

## Evaluation of the Knowledge, Attitudes and Practices of Alcohol Abuse among Pregnant Women Attending Antenatal Clinics at Kitwe Teaching Hospital and Wusakile

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### Abstract

**Introduction:** Alcohol is one of the most abused substances among pregnant women in developing nations, despite its teratogenic effects on the unborn baby. Prenatal alcohol exposure can significantly influence the development of a child, which may result in a range of structural, cognitive and behavioural defects. Therefore, the aim of this study was to evaluate the knowledge, attitudes and practices of alcohol abuse among pregnant women attending antenatal clinics at Kitwe Teaching Hospital and Wusakile clinic.

**Methods:** The study conducted was cross sectional, which involved the use of questionnaires to those who qualified to be part of the study. A total of 119 women were enrolled despite the sample size being 82 because they insisted in being part of the study. Out of the 119: 79 were enrolled at Kitwe Teaching Hospital while 40 were enrolled at Wusakile.

**Findings:** From the study, it was noted that (60.5%) of the participants had good knowledge about the dangers of alcohol intake during pregnancy while (58.8%) of the women had not heard about fetal alcohol syndrome while (41.2%) had heard about it. It was worth noting that the women who had attained tertiary level of education were the majority who had heard about Fetal Alcohol syndrome. Furthermore, (68.9%) of the women had good attitude while (81.47%) had bad practices towards the intake of alcohol during pregnancy. It was noted that the women who attained tertiary level of education were more knowledgeable on the dangers of alcohol intake during pregnancy. The age, level of education and gravidity of the women was significantly associated to their practice on alcohol abuse which showed to have a significance level of 0.02, 0.04 and 0.01 respectively. This implied that women who were younger, less educated and had a smaller number of pregnancies abused alcohol more than those who were elderly, educated and had many numbers of pregnancies.

**Conclusion and Recommendations:** The results of this research show that the majority of the women had good knowledge, good attitudes but bad practices towards the adverse effects of alcohol intake during pregnancy. This still shows that there is need to highlight more on the preventive strategies as well as awareness campaigns regarding alcohol use during pregnancy which should include information on the severity and permanent features of Fetal Alcohol syndrome highlighting the fact that all types of alcoholic beverages could result in that condition.

**Key Words:** Knowledge; Attitude; Practices; Alcohol; Reproductive; Fetal alcohol syndrome.

### Introduction

It has been known since biblical times that alcohol consumption should be avoided during pregnancy as it can be harmful to the developing fetus. Literature has shown that children exposed to alcohol while still in the womb tend to be born with malformations. At the severe end of the spectrum, children with significant prenatal alcohol exposure have been shown to be affected with a condition known as Fetal alcohol syndrome (FAS). However, despite the amount of research that has been conducted to explain the specific effects of prenatal alcohol exposure, women seem to only have a vague idea of why alcohol should be avoided and what conditions such as Fetal alcohol syndrome. Therefore, it is cardinal to increase women's knowledge and understanding of conditions such as Fetal Alcohol Syndrome (FAS) and maternal abstinence of alcohol.

There are reported rates of alcohol use among women of child bearing age and may differ slightly according to country and culture. The majority of young women consume alcohol, as shown by various surveys conducted in a number of countries, such as Korea where the traditional social principles allowed only men to consume alcohol in the past. The frequency of alcohol use among women has increased from 32% in the late 1980's to 80% in 2007 in Korea. Studies in America have showed that

25% of women have reportedly continued to consume alcohol during pregnancy, while an alarming rate of 42.8% was recorded by pregnant women in certain parts of Western Cape, South Africa. The accurate assessments of the use of alcohol among pregnant women continues to pose many challenges, such as differences in the methodology of studies and underreporting by participants due to the fear of social stigma [1].

