Socio-Demographic Predictors to Health Promotion among Pregnant Women in Okrika Local Government Area of Rivers State Nigeria

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Abstract: **This study examines the predictors to health promotion among pregnant women in Okrika Local Government Area, Rivers State, Nigeria based on employment status and level of income earned. The population in this study comprised of all registered pregnant women attending antenatal care in the 15 selected Primary Health Care centers in Okrika Local Government Area. A sample of 800 respondents was selected using Taro Yamen Formula out of the population of 1500. The study adopted a multi-stage sampling procedure: at stage 1, simple random sampling was used to select 15 primary health centers; at stage 2, purposive sample was adopted to select the respondents from each health center. The research instrument was a validated self-structured questionnaire. Data collected was analyzed using Statistical Package for Social Sciences (SPSS) version 23. Two null hypotheses were tested using inferential statistics at 0.05 level of significance. Results revealed that there is high level of health promotion among pregnant women in Okrika Local Government Area with the grand mean based on employment status and level of income earned 3.37± .69, the findings revealed that employment status with $\bar{X}$3.4 ± .64 is a predictor to health promotion among pregnant women in the area under study. Income status with the grand mean $\bar{X}$=3.4 ± .69 is not a predictor to health promotion among pregnant women in Okrika Local government area. The study concludes that pregnant women in Okrika Local Government Area of Rivers State, Nigeria have a high level of health promotion; level of income earned is not a predictor to health promotion among pregnant women in Okrika Local Government Area. The study recommends that the ministry of health should enact policies and improve basic education for all women of childbearing age both at the pre (before pregnancy), during and post pregnancy (after birth), on the need for healthy practices expected of pregnant women and not just focusing on the sensitizations and cancelling services rendered only during Antenatal and/or postnatal care which is centered towards the pregnant mothers only.**

Keywords**: Socio-Demographic, Predictors, Health promotion, pregnant women, Nigeria.**

I. INTRODUCTION

Pregnancy is a state that exists when a mature female misses her monthly menstruation in a normal condition. The fertilized ovum becomes firmly implanted in uterine wall. The ovaries stimulate pituitary hormones for the degeneration of the griffin follicles which degenerate in preparation to receiving ovum as a result of conception. The woman becomes pregnant and menstruation will stop till after birth (Kazemi, & Hajian, 2018). Pregnancy is also referred to as a locus from conception to birth, which brings changes in oestrogen and progesterone. These changes enable the woman to nurture her fetus, prepare her body for production of muscles for labor, develop her breast and lay down stores of fat to provide calories for the production of breast milk. Pregnancy is the state of having an implanted embryo in the uterial wall such a time that is terminated by spontaneous or elective abortion or delivery. It involves the presence of a developing offspring in the uterus.

Gestation in singleton pregnancies lasts an average of 40 weeks (280 days) from the first day of the last menstrual period to the estimated date of delivery. In the past, the period from 3 weeks before until 2 weeks after the estimated date of delivery was considered "term" (WHO, 2004). With the expectation that neonatal outcomes from deliveries in this interval were uniform and good. Increasingly, however, research has identified that neonatal outcomes, especially respiratory morbidity, vary depending on the timing of delivery even within these 5 weeks gestational age range. The frequency of adverse neonatal outcomes is lowest among uncomplicated pregnancies delivered between 39 0/7 weeks of gestation and 40 6/7 weeks of gestation (Tita, Landon, Spong, Lai, Leveno, & Varner, 2009; Reddy, Bettegowda, Dias, & Yamada-Kushnir, 2011). For this reason, quality improvement projects have focused, for example, on eliminating non-medically indicated deliveries at less than 39 0/7 weeks of gestation (American College of Obstetricians and Gynecologists (ACOG), 2013).

Health promoting behaviors and healthy lifestyle patterns are a fundamental concept and determinant of general health status (Kazemi, Hajian, Ebrahimi-Mameghani, & Khob, 2018; Abdolkarimy, Zareipour, Mahmoodi, Dashti, Faryabi, & Movahed, 2017). The importance of adopting health promoting behaviors is that these behaviors have the potential to prevent the occurrence and progress of chronic diseases and increase the control of individuals on their health status (Abdolkarimy, et al., 2017; Khodaveisi, Omidi, Farokhi, & Soltanian, 2017). Health promoting lifestyle emphasizes on life-improving behaviors such as regular exercising, eating nutritious foods, managing stress, avoiding high-risk behaviors, creating satisfying relationships with friends, and

