

**KNOWLEDGE OF THE EFFECT OF ALCOHOL DURING PREGNANCY AMONG  
WOMEN OF REPRODUCTIVE AGE (18-45) IN OWERRI EBIRI COMMUNITY ORLU  
L.G.A IMO STATE.**

**Ibebuike J. E.\*, Nwokike G. I. and Onu L. C.**

Department of Nursing Science, Faculty of Health Sciences, Imo State University, Owerri, Nigeria.

Received date: 28 May 2019

Revised date: 18 June 2019

Accepted date: 09 July 2019

\*Corresponding author: Ibebuike J. E.

Department of Nursing Science, Faculty of Health Sciences, Imo State University, Owerri, Nigeria.

**ABSTRACT**

This study investigated the knowledge of the effect of alcohol during pregnancy among women of reproductive age (18-45) in Owerri Ebiri Orlu L.G.A Imo State. A Cross-Sectional descriptive survey design was adopted for this study. Three research objectives were formulated and three corresponding research questions were raised to guide the study. The research Objective includes: Knowledge of the effect of alcohol during pregnancy, Factors influencing pregnant women into alcoholism and measures to prevent the effect alcohol has on pregnancy. The Cognitive dissonance theory was used as the theoretical framework to obtain information from respondents (women of reproductive age, 18-45). An 18- items self-developed questionnaire made up of four (4) sub-sections was used. A systematic sampling technique was used to select 200 women of reproductive age from the community. The analysis revealed that 64.66% of the respondents were aware of the effect of alcohol during pregnancy, while 35.34% have no idea of the effect of alcohol in pregnancy and 15.8% were of the believe that alcohol has no effect on the fetus. Also based on the findings, it was recommended that nurses and health workers should educate women of child bearing age about the effect of alcohol during pregnancy and can also apply the initiative and intervention method as strategy for prevention.

**KEYWORDS:** knowledge, effect of alcohol, pregnancy, women of reproductive age (18-45), Owerri Ebiri Community.

**INTRODUCTION**

Alcohol consumption in childbearing women is a public health concern because of adverse health implications for the mother and baby (Martinez *et al.*, 2011). Alcohol during pregnancy causes harmful effect to the mother, but may have devastating effects on the developing fetus. Light to moderate alcohol during pregnancy, and occasional binge drinking, has been associated with, mainly behavioural or intellectual problems, but also with increased chance of fetal death. Extreme prematurity has also been associated with alcohol use during pregnancy (Krishma *et al.*, 2016).

Furthermore, alcohol exposure is one of the few modifiable risk factors for poor pregnancy outcomes. Fetal Alcohol Syndrome (FAS) was formally described only thirty-five years ago but the effects of alcohol consumption in pregnancy on the unborn child have been recognized for hundreds of years. Alcohol consumption in pregnancy has been associated with miscarriage, premature birth, still birth, low birth weight and

diagnoses that is called Fetal Alcohol Spectrum Disorders (Fetal Alcohol Spectrum Disorder (FASD)). Children with FAS have characteristics facial features (Small palpebral fissures, smooth philtrum and thin vermilion border of the upper lip), prenatal and/ or postnatal growth retardation, and central nervous system structural and/or functional abnormalities (Elizabeth *et al.*, 2010). Persons with FASD often requires medical treatment for their physical defect and mental disorders, Special education for their cognitive and behavioral disorders, correctional (justice) services for the criminal behaviours and they may have , social and family supports for their ill health. The care of persons with FASD therefore, requires the use of resources that spread beyond the health care system, and constitute a drain on the economy. It is estimated that FASD cost the Canadian economy up to \$6.2 billion every year (Ordinoha & Brisibe, 2015).

In a national study conducted in South Africa, 17% of women aged 15 years or older were current drinkers and among these, the prevalence of harmful or hazardous

drinking was 17% (Ornoy & Ergaz, 2010). Hazardous drinking is a pattern of alcohol consumption that places an individual at risk of adverse health event whereas harmful drinking involves a pattern that results in adverse event (Ornoy & Ergaz, 2010). The relationship between alcohol consumption and risk is one of dose response and not one in which there is a threshold of consumption over which damage of the fetus occurs (Adusi-Poku *et al.*, 2012). Alcohol consumption is also widespread in Nigeria where it is used in social and religious occasions. A study in a community in Bayelsa State, South-South Nigeria found that alcohol is regularly consumed by more than 90% of the adult population, and use as an aphrodisiac, (An agent that stimulates sexual excitement) to treat cold, and for oral hygiene. In spite of this, there is no concerted effort in the Nigerian health system to discourage pregnant women from drinking alcohol, and protect the unborn child (Ordinioha & Brisibe, 2015).