Furthermore, studies which have been conducted in America have shown an increasing rate of binge drinking patterns which have been associated with unplanned pregnancies. According to a study conducted in Australia, about half of the pregnancies are reported as being un-

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planned which the women tend to recognize in the fourth gestation period. There is an increased risk of unintentional alcohol consumption before the pregnancy can be recognized by the mother. Certain studies show that up to 60% of women continue to consume alcohol before realizing they are actually pregnant and their ignorance has resulted in severe implications on the fetus in utero during the first trimester of pregnancy, when organogenesis takes place. Most women tend to reduce the alcohol intake during pregnancy, except for those who are heavy drinkers who seem less likely to do so. Research has shown that mothers who have children at the extreme end of Fetal Alcohol Syndrome (FAS) do not stop taking alcohol once they identify that they are pregnant and a case study conducted in one community of western Cape of South Africa, found that mothers of affected children reported a consumption of 12.6 drinks per week, compared to 2.4 drinks per week reported by mothers in the control group. More than half of the affected mothers with affected children also admitted that their alcohol intake levels increased during pregnancy. Therefore, the level of alcohol consumption before pregnancy is a useful predictor of prenatal alcohol consumption [2].

Recent research has shown that the risk factors that tend to affect the pregnant women to consume alcohol during pregnancy are smoking, ethnicity, pre-pregnancy alcohol consumption, exposure to violence and age of drinking onset. Conversely knowledge of Fetal Alcohol Syndrome (FAS), high levels of maternal education and multiparity may be protective against maternal alcohol use. It is worth noting also that countries of the Sub Saharan Africa (SSA) are consistently ranked by WHO as having the highest per capita rates of alcohol consumption in the world. This is attributed to limited public health resources and that of decreased public health campaigns to discourage the intake of alcohol among pregnant women in most sub Saharan African countries [3].

#### Literature review

Alcohol consumption in women of childbearing age is a public health concern because of the adverse health implications it has for both the mother and the baby. Various types of literature have documented on the pattern of alcohol consumption among child bearing women in many countries such as USA, Canada and the United Kingdom, very few such studies have been carried out in Zambia.

Estimates of the prevalence of alcohol use by women have also been documented in African countries, including Botswana (30%) and Namibia (47%). According to the 2008 Ghana Demographic and Health survey, the proportion of women in child bearing age (15-49 years) who drink alcoholic beverages is 18.0% (19). A study conducted by WHO found diverse drinking patterns among 20 African countries. The proportion of female heavy drinkers varied between 4% in Ghana to 41% in Chad.

In about half the countries, the increasing age was associated with increased likelihood of being a current drinker. In low- and middle-income countries which includes most of the African countries: factors associated with alcohol use among women include being single, higher socioeconomic status and higher levels of education. While other factors include a drinking environment which has the minimal regulation of alcohol companies resulting in increased availability and distribution of alcoholic beverages, undue influences on natural alcohol policies and high levels of social tolerance towards female drinking.

Studies have shown that alcohol consumption during pregnancy is higher among African women compared to other parts of the world (Ghana Statistical Service, Ghana Health Service and ICF, 2009). Some studies have also shown that the amount of alcohol that is safe for the

fetus has not been determined. Therefore the damage to the fetus is more likely to occur with higher amounts of alcohol and of a greater risk is that of the pattern of drinking in which high levels of alcoholic drinks (>5) drinks consumed on one occasion which is referred to as binge drinking. Patterns of heavy drinking including episodic binge drinking and regular high consumption have been recorded in African countries and examples include that of 38% and 20% of current female drinkers who drink heavily in Nigeria and Uganda respectively [11-16]. A national study carried out in South Africa, showed that 17% of women aged 15 years or older were current drinkers and among these, the prevalence of harmful or hazardous drinking was 17 %.

According to a study conducted in Tanzania, it looked at describing the trend levels of alcohol consumption, access of the socio demographic factors of alcohol consumption and health related maternal and Fetal outcomes. Therefore, the effect of alcohol consumption on behaviour, health and society are major public health challenges worldwide. Consumption of alcohol during pregnancy increases the risk of a wide range of diseases and affects Fetal development negatively. Fetal Alcohol Syndrome (FAS) is the most serious condition caused by that of large amounts of alcohol during pregnancy. Other consequences of the fetus exposed to alcohol in utero during pregnancy include that of reduced attention span, receptive language and visual motor skills.

