Demographic Variables Predicting Psychological Distress among Pregnant Women in Makurdi Metropolis, Benue State, Nigeria

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Abstract

This study examines demographic variables predicting psychological distress among pregnant women in Makurdi metropolis. A survey was conducted using the Kessler Psychological Distress Scale (K-10), a standardized psychological instrument developed for testing psychological distress having ten items with a five point Likert responses. A total number of 58 participants were used for the study. Data collected was tested using descriptive method, linear regression analysis and correlation. Result showed that only two demographic variables out of the seven tested individually predicted psychological distress among pregnant women; participants' employment status, (ß= .282), t = 2.047, p < .05 and family monthly income, (ß=.370), t = 2.775, p < .05. The two variables jointly explain 25% variance of scores, R^2= .25, F (2, 55) = 6.37, p<.05. Result also shows that demographic variables jointly predicted psychological distress, R^2= .136, p <.05, although individually. The stepwise version of regression analysis shows that they remained valuable in contributing to psychological distress to a certain extent as they were not removed for being completely insignificant. Conclusion was drawn on the basis that financially related demographic variables were major predictors of psychological distress among pregnant women. Therefore, health policies should be created to control for those factors, government should create policies that provide financial benefits to women through pregnancy, delivery and early care of their babies, this will go a long way to control for the psychological distress suffered by pregnant women in response to low income earnings.

Key words: Demographic Variables, Psychological Distress, Pregnancy, Makurdi Metropolis

Introduction

Pregnancy is a major period of transition in a woman's life, which involves substantial changes and adjustments both physiologically and psychologically (Chan, Lee, Lam, Lee, Leung, Koh & Tang, 2013). Nierenberg (2015) confirms that during any time of transition, a person's emotions can be up and down. Thus, pregnancy could be a potential stressor and high risk period in which a woman may develop psychological distress.

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This is a stage in which life goes through various physiological and psychological suffering along with expectation and hope. An expectant mother could feel insecure and vulnerable in this crucial time (Orr & Blazar, 2007). Although, pregnancy has been viewed as a time of diminished self doubts about femininity and a period of well-being that allows a woman to feel biologically complete, it is understood that most women still view this period negatively that they may fear child birth or feel inadequate about mothering (Bhat, Sheth, Shah, Palel & Bhavsa, 2015). There are other issues of practical concerns when bringing new life into the world, like considering the additional financial responsibility to the family, and sometimes the pressure of living on one income, in cases which the woman does not work. Pregnancy could also bring up other issues such as difficulty in family relationships, insecurities and other unrealistic personal expectations which may have previously been suppressed or ignored. The fear of uncertainty that comes with pregnancy can lead to anxious thoughts resulting in psychological distress (Nierenberg, 2015).

Psychological distress is a state of emotional suffering characterized by symptoms of depression (such as; lost of interest, sadness and hopelessness) and anxiety (such as; restlessness and feeling tensed). It is uneasy feelings of depression or anxiety in response to physical, spiritual or emotional demands, or combination of multiple demands that result in temporary or permanent harm (Drapeau, Marchand & Beaulieu-Prevost, 2011). Psychological distress in form of depression and anxiety during pregnancy can have devastating consequences not only for the woman experiencing it, but also for her children and family (Karmaliani, Asad, Bann, Moss, McClure, Pasha, Wright & Goldenberg, 2013). Studies by Field, Diego, Dieter, Hernandez-Rief, Schanberg, Kuhn, Vando and Bendell (2004) and those of Rondo, Ferreira, Nogueira, Ribeiro, Lobert and Artes (2003) show that psychological distress is associated with negative impact on the developing foetus and could result to premature births and lower birth weights.

These studies also reveal that depression in pregnant women is associated with low weight gain, alcohol and substance abuse and sexually transmitted infections, all of which can harm both the mother and baby. According to Escribe and Barona (2008) relationship adjustment, especially marital adjustment is significantly associated with depression during pregnancy. Anxiety during pregnancy on the other hand according to Roesch and Woo (2004) manifest in anxious feelings and fear or panic about the pregnancy, with women showing high pregnancy anxiety having 1.5 times greater risk of preterm birth. A meta-analytic review by Stroud (2008), indicated that women with both depression and anxiety were at higher risk of low birth weight as compared to those with only depressive or anxious symptoms or none.