Although, not all children exposed to alcohol during pregnancy will be affected or are affected to the same degree. The level of harm is related to the amount of alcohol consumed, and the frequency and timing of exposure (Georgetta *et al.*, 2014). Irrespective of the level of consumption, alcohol intake during pregnancy and cause a wide range of physical and neuro-developmental conditions in the unborn child known as Fetal Alcohol Spectrum Disorder (FASD), the most popular among these being the Fetal Alcohol Syndrome (Georgetta *et al.*, 2014). It has been estimated that for every child born with FAS, there are three children who may not present with all these features of the syndrome but suffer some neuro-behavioral deficit. Alcohol consumption in pregnancy has also been associated with miscarriage, preterm birth, still birth and low birth weight (Peadon *et al.*, 2011). However, many women do not recognize pregnancy until the fourth to sixth week of gestation. Consequently, unintended fetal alcohol exposure during the pre-conception period or during early pregnancy is common (Peadon *et al.*, 2011). However, many women do not recognize pregnancy until the fourth to sixth week of gestation. Consequently, unintended fetal alcohol exposure during the preconceptional period or during early pregnancy is common (Peadon *et al.*, 2011). Binge drinking may contribute to slight intellectual deficiency in childhood and fetal alcohol exposure has been associated with an increased risk of developing early and late onset of alcohol disorders in early adulthood (Georgetta *et al.*, 2014). Binge drinking tends to pose a greater risk of harm to the fetus than drinking a comparable amount over a longer period because of the peak blood alcohol concentration which is a major factor. Alcohol also poses a substantial health risk to the mother through substance dependence, depression, liver cirrhosis, diabetes, breast cancer and HIV infection (Georgetta *et al.*, 2014).

The purpose of the study is to examine the knowledge on the effect of alcohol during pregnancy among women of

reproductive age in Owerre-Ebeiri, Orlu L.G.A. Imo State.

## MATERIALS AND METHODS

### Research Design

In this research, a descriptive cross-sectional survey design was adopted for this study.

### Study Setting

This study was carried out in Owerri Ebeiri community in Orlu LGA of Imo State Nigeria.

### Population of the study

The target population for this study is 200 women who are within child bearing age which is the number of reproductive age women currently present in Owerri Ebeiri as at the time of this research.

### Sampling and sampling technique

Sample size for the study was statistically determined by Taro Yamene formula which is

$$n = \frac{N}{1 + N(e)^2}$$

Where

N = Sample size

N = The Target population

I = Constant (unity)

E = Level of significance/limit of tolerable error (0.05).

Therefore, N = 200

$$1 + 200(0.05)^2 = 133.$$

$$= \frac{200}{1.5} = 133.33 = 133.$$

This represented 5% of the population, comprising about 15% of pregnant women.

### Sampling technique

A systematic sampling technique was used. A 1-in-3 systematic sample was used where every 3<sup>rd</sup> woman of reproductive age was picked and included in the study considering the following inclusion criteria.

### Inclusion Criteria

- Women within the age bracket of 18 to 45 years
- Those present at the time of study
- Willingness to participate in the study

### Instrument for data collection

The instrument for data collection is a questionnaire developed by the researcher. It is considered based on the stated objective. It is divided into four sections. Section A contained the socio demographic data of the respondent's. Section B comprises of seven (7) questions eliciting information on the reproductive women knowledge on effect of alcohol consumption during pregnancy section C comprises of six (6) question eliciting information on factors that influences them into alcoholism and section D has five (5) questions eliciting

information on measure to prevent the effect of alcohol consumption during pregnancy.

**Validity of instrument**

The instrument’s validity was established by the project supervisor when the questionnaire which was formulated by the researcher was presented to her after making appropriate suggestions. Corrections and necessary adjustment were made by the researcher.

**Reliability of Instrument**

For the reliability of the instrument, a pilot study was conducted using test-retest method in which fifteen (15) copies of the question were distributed to 15 women of reproductive age from Umunna, The neighboring community who were not part of the study but met the criteria for selection. After filling the questionnaire another fresh copies of the same questionnaire were administered to the same group of women after one (1) weeks. Responses from The two tests were correlated using Cronbach’s Alpha coefficient to test their significance at 0.05 level of significance meaning the instrument are reliable.