having a goal in life (Baker, 2007; Kazemi, Hajian, Ebrahimi-Mameghani, & Khob, 2018). The health-related behaviors of the individual are problematic despite the much evidence about the benefits of healthy behaviors (Ghahremani, Alipoor, Amoee, & Keshavarzi, 2017). While women are seeking safe ways to spend the pregnancy period in a healthy manner as soon as they get pregnant and they are going to make positive behavioral changes, (Edvardsson, Ivarsson, Eurenius, Garvare, Nystrom, Small, & Mogren, 2012; Kazemi, Hajian, Ebrahimi-Mameghani, & Khob, 2018). Unfortunately, some pregnant women do not succeed in adopting healthy behaviors For instance, the level of physical activity of women decreases during pregnancy despite the emphasis of studies on the beneficial effects of physical activity on the consequences of pregnancy (Sui & Dodd, 2013).

Mid-moderate exercise programme during pregnancy does not adversely affect pregnancy delivery. Good and low-impact exercise choice for pregnant women include brisk walking, swimming, and jogging. These exercises have many benefits for mother to be. These benefits include building strength and endurance, which may help the pregnant woman to cope and better with the extra weight of pregnancy and the hard work of labour; make it easier for the pregnant woman to get back into shape after her baby is born; and boast her spirit and even help ward of depression (Kazemi, et al 2018).

Since prioritization of the health of mothers and efforts to provide the desired services is in some way a guarantee of the health of the family and the future generation, and because the establishment and plan to provide psychosocial and health services for specific and vulnerable groups, like the pregnant women, needs discovering and interpreting their experiences and views, and to clearly understand the perceptions of pregnant women as factors influencing health promotion behaviors which are keys to intervene and modify strategies for improving health behaviors, a qualitative study with an emphasis on the social context was designed to explore the experiences of overweight pregnant women in terms of the factors influencing selection and adoption of health promoting behaviors during pregnancy.

Nowadays, the lifestyle and unhealthy behaviors are considered as two major reasons of death across the globe. Since the philosophy of providing healthcare services has shifted from the treatment of diseases to the prevention and promotion of health (Saydam, Bozkurt, Hadimli, Can, & Sogukpinar, 2007), the significance of health-promoting behaviors has found a pivotal role in the healthcare system (Christian, Iams, Porter, & Leblebicioglu, 2013; Sehhatie, Mirghafourvand, & Momeni, 2015). Hence, it is considered the most important strategy for the promotion of community health (Gharaibeh, Al-Ma'aitah, & Al-Jada, 2005). Health promotion is a broad term encompassing social, physical, mental and spiritual aspects (Sehhatie, Mirghafourvand, & Momeni, 2015). It refers to any kind of conscious planning and performance, which aims to improve health, prevent diseases, prevent negative consequences, increase productivity, and achieve individual and collective self-actualization (Beldon, & Crozier, 2005; Mahmoodi, Asghari-Jafarabadi, & Babazadeh, 2015).

Furuta, and Salway (2006), maintained that psychosocial pressures on young pregnant women can be endangering to their health though the increased likelihood of illicit abortion, or inadequate access to health care. Cyphers, (2009) viewed that family pressure often forces pregnant teenager to drop out of school. Adolescents may seek unskilled abortions in order to avoid expulsion from school on grounds of pregnancy. Education has been described by Allen (2005), as a medication against fatalism. Fatalism can take a form of belief, such as exists in many southern African cultures that health problems are being.

Ahdieh (2001), defines education as "a process of acculturation of knowledge through which the individual is helped to attain the development of his potentials and maximum activation when necessary according to right reason and to achieve thereby his perfect self fulfilment". Education is a process of changing attitude and cut off people through the effort of teaching and training process. Most pregnant women did not go to school and this hinders them from knowing the benefits of modern health care. Lack of family planning, age of marriage, women education and harmful traditional practices are all factors affecting pregnant women (Nnamdi, 2004).

Nnamdi, (2004) also found that illiterate mothers had the worst maternal health outcomes compared to their literate counterparts in terms of access and utilization of recommended number of antenatal visits. It is also unlikely that illiterate women would seek out quality antenatal services; they also lack the essential knowledge that might help them use health care inputs that offer better maternal health care services. The women's level of education was found to be a risk factor for non-utilization of antenatal services as level of education increased among women.