Further findings also confirm the adverse effects of psychological distress among pregnant women. In those conducted in New-Delhi by Nasir, Rafia, Shafig and Shanu (2015), demographic variable significantly predicted psychological distress among pregnant women. The studies of Nasir et al. (2015) also revealed that the demographic variables of age, family monthly income and gestation period were significant predictors of psychological distress among pregnant women, although other demographic variables tested in the study were not significant. Those who were less than 30 years old showed greater psychological distress than those 30 years old and above, those who had higher monthly income expressed lesser psychological distress among pregnant women, as pregnant women with longer gestation periods. A study among Nigerian population by Fatoye, Adeyemi and Oladimeji (2004), conducted in a teaching hospital comparing 156 pregnant women with a matched control group revealed that the pregnant women had significantly higher psychological distress than their non-pregnant controls. Theoretically, this can be confirmed as Pearlin (1995) states that changes capable of resulting into psychological distress are bound to happen as individuals make transition.

In spite of these potential challenges of psychological distress among pregnant women in Nigeria, there are few studies concerning the subject among the Nigerian population. Several studies have also considered other predicting variables of psychological distress among pregnant women other than demographic variables, which has resulted to very few studies on the subject, therefore the need for more studies in the area. In this light, the present study offers a new perspective on the subject as it built on existing works to further examine the demographic variables predicting psychological distress among pregnant women in Makurdi metropolis, a Nigerian population. This is with the goal of factoring demographic related variables that can predict psychological distress among pregnant women which will further inform health care policies and provide interventions during antenatal care for pregnant women.

Leonard Pearlins's theory of Psychological Distress

While different theories explain how psychological distress evolves in the life of an individual, this research focuses on the theory of Leonard Pearlins (1995). He believes that individuals are in a stage of perpetual change for their entire lives. Development is unique to the individual, although common patterns can be predicted by looking at the various social factors. The theory proposes that life requires distress in order for continuous change. People continuously change due to situations and the stressors that come along with them to help them evolve. Changes in behaviour are from socialized responses to the social clock instead of age linked interchange. Early adults must make major changes in their behaviour, by meeting new responsibilities and through the transition into adult life (Hogen, 2014).

According to this theory life requires distress for continuous change; however individual characteristics such as gender, intelligence and personality among others can affect one's life choices. The question remains; does an individual have the skills to cope with distress? Because according to this theory the time of stress can impact an individual psychologically and challenge them mentally. This is the moment where such an individual gets the chance of maturity due to experiencing distress (social clock). Role changing then occurs by socializing and changing behaviour as a result of the social clock. The theory shows that psychological distress determines the difference in vulnerability to stressful circumstances by different individuals in a society (Maeghan & Saemah, 2015).

Pregnancy is such an occasion of major change in an individual's life (a crucial period of transition) which is accompanied by its stressors. The stress that comes with the change of pregnancy according to this theory is capable of impacting the individual psychologically and mentally. Since the theory argues that individual characteristics come to play in handling new stressors, it is safe to argue that certain women may fall vulnerable to this new stress in their lives, therefore resulting to psychological distress.

Method

The research aimed at determining if demographic variables (age, educational qualification, participant's employment status, husband's employment status, family monthly income, number of pregnancy experience, and gestation period) individually and jointly predict psychological distress among pregnant women in Makurdi metropolis. The population of interest was women in Makurdi metropolis age between thirteen years old to thirty years old and above. They were conveniently selected in two different health care facilities (Family Support Clinic Makurdi and Federal Medical Centre Makurdi. The consent of hospital authorities was sought before assessment was carried out among the participants.

The K-10 Scare (Keshler Psychological Distress Scale), a standardized instrument containing 10 items with a five level scoring likert scale designed to test psychological distress was used for assessment. Pencils were also provided for ticking applicable options by literate participants on the questionnaire. Semi-literate and non literate participants were assisted in filling suitable options. A minimum of at ten minutes was required to complete each questionnaire by the participants, although they were not formerly given any time limit to do so. Completed questionnaires were retrieved from participants and they were thanked for their participation and cooperation. The data collected was then statically analyzed by using Statistical Package for Social Science (SPSS 20.0).