Due to the high risks associated with alcohol consumption during pregnancy, pregnant women in many developed countries are recommended to abstain from alcohol during pregnancy. In contrast to that of the developed countries, policies in many developing countries have paid little attention to risks associated with alcohol consumption during pregnancy [10]. The alcohol attributable fraction of the total burden of disease in many developing countries such as Tanzania is considerably lower than in Europe and the United States. Although the burden of alcohol use during pregnancy has significant consequences, the consumption of alcohol among pregnant women is still high in some African countries.

Notably, from 2000 to 2010, there was a decline in reported alcohol consumption during pregnancy from 49.5% to 21.5%. The decline was observed in demographic groups, although the decline was stronger in the younger women. The possible explanation in the decline of alcohol consumption could still be the increase in the knowledge of the effects of alcohol in the general community and the also the decrease in the financial resources. This study has shown that despite the growth in the Tanzanian Growth National Product (GNP), the poverty rate has remained stable since 2001 at about 30% of the population. A changing drinking culture can lead to that of decline of alcohol consumption.

The conclusion obtained from the study is that the combination of culture, knowledge and economic regions offer possible explanations for the decline in the alcohol consumption among the pregnant women in northern Tanzania. A number of studies have been performed to explore women's perception of alcohol consumption during pregnancy. Several studies have explored pregnant women's beliefs regarding maternal alcohol use and have aimed to identify factors which contribute to the high levels of alcohol consumption during pregnancy.

Three studies focused on investigating women's knowledge regarding the risks involved with different levels of alcohol intake and they also evaluated whether educational interventions were needed.

Sixty six percent of pregnant Danish women interviewed at an antenatal clinic considered alcohol intake during pregnancy as acceptable. A similar study in France found that while only 6% of pregnant women would not consider drinking even one drink per day, 60% considered

two drinks per day as reasonable.

A nationwide cross-sectional survey conducted amongst non-pregnant women in New Zealand revealed that only 44% believed that no level of alcohol consumption was safe during pregnancy. There are other studies that have shown that some women even consider taking alcohol during pregnancy as beneficial, claiming that antenatal anxiety has been associated with mental health problems in children. In addition, an inappropriate interpretation of a study conducted in 2008 in the United Kingdom resulted in the public belief that light drinking during pregnancy could enhance the Childs intelligence and behaviour.

Despite the recommended guidelines of abstinence, it's clear that public knowledge regarding the amount of antenatal alcohol intake is lacking. A recent study has shown that due to conflicting advice from various health organizations, government guidelines and media reports, most women find information regarding safe levels of prenatal alcohol consumption as confusing. This has been substantiated by results of a survey showing that only 56% of participating couples were aware that no safe level of alcohol use during pregnancy has been established.

### Conceptual framework

The figure1 below shows how the independent variables relate to the dependable variable. The knowledge which is coming from various sources such as the society, schools, clinics can be good, average or poor and the attitudes which are informed by the knowledge and affected by factors such as age, culture, education, religion and history tend to interact together and hence determine the actions (practices) which one would take in terms of alcohol intake during pregnancy. The practices are determined by the knowledge and attitudes and would give birth to the outcomes which can good if one abstains from alcohol use during pregnancy and bad if the woman takes alcohol during pregnancy which can further result into Fetal alcohol syndrome [18](Figure 1).

### Methodology

#### Study site

This study was conducted at Kitwe Teaching Hospital located along Kuomboka drive and Wusakile clinic in Wusakile.

#### Target population

The study was designed to focus on women of the ages 18 and over who were attending antenatal clinics at Kitwe Teaching Hospital and Wusakile in Kitwe who were willing to participate as well.