Kever, Martins, Lola, Dathini, Fatima, and Sambo, (2015) conducted a study on Knowledge and attitude of pregnant women towards dietary practices in Yerwa Clinic, Maiduguri Metropolitan Council, Borno State, the study was conducted to assess the knowledge and attitude of dietary practices among pregnant women attending Yerwa Clinic. Descriptive design was used for the study. 294 women were selected using systematic random sampling technique. Data was collected using a self-structured and validated questionnaire. Analysis was done using frequency distribution, simple percentages and inferential statistics of chi-square was used to test hypothesis at 0.05 alpha level of significance. The findings revealed that respondents have high (65.3%) knowledge of dietary practices and (63.27%) of the respondents have positive attitude towards the practices. Among the factors that impede good dietary practices in the population were cultural belief and poor socio-economic background while regular attendance of antenatal clinic and good socioeconomic

background enhance good dietary practices among the population. Test of hypothesis showed no association between age and knowledge, attitude and religious affiliation; however occupation and the attitude of the respondents were statistically significant. The study however suggests that intensive health education strategy should be developed and implemented order to bring about orientation of cultural beliefs. Although the study was limited to knowledge and attitude of pregnant women towards dietary practices, the study is found relevant and useful to this present research as dietary practice is considered to be one among the recorded predictors to healthy practices in this study.

Another study conducted by Maryam, Habibeh, Parichehr, and Maryam (2016), on "effects of education on exercise (physical activity) performance of pregnant women" the study was a semi-experimental study. 272 numbers of the nulliparous admitted to the eight health centers of Semnan, Iran selected by stratified-cluster sampling method and were placed in the intervention and control groups. Classes for the intervention group were held once every one week in the eight sessions and the duration of each session, was one hour. Collection of data was conducted through Godin and demographic questionnaires and in order to its analysis, SPSS software was used. The results of this experiment showed that the groups of intervention and control were similar in terms of the demographic characteristics. Before the intervention, in terms of exercise performance, there was no significant difference between the intervention and control groups. After intervention level of physical activity was mild (53.7%) in the training group, and was in lack of activity range (99.3%) in the control group. Statistical analysis showed that there were significant difference in physical activity of intervention and control groups ($p = 0.000$). Therefore, the final results of this investigation showed that educational classes of pregnancy exercise had positive effects on the performance of pregnant women. The study concluded that trainings and pregnancy classes had a positive effect on the exercise performance and improved these activities. One of the inhibitors of exercise during the pregnancy is cultural beliefs. Many of the women enjoy from the exercise and they would like to continue it during the pregnancy. On the other hand, poor knowledge about the correct methods of exercise and the benefits of exercise during pregnancy and wrong beliefs about this note. Staying healthy of both mother and fetus requires awareness about type and method of doing of exercise in pregnancy. Therefore, providing the essential training and emphasis on the benefits of exercise, decreases the worry of women about probable adverse effects on the fetus exercise and also with emphasis on this fact that specific exercise during pregnancy with preparation of the pelvic floor muscles and the abdominal, prepares the mother to the easier vaginal delivery and without damage to the fetus. That can improve mothers' performance for having physical activity. The study contributes greatly to this present research as it revealed the effects of education on exercise and performance of physical activities on pregnant women. Level of educational attainment and knowledge has been listed as one of the major predictors to healthy practices among pregnant women. The study adopted a different sampling method (stratified-clustered sampling) which proves to be different from the multistage sampling study adopted in this present research.