Result

Table 1: Demographic characteristics of participants

Demographic variable	N	Percentage (%)
Age		
13-19	9	15.5
20-29	35	60.3
30 and above	14	24.1
Educational qualification		
None	3	5.2
Primary	6	10.3
Secondary	24	41.4
Tertiary	25	43.1
Participant's employment Status		
Unemployment	28	48.3
Employed	11	19.0
Self-employed	19	32.8
Husband's employment status		
Unemployed	6	10.3
Employed	27	46.6
Self-employed	25	43.1
Family monthly income		
≤ ₦20,000	12	20.7
₦20,000- ₦40,000	16	27.6
₦50,000 and above	30	51.7
Pregnancy experience		
First timer	23	39.7
Others	35	60.3
Gestation period		
1st trimester	2	3.4
2nd trimester	18	31.4
3rd trimester	38	65.5

The descriptive table shows that of the 58 participants, 9(15.5%) were within the teenage age range of 13 to 19, 35(60.3%) were within the age range of 20 to 29 and 14 (24.1%) were within the age range of 30 and above.

In regards to educational qualification, 3(5.2%) had no form of formal education, 6(10.3%) obtained only primary education, 24 (41.4%) had secondary education and 25 (43.1%) attained tertiary education. The employment status of the participants show that 28(48.3%) were unemployed, 11(9.0%) were employed and 19(32.8%) were self employed. Spouse's employment status indicated that 6(10.3%) were unemployed, 28(46.6%) were employed and 25(43.1%) were employed. The family monthly income revealed that 12(20.7%) earned less than twenty thousand Naira per month, 16(27.6%) earned between twenty to forty thousand naira per month, and 30(51.7%) earned fifty thousand naira and above in a month. First time pregnancies were 23(39.7%) and those pregnant for the second or more times were 35(60.3%). Those within the first trimester of their pregnancy were 2(3.4%), 18(3.0%) were within the second trimesters of pregnancy and 38(65.5%) were within the third trimester of their pregnancy.

Table 2: Descriptive Statistics showing Mean and Standard Deviation of demographic variables

Variables	Mean	Std. Deviation	t-value
Age	2.086	.629	- 0.610
Educational qualification	3.224	.839	0.500
Participant's employment status	1.845	.894	2.047
Husband's employment status	2.328	.659	- 1.025
Family monthly income 2.310	.799	2.775	
Pregnancy experience	1.603	.493	1.288
Gestation period	2.621	.557	- 1.072

Table 2 shows the mean scores obtained by all the demographic variables tested in the study, with educational qualification indicating the highest mean score of 3.224(SD=.839) signifying the highest predictor of psychological distress to the number of pregnancy experience having the lowest mean score of 1.603 (SD= .493), showing the lowest predictor of psychological distress among women.

Table 3: Linear Regressive analysis showing individual prediction of demographic variables on Psychological Distress

Predictors	B	Beta	T	Sig.
Age	- .087	- .097	- .610	.544
Education Level	.046	.068	.500	.619
Participant's employment status	.177	.282	2.047	.046
Husband's employment status	-.126	- .148	- 1.025	.310
Family monthly income	.260	.370	2.775	.008
Pregnancy experience	.215	.189	1.288	.204
Gestation period	-.138	- .137	- 1.072	.289

In Table 3, linear regression revealed that participant's employment status and family's monthly income show significant contributions as predictors of psychological distress among the participants. The two variables jointly explain 25% variance of scores, R^2= .25, $F_{(2, 55)}$ = 6.37, p<.05. Result indicated that age was negatively and not significantly related to psychological distress, ($\hat{a}$ = -.097), t = -.610, p > .05. Educational qualification was positive but not significantly related to psychological distress, ($\hat{a}$ = .046), t = -.500, p > .05. Husband's employment status also indicated a negative and non significant predictor of psychological distress ($\hat{a}$ = -.126), t = -.1.025, p >.05. Number of pregnancy experience showed a positive and also insignificant prediction on.

Psychological distress ($\hat{a}$ = .215), t = 1.288, p >.05. The variable of gestation period had a negative and insignificant prediction on psychological distress ($\hat{a}$ = -.126), t = -.1.025, p >.05.

Table 4: Linear Regressive analysis showing joint prediction of demographic variables on Psychological Distress

Variables	R	R^2	Adjusted R^2	Sig
Psychological Distress	.492	.242	.136	$p < .05$

Table 4 reveals that demographic variables however jointly predict psychological distress and jointly contributes to 14% prediction on psychological distress, $R^2 = .136$, $p < .05$.