**Method of Data Analysis**

The scores obtained from the instrument were subjected to simple descriptive statistics frequency, percentage and presented in tables.

**Ethical consideration**

A letter was written to the department of nursing Imo State University bearing a research proposal and seeking for administrative permission of the ethical committee of the institution. An introductory letter from the department and a copy of a self-written research proposal comprising of chapter one. Summary of chapter who and chapter three of the research work with the instrument for data collection was submitted after which an approval was made however, the researcher ensured. The informed consent of respondent confidentiality and privacy of information anonymity of the respondents.

**RESULTS**

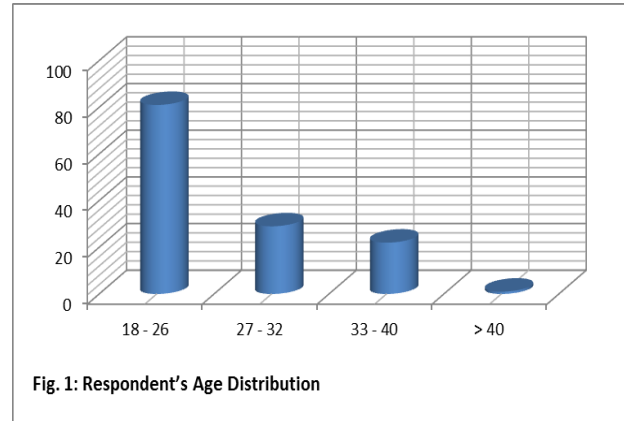
**Table 1: Respondent’s Age Distribution.**

Age Group	N	(%)
18 - 26	81	60.9
27 - 32	29	21.8
33 - 40	22	16.54
> 40	1	0.752
Total	133	100

Source: Field Work, 2018

The result in table 1 shows that the age group between 18 - 26 years (60.9%) were the highest participants in the study, followed by those aged 27 – 32 years (21.8%), then the age group 33 - 40 years (16.54%) and the least participants which is very insignificant (0.75%) falls within the age group above 40 years of age. This indicates that the participants studied were women who

are between the child bearing age in the international market studied. See figure 1 for a graphical representation of the result.

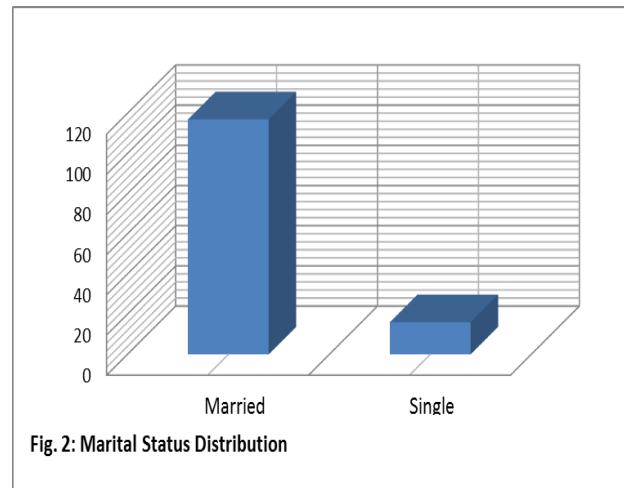


**Table 2: Respondent’s Marital Status Distribution.**

Marital Status	N	(%)
Single	16	87.97
Married	117	12.03
	133	100

Source: Field Work, 2018

The result in table 2 presents the marital status of the respondents. The result reports that there were more married women (87.97%) that participated in the study than the single women (12.03%) within the child bearing age in the study. See chart in figure 2 below for a graphical representation of the result.

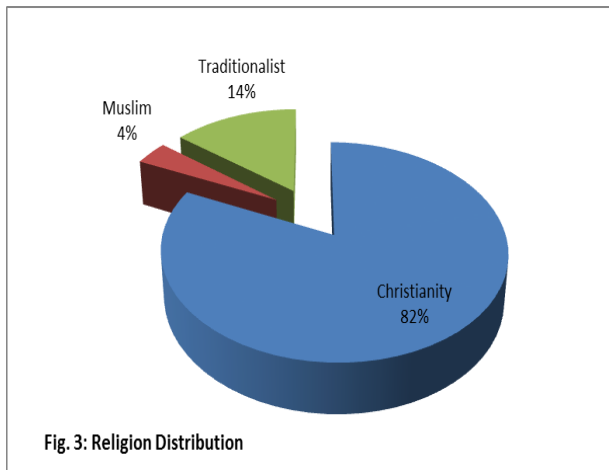


**Table 3: Respondent’s Religion Distribution.**

Religion	N	(%)
Christianity	109	81.95
Muslim	5	3.76
Traditionalist	19	14.29
	133	100