"Socio-economic status can affect pregnancy outcomes and complications, even with a universal care system". Was a study conducted by Kim, Lee, Bae, Hyun, Lim, Youn, Jin, and Jo. (2018), the study assessed pregnancy related indicators, prenatal care utilization, obstetric outcomes and occurrences of obstetric complications. Total number of 461,580 women (aged 20 years and above) who gave birth between 1st January, 2010 and 31st December, 2010. The researchers used the type of health insurance as a proxy indicator. Among the 461,580 women, 99.1% (n=457,336 were NHI beneficiaries and 0.9% (n=4244) were MA recipients. The study revealed in the MA group; 29.4% women received inadequate prenatal care, compared to 11.4% in the NHI group. Mothers in the MA group were more likely to have an abortion (30.1%), rather than deliver a baby, than those in the NHI group (20.7%, $p<0.001$). mothers in the MA group were also more likely to undergo cesarean delivery (MA 45.8%; NHI group 39.6%, $p<0.001$), and have preeclampsia (1.5%; NHI group 0.6%, $p<0.001$), obstetric hemorrhage (MA 4.7%; NHI group 3.9%, p=o.o17) and preterm delivery (MA 2.1%; NHI group 1.4%, $p<0.001$). the study concluded that women in the MA group tended to show higher rate of abortion, cesarean delivery, preeclampsia, preterm delivery, and obstetric hemorrhage than those in the NHI groups. it was recommended in the study that the health authorities should consider investigating what kind of barriers exist or what factors may affect these inequitable outcomes. The study is on the premise "socio-economic status can affect pregnancy out comes even with a universal care system", socio-economic status has been discussed as a perceived variable and a predictor to healthy life style among pregnant women in this present research. The study therefore found relevant to this present research as they both observed socio-economic status to be a predictor to healthy life style among pregnant women. The study assessed a rather conflicting pregnancy indicator as; prenatal care utilization, obstetric out comes and occurrences of obstetric complications, while this present research focus on the income earnings and mode of living (expenditure), and the economic strength of the pregnant women.

Objectives of the Study

The present study tries to answer the following questions with regard to the socio-demographic predictors to health promotion among pregnant women in Okrika Local Government Area:

1. What is the extent of health promotion among pregnant women in Okrika Local Government Area based on level of education?

2. What is the extent of health promotion among pregnant women in Okrika Local Government Area based on Employment status?
3. What is the extent of health promotion among pregnant women in Okrika Local Government Area based on Level of Income Earned?

Research Hypotheses

1. The following hypotheses were formulated and tested
2. Level of education is not a significant predictor to health promotion among the pregnant women in Okrika Local Government Area of Rivers State, Nigeria
3. Employment status is not a significant predictor to health promotion among the pregnant women in Okrika Local Government Area of Rivers State, Nigeria.
4. Level of income earned is not a significant predictor to health promotion among the pregnant women in Okrika Local Government Area of Rivers State, Nigeria.

II. METHODS

Survey research design was adopted for this study. The population for this study comprised of all registered pregnant women attending antenatal care in the selected Primary Health Centers in Okrika Local Government Area of Rivers State. The population is 1500 (Primary health centers (PHC), record 2019). The sample size for the study was arrived at 800 registered pregnant women. Using Taro Yamen formula the researchers arrived at 400, but decided to double the number to 800 respondents in order to have a much clearer opinion of the pregnant women attending Antenatal care in Okrika Local government Area. A structured questionnaire known as "Predictors to Health Promotion among Pregnant Women Questionnaire, (PHPPWQ)" was used as the instrument for data collection. The instrument was validated by the researchers and three (3) other research specialists in the Department of Human Kinetics, Health and Safety Studies, Ignatuis Ajuru University of Education, Port Harcourt to scrutinize so as to ensure that the research instruments were consistent with the variables raised and that they actually measure the issues under the study by the researchers. This therefore, improved without doubt the validity of the research instrument. The odd number score and even number score was correlated using Pearson Product Moment Correlation (PPMC) to determine the reliability coefficient of 0.78. The data generated from this study was coded and analyzed using Statistical Package for Social Sciences (SPSS). Hypotheses were tested using inferential statistics at 0.05 level of significance. Specifically, the hypotheses were tested with z-test. The decision to either reject or retain the hypotheses was based on 0.05 alpha levels. When the p-value is less than the alpha level, the hypotheses will be rejected whereas, when it is greater than the alpha level, the hypotheses will be accepted.

III. RESULTS

The researchers were not able to retrieve all copies of the questionnaire hence; the analysis is based on 793 given a return rate of 99.1%.

Table 1: Socio-demographic Characteristics of the Respondents

Socio-demographic Characteristics	Frequency (F)	Percentage (%)
Level of education		
None	29	3.7
Primary	41	5.2
Secondary	334	42.1
Tertiary	389	49.1
Total	793	100.0
Employment status		
Civil servant	192	24.2
Self-employed	364	45.9
Working in private setting	180	22.7
Fishing	19	2.4
Not working	38	4.8
Total	793	100.0
Monthly income		
Less than 30 thousand naira	379	47.8
31-50 thousand naira	308	38.8
51-70 thousand naira	68	8.6
Above 70 thousand naira	38	4.8
Total	793	100.0