Table 5: Linear Regression using stepwise selection version showing most highly significant predictors of Psychological Distress among pregnant women

Predictor variable	Beta	P
Family monthly income	.393	P<0.002
Participant's employment status	.278	P<0.029

Table 5 represents the stepwise selection version of linear regression which shows that only two of the demographic variables assessed; family monthly income and participant's employment status significantly predict psychological distress among pregnant women in Makurdi metropolis with family monthly income contributing 9% (Adjusted $R^2 = .098$) and participant's monthly employment status contributing 16% (Adjusted $R^2 = .159$). However, the other variable re-tested show that they still contribute in predicting psychological distress as none of them was completely removed for not significantly predicting psychological distress among pregnant women.

Table 5: Correlation (Pearson r)

	Age	Educational Qualification	Participant's Employment Status	Husband's Employment Status	Family Monthly Income	Pregnancy Experience	Gestation Period
Psychological Distress	.058	.054	.199	.031	.337	.193	-.211
Sig. (1- tailed)	.332	.344	.067	.408	.005	.073	.056

Table 5 shows that all the demographic variables have positive correlation with psychological distress except for gestation period which indicate a negative correlation of -.211, family monthly income shows the highest relationship (.337) with psychological distress, while husband's employment status indicate the lowest relationship (.031) with psychological distress among pregnant women in Makurdi metropolis.

Discussion

This study was aimed at finding if demographic variables will independently and jointly predict psychological distress among pregnant women in Makurdi metropolis. Results obtained showed that independently, only two demographic variables of the seven tested significantly predicted psychological distress among pregnant women, that is; participant's employment status and family monthly income.

However, individually the other demographic variables; age, educational qualification, husband's employment status, pregnancy experience and gestation period did not significantly predict psychological distress. This finding agrees with the studies of Nasir et al. (2015) which shows that when testing demographic variables, not all of them were found to be significant predictors of psychological distress.

In the case of their study, family monthly income happens to tarry with the findings of this present study. In addition, they found that, age and gestation period as opposed to the current study were also significant predictors of psychological distress. This study however show that one additional demographic variable that was not significant in their own study was found to be significant in predicting psychological distress, that is, participant's employment status. Since issues of additional financial burden are contemplated when expecting a new life (Nierenberg, 2015), it is possible that participant's employment status played a role in predicting psychological distress as out of the 58 participants 28 (48.3%) were unemployed, they might have been expressing feelings of incompetence in contributing their own quota in supporting the growing family. The aforementioned factor goes hand in hand with family monthly income which was also found to be a significant predictor of psychological distress. Therefore, it is safe to conclude that the amount of income obtained by a family is capable of causing psychological distress to a pregnant woman. This confirms the findings of Nasir et al. (2015).

The study further reveals that jointly, the demographic variables significantly predicted psychological distress among the pregnant women. That is to say that, although all the demographic variables may not be individual predictors but every one of them to some extent are capable of causing psychological distress in pregnant women. That is why the stepwise version of regression analysis meant to remove variables that had no contribution at all to psychological distress did not remove any of the other demographic variables. In addition, the data collected showed that younger participant (those less than 30 years) had higher psychological distress which agrees with the theory of Pearlins (1995) confirming that as individuals grow older, they build greater capacities of coping with emerging stressors (social clock). And this further agrees with the findings of Nasir et al. (2015) where pregnant women less than 30 years old expressed more psychological distress than those 30 years and above.

Limitations of the study

Most of the participants showed unwillingness to participate in the study based on the descriptive data most of them (38=65.5%, out of the 58 assessed were in their third trimester of pregnancy), therefore showing signs of discomfort and lack of interest in any issue they perceived might cause them stress. The sample size of the study was also relatively small for a research of this magnitude. Data collected was based on self report which gave room for participant's bias response to the questions which may have tendencies of depicting social desirability. Therefore, further studies on this subject should make efforts to get all participants to be motivated enough to participate, a larger sample should also be used as well as a more systematic and authentic means of gathering data which may include other technique as observation of the participants in different environmental situation.

Conclusion

The study thus shows that demographic variables in general can predict psychological distress but participant's employment status and family monthly income are more significant predictors of psychological distress among pregnant women. Therefore, health policies should be created to control for these two factors.

The government itself can create policies that provide financial benefits to a woman through pregnancy, delivery and early care of her baby, this will go a long way to control for the psychological distress suffered by pregnant women in response to low income earnings.

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