#### Study design

The study was cross sectional study which employed the use of questionnaires to the participants as a way of collecting data. Part of the questionnaire was obtained from a study titled "Pregnant women's perceptions and knowledge regarding alcohol use in pregnancy", the rest was self-made.

#### Sample size

The prevalence used in this study was 12% and hence the sample size calculated was 82 but a total of 119 questionnaires were distributed among the two health institutions because the remaining insisted in being part of the study.

The sampling method used was Systematic Random Sampling. The advantage was that each participant had an equal chance of being in the study and there was no sampling biasness.

#### Data collection

Data was collected using questionnaires and personal interviews for those individuals who were unable to complete the questionnaire. Data collection was done in a period of 4 weeks from 08:00 to 12:00 and 14:00 to 16:00. The purpose of this study was explained to the participants and all of them signed a consent form before taking part in the study. Refer to the appendices for more details on the work plan, extraction and budget.

#### Data analysis

The data collected herein was entered and analysed using SPSS version 23 and the analysis done was namely univariant to present descriptive statistics and bivariant to compare relationships (chi-square). Data cleaning was also done before the analysis using SPSS to complete incomplete entries and check for errors, consistency and completeness of collected data.

#### Ethical considerations

Ethical approval of the thesis was obtained from the Tropical Diseases Research Centre (TDRC). In addition, permission was obtained from the Provincial Health Office and the Kitwe Teaching Hospital ethical committee as well as Wusakile clinic. Further, for confidentiality, autonomy purposes, no names were requested and consent was obtained from would be participants respectively.

#### Limitations

Though the study may provide reliable and valid information, limitations arose from participants that may not have responded honestly and those that wanted to participant but did not give consent to all the questions. Another limitation was insufficient funds.

#### Obstetric history

Respondents were asked on the number of pregnancies they had before including the pregnancy they had during the study. Respondents were asked of the months of the current pregnancy. The following responses were recorded as shown in Table1 below.

**Table 1:** Obstetric history of women

Variable	Response	Frequency	Percentage
Number of pregnancies	One	34	28.6
	Two	31	26.1
	Three	23	19.3
	Four	14	11.8
	Five	7	5.9
	Six	5	4.2
	Seven	2	1.7
	Eight	2	1.7
	Nine	1	0.8
	Total	119	100
Months of women' current pregnancy	1-3 months	2	1.7
	4-6 months	9	7.6
	6-9 months	108	90.7
	Total	119	100

#### Knowledge of women on alcohol

In this study, knowledge of the respondents was measured using the

percentage scale from 0% to 100% of the responses. A “Yes” response to the question were considered as knowledgeable and a “No” response was considered unknowledgeable. A percentage response of above 50% was considered to be the general view of how knowledgeable the respondents are. For instance, if on average above 50% of the respondents indicated to have knowledge on alcohol, then women were considered to have good knowledge and a response of below 50% was considered as having poor knowledge [19]. The women were asked if they had knowledge on the problems that they may and whether they heard of Fetal Alcohol Syndrome (Table 2).

**Table 2:** Knowledge on alcohol during pregnancy

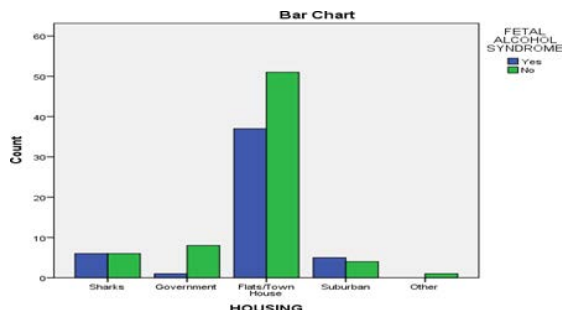
	Response	Frequency	Percentage
Do you think problems can arise in the baby when taking alcohol during pregnancy	Yes	95	79.8
	No	24	20.2
Have you ever heard of fetal alcohol syndrome	Yes	49	41.2
	No	70	58.8
Average knowledge	Knowledgeable	72	60.5
	Unknowledgeable	47	39.5