Table 1 shows the socio-demographic characteristics of the respondents. The result showed that more than half 480(60.5%) of the respondents were aged 28-37 years, 269(33.9%) were aged 18-27 years, 34(4.3%) were aged 38-47 years and 10(1.3%) were aged 48 years and above. Very close to half 389(49.1%) had tertiary education, 334(42.1%) had secondary education, 41(5.2%) had primary education while 29(3.7%) had no formal education. The table also showed that, 530(66.8%) were married, 217(27.4%) were single, 40(5.0%) were divorced while 6(0.8%) were cohabiting. Close to half 364(45.7%) were self-employed, 192(24.2%) were civil servants, 180(22.7%) were working in private setting, 19(2.4%) were fishing while 38(4.8%) were not working. The result on the monthly income showed that 379(47.8%) earned less than 30 thousand naira, 308(38.8%) 31-50 thousand, 68(8.6%) *51-70 thousand while 38(4.8%) earned above 70 thousand naira.*

Research Question 1: What is the level of health promotion among pregnant women in Okrika Local Government Area of Rivers State based on educational status?

Table 2: Health promotion among pregnant women based on educational status

Items	None		Primary		Secondary		Tertiary	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
Cleaning of breast and nipples every day when pregnant	3.5	.50	3.1	.95	3.4	.66	3.4	.57
Register for antenatal care as soon as been noticed of pregnancy	3.4	.51	3.2	.88	3.5	.55	3.6	.55
Attended antenatal up to four (4) times before delivery	3.4	.82	3.5	.50	3.4	.71	3.5	.66
Engaged in mild physical activities and exercises like morning or evening walk	3.2	.75	3.2	.69	3.3	.77	3.3	.81
Eat balanced diet in every meal	2.9	.86	2.9	.82	3.5	.64	3.5	.60
Observed adequate rest everyday	3.3	.47	3.5	.62	3.5	.62	3.6	.65
Ensure cleanliness of house and the	3.5	.51	3.6	.49	3.5	.58	3.6	.54
Comply with regiment drugs as instructed	3.2	.78	3.4	.80	3.5	.65	3.5	.63
Did not miss ante-natal check up	3.1	.72	3.2	.69	3.5	.56	3.4	.79
Drank up to eight or more glasses of fluids daily	3.9	.55	3.0	.87	3.4	.74	3.5	.62
Avoidance of foods containing preservatives such as alcohol and salts	2.6	.86	3.4	.86	3.6	.62	3.6	.65
Took calcium rich food substances like milk, milk products, and biscuit bones	2.4	.82	2.3	.72	2.6	.59	2.5	.60
Grand mean	3.2	.68	3.2	.74	3.4	.64	3.4	.64

Table 2 shows the level of health promotion among pregnant women in Okrika Local Government Area of Rivers State based on educational status. The result shows that the level of health promotion was higher among those who had tertiary and secondary education ($\bar{X} = 3.4$) each followed by those who had primary education and no formal education ($\bar{X} = 3.2$) each.

Research Question 2: What is the level of health promotion among pregnant women in Okrika Local Government Area of Rivers State based on employment status?

Table 3: Health promotion among pregnant women based on employment status

Items	Civil serv.		Self-emp.		Private setting		Fishing		Not working	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD		
Cleaning of breast and nipples every day when pregnant	3.5	.61	3.4	.64	3.3	.49	3.3	.49	3.4	.75
Register for antenatal care as soon as been noticed of pregnancy	3.5	.65	3.6	.54	3.5	.56	3.3	.49	3.4	.48
Attended antenatal up to four (4) times before delivery	3.6	.67	3.5	.70	3.4	.65	3.7	.48	3.2	.70
Engaged in mild physical activities and exercises like morning or evening walk	3.5	.67	3.3	.82	3.3	.80	3.0	.85	3.1	.31
Eat balanced diet in every meal	3.3	.72	3.6	.57	3.3	.66	2.8	.68	3.2	.90
Observed adequate rest everyday	3.5	.72	3.5	.64	3.4	.61	3.2	.37	3.42	.59
Ensure cleanliness of house and the	3.7	.53	3.5	.52	3.5	.65	3.3	.49	3.4	.50
Comply with regiment drugs as instructed	3.5	.67	3.5	.65	3.6	.64	3.0	.85	3.4	.49
Did not miss ante-natal check up	3.5	.68	3.5	.65	3.4	.44	3.1	.85	3.3	.74
Drank up to eight or more glasses of fluids daily	3.4	.70	3.5	.71	3.3	.49	3.5	.51	3.0	.61
Avoidance of foods containing preservatives such as alcohol and salts	3.6	.61	3.6	.69	3.4	.71	3.0	1.1	3.3	.75
Took calcium rich food substances like milk, milk products, and biscuit bones	2.5	.55	2.6	.57	2.4	.69	2.3	.49	2.5	.76
Grand mean	3.4	.64	3.4	.64	3.3	.61	3.1	.63	3.2	.63