Source: Field Work, 2018

The result in table 3 presents the religion distribution of the respondents. The result shows that there were more Christians (81.95%) that participated in the study followed by the traditionalist accounting about 14.29% of the study and finally about 3.76% of the respondents which are Muslims. See chart in figure 3 below for a graphical representation of the result.

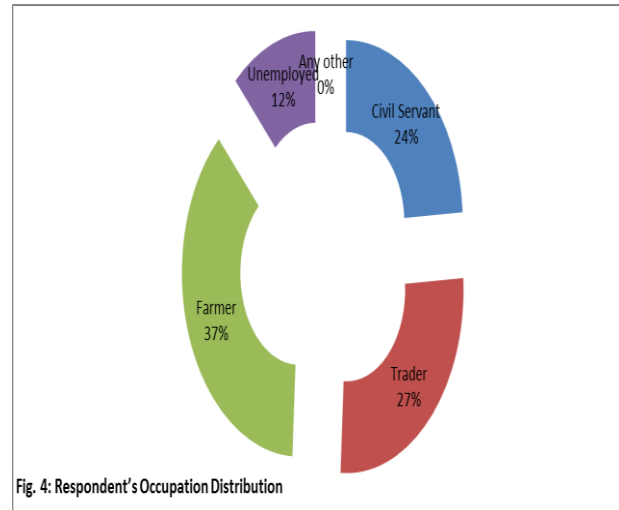


**Table 4: Respondent’s Occupation Distribution.**

Occupational Distribution	N	(%)
Civil Servant	42	31.58
Trader	47	35.34
Farmer	65	48.87
Unemployed	21	15.79
Any other	0	0
Total	133	100

Source: Field Work, 2018.

Table 4 presents the occupational distribution of the respondents. The result showed that the participants were mostly farmers (48.87%), followed by trader (35.34%), then about 31.58% were civil servant while the rest of 15.79% were unemployed. See a graphical representation of the result in figure 4 below.

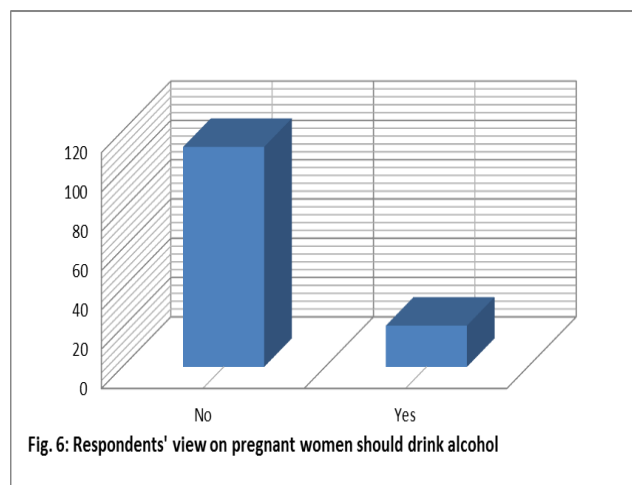


**Table 6: Respondents’ view on pregnant women to drink alcohol.**

Pregnant women should drink alcohol	N	(%)
No	112	84.21
Yes	21	15.79
Total	133	100

Source: Field Work, 2018

The result in table 6 presents the respondents knowledge of contraceptive. The result reports that about 84.21% of the study discourages the idea of pregnant women drinking alcohol while only 15.79% of the respondent encouraged the idea. Figure 6 below presents a graphical representation of the result.



**Table 7: Respondents’ view on alcohol having effect on pregnancy.**

Alcohol consumption affect pregnancy	N	(%)
No	21	15.79
Yes	112	84.21
Total	133	100

Source: Field Work, 2018

The result in table 7 presents the respondents view on alcohol having effect on pregnancy. The result reports

that about 84.21% of the studies were of the view that alcohol consumption affect pregnancy while the rest of

15.79% of the respondents were of the view that alcohol consumption does not affect pregnancy. Figure 7 below presents a graphical representation of the result.

