee. Respondents were allowed to participate voluntarily, and informed consent was taken from the respondents individually before involving in the study. Anonymity was maintained throughout the research processes, and all the information obtained from respondents was treated with the utmost confidentiality.

RESULTS

Table 1 revealed that most respondents were between 15-24 years and 25-34 years (36.9% and 36.6%), respectively. Thirty-nine percent of the respondents had a tertiary level of education, and 57.6% of the respondents were in middle-class socioeconomic status families.

Table 1: Socio-demographic variables of the respondents N=290

Variables	Frequency	Percentage
Age		
15-24	107	36.9
25-34	106	36.6
35-44	55	19.0
≥ 45	22	7.6
Educational level		
Primary education	30	10.3
Secondary education	91	31.4
Tertiary education	113	39.0
Non-formal education	56	19.3
Socioeconomic status		
Upper-upper class	44	15.2
Upper class	41	14.1
Middle class	167	57.6
Lower class	19	6.6
Lower-lower class	19	6.6

Table 2 shows that most respondents had poor and very good PSS levels (27.2%), respectively. However, the majority (76.6%) of the respondents had poor QOL, 40.3% had outstanding resilience, with only 6.6% with poor resilience.

Table 2: Respondents' Levels of PSS, QOL, and Resilience N=290

Variables	Frequency	Percentage
PSS		
Poor	79	27.2
Fair	46	15.9
Good	67	23.1
Very good	79	27.2
Excellent	19	6.6
QUOTE		
Poor	222	76.6
Fair	47	16.2
Good	17	5.9
Very good	3	1.0
Excellent	1	0.3
Resilience		
Poor	19	6.6
Good	83	28.6
Very good	117	40.3
Excellent	71	24.5

Table 3 shows that the m*odel fitting information* Chi-square P-values for all the models were significant ($P < 0.05$). The goodness-of-fit test of all the models was more significant than 0.05, and the pseudo R^2 values (Nagelkerke) were 22.1%, 16.8%, and

11.1% in PSS levels QOL and levels of resilience models, respectively. It indicates that family socioeconomic status was the only variable significantly predicting the levels of PSS, P < 0.05. No variable significantly predicted the QOL and resilience.

Table 3: Predictors of PSS, QOL, and Resilience in Pregnancy

Dependent Variables	Sig.	Goodness-of-Fit Sig.	Pseudo R^2 (Nagelkerke)	Estimate	Predictors Sig.
Levels of PSS	0.000	0.951	0.221	Age: 1.048 Educational level: -0.828 Family socioeconomic status: 1.232	Age: 0.065 Educational level: 0.070 Family socioeconomic status: 0.032
Levels of QOL	0.001	0.720	0.168	Age: 0.151 Educational level: 0.315 Family socioeconomic status: -1.007	Age: 0.808 Educational level: 0.574 Family socioeconomic status: 0.113
Levels of Resilience	0.013	0.524	0.111	Age: 0.270 Educational level: -0.390 Family socioeconomic status: 0.328	Age: 0.606 Educational level: 0.372 Family socioeconomic status: 0.542

DISCUSSION

The study was on Predictors of PSS, QOL, and Resilience in Pregnancy. Three variables (age, educational level, and family socioeconomic status) were considered independent variables. The results revealed that respondents with poor PSS and those with perfect PSS had the highest percentage of PSS levels. However, more than two-fifths of the respondents had either poor or fair PSS levels. This finding is discouraging as pregnant women's health is a concern. The conclusion is contrary to the result of a study in Calabar, Nigeria, by Afulukwe (20), where it was found that most respondents had adequate social support. The difference might be because the two studies used different instruments for data collection and other scoring methods. It might also be because the two studies were conducted in two entirely different geographical areas of Nigeria, with very high differences in culture and traditions.

The result of this study revealed that maternal age was not a significant predictor of PSS. This is in disagreement with the study conducted in Iran by Abdollahpour et al. (21), in which many relationships between a mother's scores of family support and her age were reported. Their study was conducted in the post-partum ward of Fatemiyeh Hospital in Shahroud, North East of Iran. This could have been the reason for the differences between the two studies; this study was conducted among pregnant women attending ANC. Also, in a study by Kim et al. (22), teen mothers received significantly more social support during pregnancy than adult mothers (65.0% vs. 57.4%, respectively, p = 0.035). However, the study by Kim et al. (22) was secondary data analysis, in contrast to this study which used primary data.