Table 3 shows the level of health promotion among pregnant women in Okrika Local Government Area of Rivers State based on employment status. The result shows that the level of health promotion was higher among the civil servants and self-employed ($\bar{X} = 3.4$) each, followed by those working in private setting ($\bar{X} = 3.3$), those not working ($\bar{X} = 3.2$) and those who are fishing ($\bar{X} = 3.1$).

Research Question 3: What is the level of health promotion among pregnant women in Okrika Local Government Area of Rivers State based on level of income earned?

Table 4: Health promotion among pregnant women based on level of income earned

Items	Amount in thousands							
	≥30		31-50		51-70		>70	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
Cleaning of breast and nipples every day when pregnant	3.3	.58	3.4	.68	3.7	.53	3.7	.66
Register for antenatal care as soon as been noticed of pregnancy	3.5	.53	3.5	.63	3.6	.59	3.7	.44
Attended antenatal up to four (4) times before delivery	3.4	.63	3.5	.69	3.5	.88	3.8	.41
Engaged in mild physical activities and exercises like morning or evening walk	3.3	.69	3.2	.92	3.5	.61	3.4	.68
Eat balanced diet in every meal	3.3	.63	3.5	.67	3.3	.80	3.5	.51
Observed adequate rest everyday	3.4	.66	3.5	.64	3.7	.46	3.6	.47
Ensure cleanliness of house and the	3.5	.49	3.6	.53	3.4	.69	3.5	.95
Comply with regiment drugs as instructed	3.5	.59	3.3	.91	3.3	.66	3.3	.66
Did not miss ante-natal check up	3.4	.70	3.5	.63	3.2	.74	2.9	.84
Drank up to eight or more glasses of fluids daily	3.3	.70	3.4	.71	3.4	.49	3.5	.50
Avoidance of foods containing preservatives such as alcohol and salts	3.4	.72	3.7	.61	3.6	.64	3.6	.48
Took calcium rich food substances like milk, milk products, and biscuit bones	2.5	.58	2.6	.62	2.4	.78	2.8	.31
Grand mean	3.3	.62	3.4	.69	3.4	.65	3.4	.57

Table 4 shows the level of health promotion among pregnant women in Okrika Local Government Area of Rivers State based on monthly income. The result shows that the level of health promotion was higher among those who earned 31-50,000, 51-70,000 and >70,000 thousand naira ($\bar{X} = 3.4$) each, followed by those earning a lesser amount, less than 30,000 naira ($\bar{X} = 3.3$).

Testing of Hypotheses

Hypothesis 1: Level of education is not a significant predictor to health promotion among the pregnant women in Okrika Local Government Area of Rivers State, Nigeria.

Table 5: Binary Logistic Regression analysis showing educational status as a predictor to health promotion among pregnant women

Educational status	B	S.E.	Wald	df	Sig.	Odds ratio(OR)	95% C.I for OR Lower	Upper
None	Ref		26.093	3	.000			
Primary	-.308	.501	.380	1	.538	.735	.275	1.960
Secondary	-1.29	.405	10.250	1	.001	.273	.123	.605
Tertiary	-1.66	.408	16.535	1	.000	.190	.085	.423
Constant	-.348	.377	.853	1	.356	.706		

*Significant p<0.05

Table 5 revealed the binary logistic regression showing educational status as a predictor to health promotion among pregnant women. The result of the study showed that educational status is a significant predictor to health promotion among pregnant women (p<0.05). However, health promotion increased with decreasing educational level (B = -1.66). Respondents who had tertiary education were 0.19 times (OR = .190; 95CI: = .085-.423) less likely to engage in health promotion practices than who had no formal education. The null hypothesis which states that educational level is not a significant predictor to health promotion among pregnant women in Okrika LGA was rejected.

*Hypothesis 2***:** Employment status is not a significant predictor to health promotion among the pregnant women in Okrika Local Government Area of Rivers State, Nigeria.