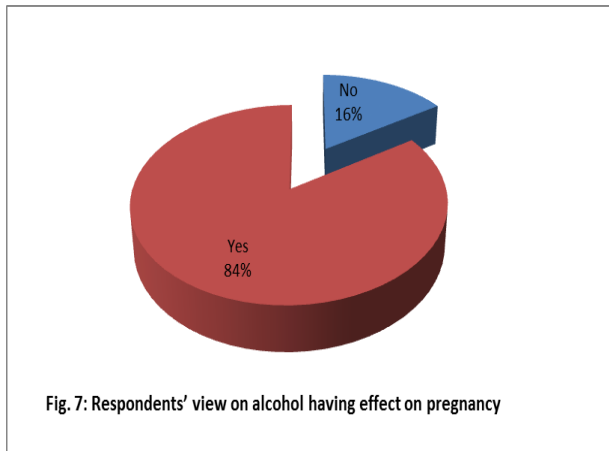


Fig. 7: Respondents' view on alcohol having effect on pregnancy

**Table 8: Respondents' view on knowledge of an effect on unborn child by alcohol consumption during pregnancy.**

Responses	N	(%)
No	47	35.34
Yes	86	64.66
Total	133	100

Source: Field Work, 2018

The result in table 7 presents the respondents view on knowledge of an effect on unborn child by alcohol consumption during pregnancy. The result reports that about 64.66% of the studies were of the view that they are aware /witnessed an effect on unborn child by alcohol consumption during pregnancy while the rest of 35.34% of the respondents have no idea or witnessed any effect on unborn child by alcohol consumption during pregnancy. Figure 8 below presents a graphical representation of the result.

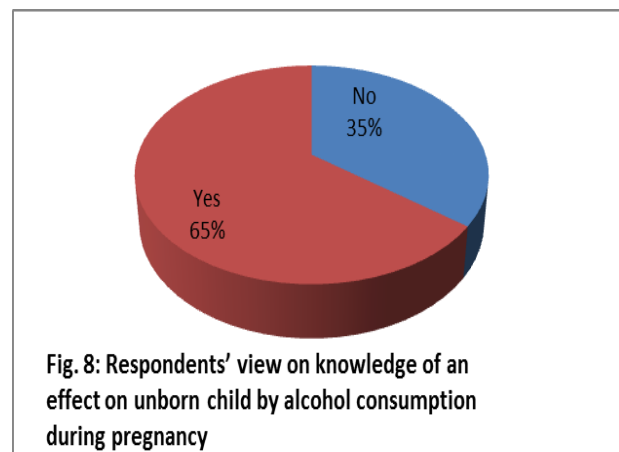


Fig. 8: Respondents' view on knowledge of an effect on unborn child by alcohol consumption during pregnancy

**Table 9: Possible effects of alcohol consumption on the unborn child.**

S/No.	Items	N	(%)
1	Fetal alcohol syndrome	9	8.036
2	Low birth weight	17	15.18
3	Brain damage	11	9.821
4	mental disorder	11	9.821
5	Growth problem	13	11.61
6	alcohol related neurodevelopmental disorder (ARND)	1	0.893
7	Miscarriage	21	18.75
8	birth defect/deformities	8	7.143
11	Still birth	19	16.96
12	Others	2	1.786
	Total	112	84.21
	Declined	21	15.79

Source: Field Work, 2018

The result in table 9 presents the respondents' view on the possible effects of alcohol consumption on the unborn child. The result discloses that out of 133 surveyed, about 15.8% declined as they reported there is no effect while the rest of 84.2% reported on possible effects of alcohol consumption on the unborn child. The study discloses that out of 112 respondents, the most possible effects of alcohol consumption on the unborn

child is miscarriage (18.75%), followed by still birth (16.96%), then low birth weight (15.18%), growth development (11.61%), brain damage and mental disorder (9.82% respectively), while the least possible effects of alcohol consumption on the unborn child is alcohol related neurodevelopmental disorder (ARND) which accounts about 0.89%. See figure 9 for a graphical representation of this result.



