KNOWLEDGE OF SEXUALLY TRANSMITTED INFECTIONS AND RISKY PRACTICES AMONG FEMALE ALCOHOL BREWERS AND SELLERS IN IBADAN NORTH EAST LOCAL GOVERNMENT AREA

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ABSTRACT

Studies have shown that there is an increasing prevalence of high-risk sexual practices among alcohol users which can lead to Sexually Transmitted Infections (STIs). In Nigeria, knowledge relating to STIs, alcohol use and sexual practices among female alcohol handlers is sparse. The study was therefore aimed at assessing the knowledge of STIs, sexual practices and alcohol use among this category of women in Ibadan North-East Local Government Area (LGA).

The study was a cross-sectional survey of female alcohol brewers and sellers in Ibadan North-East LGA. All the consenting 374 females aged 20 years and above, identified through leaders of the local brewers and bar owners associations were interviewed. A validated semi-structured questionnaire which included a 21-point knowledge scale was used to measure respondents' STI knowledge. Risky practices assessed included possession of multiple sexual partners, inconsistent condom use and alcohol use before sexual intercourse. Data were analyzed using descriptive statistics, Chi-square test and ANOVA at 5% level of significance.

Respondents' mean age was 36.0 ± 9.1years and 81.3% had formal education. Forty-five per cent were married, 16.3% single, 14.2% separated and others were cohabiting (12.0%), divorced (7.8%) and widowed (5.1%). Sellers of industrially brewed alcoholic drinks comprised 44.4% while 55.6% brewed and sold traditional alcoholic beverages. The mean number of hours spent selling alcohol was 10.9 ± 3.4 hours. Mean STI knowledge score was lower in respondents who brewed and sold traditionally brewed alcoholic beverages (8.6 ± 2.5) while the score for those that sold industrial alcoholic beverages was 8.7 ± 2.7 with no significant difference. Respondents who were single had the highest STI knowledge score of 10.3±2.2 while the mean scores among married, widowed, cohabiting, separated and divorced respondents were 8.6 ± 2.5, 8.5 ± 1.9, 8.4 ± 2.7, 7.7 ± 2.7 and 7.7 ± 2.2 respectively. Overall mean STI knowledge score of respondents was 10.4 ± 3.4. Majority of the respondents (81.3%) had ever consumed alcohol out of which 70.4% still consumed regularly. Reasons for alcohol consumption included: for treatment of ailments (31.1%),

pleasure and relaxation (26.5%), social acceptance (25.3%), as an aphrodisiac (4.7%). Risky practices reported included inconsistent condom use (58.7%) and having more than one sexual partner (53.0%). Only 12.3% had ever become intoxicated. Many married respondents (48.9%) and those aged 30-39 years (42.2%) engaged in the aforementioned risky practices. More married respondents engaged in at least a risky practice compared with the separated (15.9%), cohabiting (14.8%), divorced (7.8%), single (7.4%) and widowed (5.2%) respondents.

The alcohol handlers used alcohol and indulge in risky sexual practices. Health education interventions such as public enlightenment and peer education are needed to address these challenges. The Government can also provide small micro-finance schemes as a means of alternative self reliance avenues among young females.

Keywords: Female alcohol handlers, sexually transmitted infections, Risky sexual practices, Alcohol use.

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Victoria O. AWOLADE

DEDICATION

''I will lift up my eyes to the hills, from whence cometh My Help..'' Psalms 121 verse 1. I dedicate this work to the Almighty Jehovah, YAWEH, *My Help* in years past. What can I amount to without You… *My Help*?

This work is also dedicated to my beloved, darling baby sister and only sibling – **Christiana Oluwatosin, Adewunni, Akanke Aro Awolade.** You were one in a trillion, a sister too many. You were the feeler of my pulse, the sharer of my feelings, the only friend close to my heart. You supported me in every aspect of my education even when you did not have any tangible source of income. You saw the beginning of this project but couldn't wait till the end because you had to answer a higher call. I doubt if I can ever find any confidant like you. I miss you so much ''Tos-tos''. Continue to rest in the bosom of our Lord Jesus till we meet to part no more. I will forever love you as long as I live.