Table 6: Binary Logistic Regression analysis showing employment status as a predictor to health promotion among pregnant women

Employment status	B	S.E.	Wald	df	Sig.	Odds ratio(OR)	95% C.I for OR Lower	Upper
Civil servant	Ref		14.017	4	.007			
Self-employed	-.166	.258	.412	1	.521	.847	.511	1.406
Working in private	.310	.279	1.234	1	.267	1.364	.789	2.359
Fishing	.994	.534	3.465	1	.063	2.703	.949	7.702
Not working	.994	.404	6.045	1	.014	2.703	1.223	5.973
Constant	-1.76	.204	74.731	1	.000	.171		

*Significant p<0.05

Table 6 revealed the binary logistic regression showing employment status as a predictor to health promotion among pregnant women. The result of the study showed that employment status is a significant predictor to health promotion among pregnant women ($p<0.05$). Respondents who were not working were 2.703 times (OR = 2.703; 95CI: = 1.223-5.973) more likely to engage in health promotion practices than who were civil servants. The null hypothesis which states that employment status is not a significant predictor to health promotion among pregnant women in Okrika LGA was rejected.

Hypothesis 3: Level of income earned is not a significant predictor to health promotion among the pregnant women in Okrika Local Government Area of Rivers State, Nigeria.

Table 7: Binary Logistic Regression analysis showing Income level as a predictor to health promotion among pregnant women

Income earned (₦)	B	S.E.	Wald	df	Sig.	Odds ratio(OR)	95% C.I for OR Lower	Upper
<30,000	Ref		3.289	3	.349			
31-50,000	.246	.210	1.379	1	.240	1.280	.848	1.931
51-70,000	.445	.334	1.775	1	.183	1.560	.811	3.003
>70,000	-.345	.549	.396	1	.529	.708	.242	2.075
Constant	-1.79	.147	49.173	1	.000	.166		

*Not Significant p>0.05

Table 7 revealed the binary logistic regression showing income earned as a predictor to health promotion among pregnant women. The result of the study showed that income earned is not a significant predictor to health promotion among pregnant women ($p>0.05$). Respondents who earned 61-70 thousand naira were 1.560 times (OR = 1.560; 95CI: = .833-3.003) more likely to engage in health promotion practices than those who earn less than 30 thousand naira. The null hypothesis which states that income earned is not a significant predictor to health promotion among pregnant women in Okrika LGA was accepted.

IV. DISCUSSION

The analysis of research question one reveals that there is a higher level of health promotion among those who had secondary and tertiary education $\bar{X}$=3.4 ± .64, which relates to the point that level of education is a predictor to health promotion among pregnant women in Okrika Local government are. Also there is a lower level of healthy practices among the expectant mothers who only had primary education and no formal education. The hypothesis tested revealed that level of education is a significant predictor to health promotion among pregnant women in Okrika Local Government Area. ($p<0.05$).This result in agreement to the study of Furuta and Salway (2006) who reported that educational factor is one of the predictors to health promotion among as they maintained that education is an indirect factor, which carries the possibility of affecting the magnitude of maternal mortality in a number of different ways. This is in agreement with Maryam, R., Habibeh, Pariachehr and Maryam, M (2016) in their study on effects of education on exercise (physical activity) performance of pregnant women, they found that education is important and does influence the attitude to pregnant women to engage in healthy practices thus engaging in exercise and other physical activities during pregnancy. Also, Adenike (2013), found that education is a predictor to health promotion among pregnant women. The study is akin to John-Nwosu and Ngozika (2011), who found that education, influences the attitude of pregnant women. The study in accord to Zelalem, Endeshaw, Ayenew, Shiferaw, and Yirgu, (2017) who found that education predicts knowledge and practice of healthy behavour among pregnant women.

The study of Otaiby, Jradi, & Bawazir (2013), disagreed with the findings of this study, they reported a low level of education among majority of their respondents, the findings recorded a rather conflicting result to the findings of this study because of some slight variables that differ from this study, the study was a cross-sectional study on the assessment of knowledge and preferences of pregnant women in Saudi Arabia, unlike in this study; the study did not sought level of education as a predictor to health promotion among pregnant women. Also Nun, Adesuyi, and Olawoore, (2018) disagreed to the findings of this study, they found that knowledge and parity has no significant influence on the practice of personal hygiene of pregnant women in Ondo state. The report is conflicting from the findings of this study because there is a difference in the scope of the and study area.