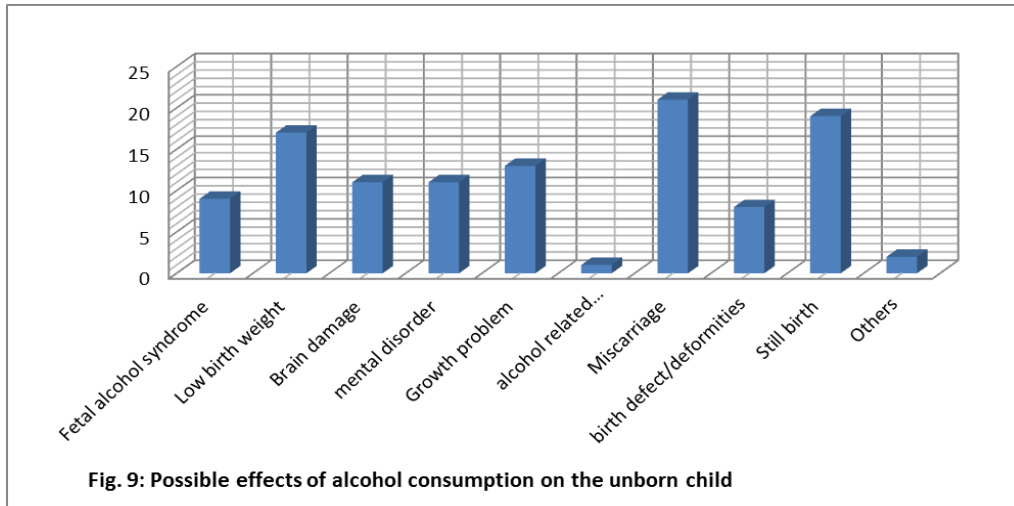


Fig. 9: Possible effects of alcohol consumption on the unborn child

Table 10: Respondents’ awareness of the disorders associated with alcohol exposure in pregnancy.

S/No.	Disorders associated with alcohol exposure in pregnancy	Yes	(%)	No	(%)	Total	Rank
1	Fetal alcohol syndrome	32	24.06	101	75.94	133	3 <sup>rd</sup>
2	Fetal alcohol spectrum disorder	56	42.11	77	57.89	133	2 <sup>nd</sup>
3	Alcohol related birth defect	96	72.18	37	27.82	133	1 <sup>st</sup>
4	Alcohol related neurodevelopmental disorder.	12	9.023	121	90.98	133	4 <sup>th</sup>

Source: Field Work, 2018

The result in table 10 presents the respondents’ view on awareness of the disorders associated with alcohol exposure in pregnancy. The result discloses that the respondents are mostly aware of alcohol related birth defect as about 72.18% are aware. There is no much knowledge of alcohol related neurodevelopmental disorder as about 90.98% are not aware, then fetal alcohol syndrome as 75.94% are not aware and fetal alcohol spectrum disorder as 57.89% are not aware. See a graphical representation of this result in figure 10 below.

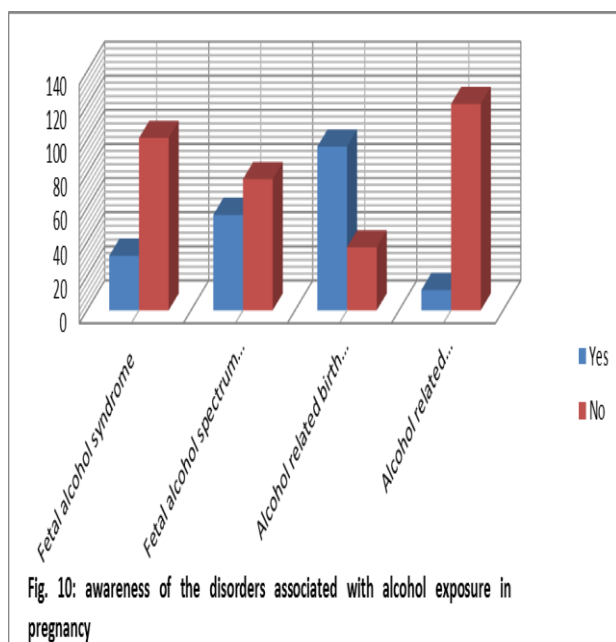


Fig. 10: awareness of the disorders associated with alcohol exposure in pregnancy

Table 11: Respondents’ informed on the effect of drinking alcohol during pregnancy by a health workers.

Responses	N	(%)
No	9	6.77
Yes	124	93.23
Total	133	100

Source: Field Work, 2018

The result in table 11 presents the respondents view on information on the effect of drinking alcohol during pregnancy obtained from health workers. The result reports that about 93.23% of the studies reported being informed about the effect of drinking alcohol during pregnancy by health workers while the only about 6.77% of the respondents reported otherwise. Figure 11 below presents a graphical representation of the result.