Education level and knowledge on fetal alcohol syndrome: Below establishes how the women did not know of fetal alcohol syndrome based on their education level. It was established that majority of women (35) who reached secondary school are the ones who had no knowledge on fetal alcohol syndrome. While women who had attained tertiary level of education were knowledgeable in majority [4,3]. Among the woman who were knowledgeable, majority responded that fetal alcohol happens when a women drinks alcohol during pregnancy and the effect of alcohol can be serious to the baby. They further did not agree that the problem associated with fetal alcohol syndrome can be cured and only happens in certain population groups. Women were also asked how much alcohol during pregnancy would cause fetal alcohol syndrome (Table 3).

**Table 3:** Women`s knowledge on fetal alcohol syndrome based on the level of education attained

	Education			Total	
	Primary	Secondary	Tertiary		
FETAL ALCOHOL SYNDROME	Yes	6	26	18	50
	No	5	35	7	47
Total		11	61	25	97

Social economic status and knowledge on alcohol syndrome: Respondents were classified in social economic status. Respondents that lived in flats, town houses and government houses were considered to have good social economic status together with those that had piped water in their homes [5]. The researcher opted to see whether this can affect their knowledge on alcohol. The Figure below shows their knowledge based on social status (Figure 1).



**Figure 1:** Obstetric History and Knowledge on Alcohol

### Discussion

This study aimed at determining the knowledge, attitudes and practices of pregnant women attending antenatal clinics at Kitwe Teaching Hospital and Wusakile. The findings revealed most of the women had good knowledge. These results were similar to a study which was done in Australia where most of the women had good knowledge about the dangers of alcohol intake during pregnancy. This is further supported by further studies which were done in France showing a good level of knowledge as well as in Denmark. This study further went and showed that the majority of the women (58.8%) had never heard of fetal alcohol syndrome. A comparison of these results to one done in Australia showed that fewer Australian than Zambian women had heard about the terms Fetal alcohol syndrome or Fetal alcohol spectrum disorder and its adverse effects on the unborn child [6]. This leaves a gap for further research and implementation of policies which would safeguard the health outcomes of the unborn child. The education level of the women was significantly associated with the knowledge level. This showed that those who had reached tertiary level of education generally had good knowledge and these findings confirm with what was found in a similar study which suggested that women with higher levels of education had more knowledge about the specific effects of alcohol consumption in pregnancy. The current study revealed that more than two thirds of the women had good attitude attendance towards alcohol abuse during pregnancy. These findings are congruent with other studies that realised a good attitude about the intake of alcohol during pregnancy. One such study was conducted in France which revealed 6% of the women considering not drinking and 60% considered two drinks per day as reasonable [7,8].

It is worth noting that the bad attitudes were attributed to the myths which are circulating in society hence affecting their practices. The current study also found that the majority of women had bad practices. Some of these women were actually taking a locally brewed beer called Chibuku shake which was perceived as having benefits on the child such as making the child fat, good looking and healthy as it is very nutritious. Some women even believed that it had a preventive effect for epilepsy [9]. It’s saddening to find such information out there in our society. According to a study by O Connor (2002) it had shown that women consider taking alcohol during pregnancy as beneficial, claiming that antenatal anxiety had been associated with mental health problems in children. In addition to this, a study in the United Kingdom revealed resulted in the public belief that light drinking during pregnancy could enhance the Childs intelligence and behaviour [20].

### Conclusion

Results obtained from this study have shed light on the pregnant women’s level of knowledge, attitudes and practices regarding the consequences of prenatal alcohol exposure for both health institutions at Kit-



we Teaching Hospital and Wusakile clinic. These results have depicted that there is need for educational awareness campaigns to focus on the many adverse effects of prenatal alcohol exposure, specifically the various features of fetal alcohol syndrome and the long term consequences.

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