The mother's educational level was also not significantly predicted by the PSS. Contrary to this finding, a study conducted on PSS among Families of Pregnant Women

found a significant relationship between mothers' scores of family support and their education level. Mothers with a higher level of education had significantly higher family support (21). Nevertheless, the finding of this study is in agreement with a result of a cross-sectional study conducted by Nazari et al. (23) on the PSS and its relationship with some of the demographic characteristics in primigravida pregnant women which showed that pregnant woman's level of education was not a predictor of the total PSS. But the authors included only primigravidae in their study, while this study included all gravidae.

It was found that family socioeconomic status was significantly a predictor of PSS. Thus, for every unit increase in family socioeconomic status, there will be a 1.23 increase in PSS. This finding is in accordance with a study on Associations between social support, mental well-being, self-efficacy, and technology use in first-time antenatal women. It was found that there was a negative relationship between socioeconomic deprivation and social support (24). However, contrary to the finding of this study, Nazari et al. [23] found that a pregnant woman's socioeconomic class was not a predictor of the total PSS. However, the authors (23) used only primigravidae as their study subjects.

The result of this study found that the majority of the respondents had poor QOL. Very few respondents were found to have good, very good, or excellent QOL. This could be in accordance with the respondents' situation, where most of the respondents' family socioeconomic status is concentrated around the middle class to the lower-lower class. Very few respondents were found to be in the upper or upper-upper class. This finding conflicts with a study conducted in North Jordan on Factors Influencing the QOL of Healthy Pregnant Women, which shows that the women had moderate QOL (25). Differences between the two studies in determining the level of QOL could be the reason for the variation. Also, the opposite result was found in a study conducted by Shishehgar et al. (26) on the Relationship of Social Support and QOL with the stress level in pregnant women using the path model. The study found that the Mean scores of QOL were within the average range (26). However, differences in the instrument for data collection and the method of determining the level of QOL might be the cause of the two studies' variation.

The findings of this study reveal that age was not significantly predicting the QOL of pregnant women. In contrast to this finding, a study on QOL in pregnant women found a correlation between maternal age and the "physical functioning" and "Social functioning" of QOL of pregnant women to be an inverse negative correlation (27). Moreover, educational level was not found to be predicting the QOL in this study. But contrary to this finding, a significant statistical correlation between different levels of education and dimensions of "physical functioning" and"mental health" of QOL was reported. Pregnant women with higher educational levels had higher average scores than those with lower academic levels (27). However, the authors analyzed the questionnaire by its different sections. In contrast to this study, the analysis was based on the sum of the whole questionnaire.

The findings from this study showed that family socioeconomic status did not significantly predict the QOL of pregnant women. This is in disagreement with the result of a study conducted by Shishehgar et al. (26), in which it was found that there was a significant correlation between socioeconomic status and QOL ($P < 0.001$). The two studies used different instruments for data collection and different methods of determining the level of QOL. These might be the reasons for the differences between the two studies.

Most of the participants of this study were found to have a very good resilience level. Nearly two-thirds of the respondents had either very good or excellent resilience. Societal culture of resisting and adapting to pregnancy challenges might have influenced this finding. The finding is contrary to the result of a study conducted in China by Jin et al. (28), where it was revealed that the respondents had a relatively low level of psychological resilience. Also, this study found that maternal age did not significantly predict maternal resilience in pregnancy. But in disagreement with this finding, a study on Maternal Resources, Pregnancy Concerns, and Biological Factors Associated with Birth Weight and Psychological Health in Spain revealed maternal resilience at the end of pregnancy. It showed significant and positive associations with maternal age (29). Differences in the instrument for data collection and method of data analysis might have been the causes of variations. According to the finding of this study also, maternal education level was not a predictor of maternal resilience. This could be due to the culture of pregnant women's perseverance and endurance in the society where this study was conducted. Also, in this study maternal family socioeconomic status of the respondents was not a predictor of maternal resilience. In agreement with this finding, a study by Olajubu et al. (30) reported no significant association between educational type and personal monthly income with resilience.

CONCLUSION AND RECOMMENDATIONS

The respondents' PSS, QOL, and resilience levels were low, very low, and very high, respectively. The independent variables (age, educational level, and family socioeconomic status) were not predictors of PSS, QOL, and resilience, except that socioeconomic status was a predictor of PSS. To boost the social support received by pregnant women and to enhance the QOL of pregnant women in developing countries, there is a need for the deep involvement of significant people in pregnant mothers' families from conception to delivery. Therefore, midwives must pass awareness and educate the family members on their roles in achieving positive pregnancy outcomes by providing positive social support and ensuring high QOL of pregnant women. This can be done more effectively through home visiting. More studies on factors predicting social support, QOL, and resilience in pregnancy using different methods and larger sample sizes are recommended.

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