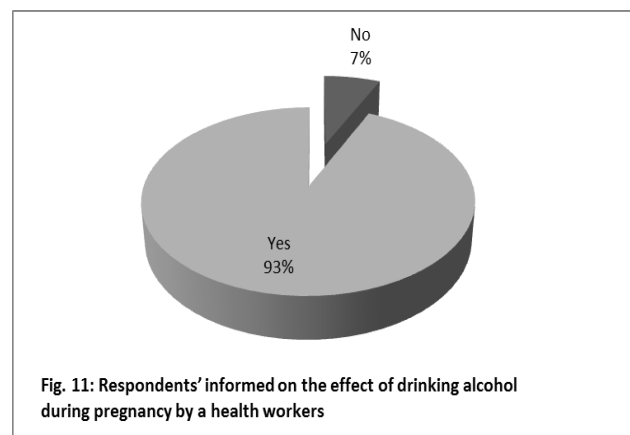


Fig. 11: Respondents’ informed on the effect of drinking alcohol during pregnancy by a health workers

**Table 12: Factors behind alcohol consumption during pregnancy.**

S/No.	Factors	Agree	(%)	Disagree	(%)	N
1	Unplanned pregnancy can made a person drinking alcohol while pregnant	87	65.41	46	34.59	133
2	Socialization is a factor while pregnant women	98	73.68	35	26.32	133
3	Family background of alcohol use can influence women into drinking while pregnant	98	73.68	35	26.32	133
4	Physical, emotional, and sexual abuse can lead pregnant women into drinking alcohol	119	89.47	14	10.53	133
5	Poor income and lack of knowledge can cause pregnant women into alcoholism	107	80.45	26	19.55	133
6	Misconception might be a factor while pregnant women drink	68	51.13	65	48.87	133

Source: Field Work, 2018

The result in table 12 shows that the majority of the respondents were of the view that about 89.47% agreed to the fact that physical, emotional, and sexual abuse can lead pregnant women into drinking alcohol. The study also showed that poor income and lack of knowledge can cause pregnant women into alcoholism (80.45%).

Socialization is a factor that can lead a pregnant woman into drinking, and family background of alcohol use can influence women into drinking while pregnant (73.68%). Unplanned pregnancy can make a person drinking alcohol while pregnant (65.41%) and misconception might be a factor while pregnant women drink (51.13%).

**Table 13: Respondents' view on the prevention of the effect of alcohol on unborn child.**

S/No.	Option	SA	A	UN	D	SD	Mean	Std. Dev.	Rank
1	Abstinence can be used to prevent alcohol effect	38	68	11	9	7	3.91	1.055	4th
2	Health education is a way of informing people of alcohol effect.	50	74	0	9	0	4.24	0.77	3rd
3	Alcohol effect can be avoided through public announcement.	17	66	16	17	17	3.37	1.234	5th
4	Counseling can cause limitation of alcohol effect	71	50	0	12	0	4.35	0.881	2nd
5	Health initiatives and intervention can reduce alcohol effects.	60	69	0	4	0	4.39	0.649	1st
					Grand		4.053	0.4431	

Source: Field Work, 2018

Table 13 reports the respondents' view on the view on the prevention techniques of the effect of alcohol on unborn child. The result discloses that the respondents agreed to the prevention techniques listed as a possible way of curbing the effect or the intake of alcohol by pregnant women as the result account a grand mean of 4.05 with a standard deviation of 0.443. The result shows that the majority of the respondents mostly agreed to health initiatives and intervention as a technique in reducing the alcohol intake and its effects (4.39±0.649), followed by counselling can cause a limitation of alcohol effect (4.35±0.881), Health education is a way of informing people of alcohol effect and Abstinence can be used to prevent alcohol effect were also proposed by the respondents as a technique in combating the possible effect of drinking among pregnant women as the result accounts a mean of 4.24 and 3.91 respectively.