Employment status in this study was analyzed as the research question two. The findings revealed that the level of health promotion was recorded to be higher among the civil servants and self-employed probably because of the difference in employment status in relation to the economic orientation maintained $\bar{X}$3.4 ± .64 statistics each, this means that employment status in a predictor to health promotion among pregnant women in Okrika Local Government Area. The hypothesis tested revealed that employment status is a predictor to health promotion among pregnant women in Okrika Local Government area (<0.05). The result is in agreement with the study of Kim, Lee, Bea, Hyun, Lim, Youn, Jin and Jo (2018) who found that socio-economic status (employment status) determines the healthy practices among pregnant women. In the same vein, Ibiyemi, Samson, Daniel, Olawale, Adebayo, Adeola and folarin (2015) found that employment status determines the type of nutritional choices made by the pregnant women in their study on the dietary pattern of pregnant women attending antenatal clinic at a tertiary health facility care in Nigeria. Okafor (2010) is also of the same accord on the discuss in a study on health needs and health problems of childbearing women in Ayamuelum Local Government Area of Anambra state, Nigeria, the study

recorded employment, and income status as economic health problems of the child bearing mothers. The study maintain the same opinion with the findings of Gondim, Fontenele, Herlânio, Renata, Araújo, Kelen, Janco, Priscila, Christina, Barbosa, and Karina, (2018) who found and reported that occupation (employment) is among the predictors to health promotion among pregnant women.

Adenike (2013) found that employment (occupation) of the pregnant women does not determine their level of health promotion. The findings of was conflicting probably because of the difference in the study area, study population and samples collected.

Based on the analysis made on research question three in this study, the result indicated that level of income is not a predictor to health promotion among pregnant women in Okrika Local Government Area with the grand mean $\bar{X}$=3.4 ± .69. The hypothesis tested gave a back up to the results (p>0.05). This finding is akin to Gondim, Fontenele, Herlânio, Renata, Araújo, Kelen, Janco, Priscila, Christina, Barbosa, and Karina, (2018), as they reported in their study that income is a predictor to health promotion among pregnant women in Brazil. The study concords with Adenike (2013), as he reported that income among other variables are predictors to health promotion among pregnant women. The study is akin to Janna, Chang, and Nilsen, (2011), who found that low alcohol consumption is associated with high level of income and thereby predicting healthy practice. Based on the findings of this study, and the earlier studies reviewed, though the difference in study area and sampling the results reported a similar findings to this study. Olatunji and Sule-Odu (2001) also agreed to the findings income earned is not a predictor to healthy practices among pregnant women in their study. The study is akin to Nun, Adesuyi, and Olawoore, (2018) who recorded that healthy behavioral practice among pregnant women is not determined by their level of income.

The findings of Mustapha, Ademulegun, and Ogundahunsi (2010) is not in agreement to the findings of this study, they reported that level of income is a determinant to healthy eating behavior among pregnant and lactating mothers. Also, the findings of Aftab, Ara, Kazi, and Deeba, (2012) propounds that level of income earned is a determinant to women's nutritional choices and is a key hindrance to their general well-being especially during pregnancy. This differences in the findings may be due to environmental difference and the characteristics of the populations which are in contrast.

V. CONCLUSION

The study concludes; socio-demographic factor is a major predictor to health promotion among pregnant women in Okrika Local Government Area. There is a higher level of health promoting behavior among the expectant mothers. Thus level of income earned is not a predictor to health promotion among pregnant women in Okrika Local Government Area of Rivers State Nigeria" and is therefore accepted.

VI. RECOMMENDATIONS

Based on the findings of the study, the following recommendations were drawn;

1. It is therefore recommended that the Ministry of Health should enact policies and improve basic education for all womenfolk of childbearing age both at the pre (before pregnancy), during and post pregnancy (after birth), on the need for wellnessy practices expected of expectant womenfolk and not just focusing on the sensitizations and cancelling services rendered only during Antenatal and/or postnatal care which is centered towards the expectant mothers only.
2. Families and spouses are also recommended to encourage marriage and reduce the prevalence of premarital/ unexpected pregnancy as marital status predicts wellness promotion amidst expectant womenfolk, which will improve the emotional wellness of the womenfolk.
3. It is premise recommended that the Government Organizations should encourage the expectant womenfolk by developing policies and campaigns to improve the livelihood of the expectant mothers.

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