## DISCUSSION

The study has shown that a good level of knowledge exists among pregnant women on the effects of alcohol on pregnancy. The finding from the study has further shown that the majority of the women of reproductive age are mostly aware of alcohol related birth defect but has no much knowledge of alcohol related neurodevelopmental disorder, fetal alcohol syndrome and fetal alcohol spectrum disorder. From this study, we can see that most respondents discourage the idea of pregnant women drinking alcohol. That alcohol consumption affects pregnancy and that they are aware /witnessed an effect on unborn child by alcohol

consumption during pregnancy. According to the findings, the most possible effects of alcohol consumption on the unborn child is miscarriage, followed by still birth, then low birth weight, growth development, brain damage and mental disorder. The respondents were of the view that the knowledge on the effect of drinking alcohol during pregnancy was informed by health workers in the hospital/clinics/health centers. This study has supported the findings of Elizabeth *et al.* (2010) report that many women frowns at alcohol consumption during pregnancy and this was among women who are educated and knowledgeable proving that education and knowledge works inversely with attitude towards alcohol consumption in pregnancy. Their study also discloses that the women knew that alcohol has an effect on the unborn baby and that they have heard of fetal alcohol syndrome.

The findings from the study discloses that majority of the women of reproductive age were of the view that the major factor that influences pregnant women into alcoholism is physical, emotional, and sexual abuse can lead pregnant women into drinking alcohol while poor income and lack of knowledge; socialization; family background, unplanned pregnancy and misconception can influences pregnant women into alcoholism. This study also agree with the findings of Georgetha *et al.* (2014) whose findings identified lower that availability of alcoholic herbal brew, religion, marital status, misconception about health benefit of alcohol where precipitators of the high number of alcohol consumption recorded among Ghanaian women. The findings is also

in concur with previous author LekettyAgyei and Aikins (2014) whose report shows that pregnant women who are into drinking were of the view that their main reason for the alcohol intake was mostly due to socialization.

## CONCLUSION

The women of reproductive age in Owerri Ebeiri are aware of the effect of alcohol during pregnancy. The respondents are mostly aware of alcohol related birth defect but has no much knowledge of alcohol related neurodevelopmental disorder, fetal alcohol syndrome and fetal alcohol spectrum disorder. The major factor that influences pregnant women into alcoholism is physical, emotional, and sexual abuse can lead pregnant women into drinking alcohol while poor income and lack of knowledge; socialization; family background, unplanned pregnancy and misconception can influences pregnant women into alcoholism. The result discloses that health initiatives and intervention is a major technique that can be used in reducing the alcohol intake and its effects, followed by counseling, then health education and finally abstinence.

## REFERENCES

1. Adusi-Poku, Y, Edusei A.K, Bonney, A.A., Tagbor, H., Nakua, E., & Otupiri E., Pregnant Women and Alcohol Use in Bosomtwe District of the Asanti Region-Ghana. *African Journal of Reproductive Health*, 2012; 16(1): 55-60.
2. Elizabeth, P., Jan, P., Nadine, H., Heather, D., Anne, B., Colleen, O., Carol, B. & Elizabeth J.E. (2010). Women's knowledge and attitudes regarding alcohol regarding consumption in pregnancy: a national survey. *BMC Public Health*. Retrieved from <http://www.biomedcentral.com/1471-2458/10/510>.
3. Georgetta, A., Emilia, A.U. & Alfred, E.Y. Factors Associated with Alcohol Consumption: A Survey of Women Childbearing at a National Referral Hospital in Accra, Ghana. *African Journal of Reproductive Health*, 2014; 18(2): 152.
4. Krishna, K.A., Narbada, T., Suresh, M., Pushpa, T., Astrid, A., Babill, S.P. Alcohol Consumption during Pregnancy and Postpartum Period and its Predictors in Sindhupalchowk District, Nepal, *J. Nepal health Res. Council*, 2016; 14(34).
5. Martinez, P., Roislien, J., Naidoo, N., Clausen, T. Alcohol abstinence and Drinking among African women: data from the World Health Surveys. *BMC Public Health*, 2011; 11: 160.
6. Ordinioha, B., &Brisibe, S. Alcohol consumption among pregnant women attending the ante-natal clinic of a tertiary hospital in South-South Nigeria. *Nigerian Journal of Clinical Practice*, 2015; 18(1).
7. Ornoy, A., Ergaz, Z., Alcohol abuse in pregnant women: effects on the fetus and newborn, mode of action and maternal treatment. *Int. J. Environ Res. Public Health*, 2010; 7(2): 364-376.
8. Peadon, E., Payne, J., Henley, N., D'Anthoine, H., Bartu, H., O'Leary, C., Bower, C. & Elliot, E.J.

Attitude and behavior predict women's intention to drink alcohol during pregnancy: the challenges for health professionals. *BMC Public Health*, 2011; 11: 584.