CERTIFICATION

I certify that this work was carried out by AWOLADE Victoria Opeyemi in the Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan, Nigeria.

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STI:	Sexually Transmitted infections
HBV:	Hepatitis B Virus
HPV:	Human Papilloma Virus
HSV:	Human Simplex Virus
HIV:	Human Immunodeficiency Virus
AIDS:	Acquired Immune Deficiency Syndrome
MPC:	Mucopurulent Cervicitis
NGU:	Non-Gonococcal Urethritis
PID:	Pelvic Inflammatory Disease
CSW:	Commercial Sex Workers
BAC:	Basal Alcoholic Concentration
CNS:	Central Nervous System
IARC:	International Agency on Research on Cancer
AARC:	American Association of Cancer Research
SAMHSA:	Substance abuse and Mental Health Services Administration
CASA:	Center for Addiction and Substance Abuse
IHRA:	International Harm Reduction association
WHO:	World Health Organization
NIAAA:	National Institute of Alcohol Abuse and Alcoholism

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

Drugs are chemical substances which when taken, produce changes in the body's physical and mental feelings. In other words, drugs can exert some control over the body and nervous system. Pharmacologically, alcohol is a drug that can be classified as a sedative, tranquillizer or anaesthetic depending on the quantity consumed (Park, 2003). Alcohol is a general term denoting the family of organic chemicals with common properties. Members of this family include ethanol, methanol, iso-propanol and others. Ethanol (alcohol) is a clear volatile liquid that oxidizes (burns) easily. It is an organic compound composed of carbon, hydrogen and oxygen (C_2H_5OH). Alcohol is a central nervous system (CNS) depressant and it is this CNS that is most severely affected by alcohol (Dombeck, 2009).

All alcoholic beverages are produced by the fermentation of fruits or other vegetable matter. Most commercial and home production involves fermented beverages that are classified - based on raw materials and production methods used as beer, wine, or spirits, although smaller quantities of other kinds of fermented beverages (cider, rice wine, palm wine, etc.) also are produced. Beer is produced by fermentation of malted barley or other cereals with the addition of hops. Wine is made from fermented grape juice or crushed grapes. Fortified wines include additional distilled spirits. Distilled spirits, so named because of liquid distillation to increase the alcohol content after sugar fermentation, originate from sources of starch or sugar, including cereals, molasses from sugar beets, grapes, potatoes, cherries, plums, and other fruits (International Agency on Research on Cancer-*IARC*, 1988). Although ethanol can be chemically synthesized from ethylene, alcohol synthesis for use in beverages is not employed by the alcoholic beverage industry because of the presence of impurities from the synthetic process. Ethanol and water are the main constituents of most alcoholic beverages. In line with the standard measure of most drinks, the amount of ethanol consumed is similar for beer, wines and spirits (10-14g) (12^{th} Report on Carcinogens, 2011).

Some studies (Al-Kaheel, 2012; Cheng 2010; Aatiya, 2010; Sarah Boseley 2010; James, 2010) have investigated the effects of substances including alcohol, cocaine, heroin, ecstasy and marijuana. These substances were ranked based on their extent of harm on their users and the society at large. They also investigated the relationship between each of the drug's addiction and the extent of harm on the human body. In addition, the studies examined other concerns such as the drug effects on environment, family stability and economy including healthcare and social services. Carson and William (2012) discovered that 48% of prison inmates were drug offenders. Their conclusion was drawn from the data obtained in the United States in 2011. When considering these and other wider social effects, alcohol, heroin and crack cocaine were the deadliest. But overall, alcohol outranked all other substances, followed by heroin and crack cocaine (Cheng, 2010).

The detrimental effects of alcohol use and abuse can be categorized under three (3) broad headings:

1. Social Effects: In homes, alcohol use can lead to divorce, wife battering, violence, family separation and all forms of domestic violence (Cheng, 2010).
2. Medical Effects: Alcoholic beverage is known to be a human carcinogen based on sufficient evidence of carcinogenicity in human studies that indicate a causal relationship between consumption of alcoholic beverages and cancer. These include cancers of the liver (liver cirrhosis) and breasts (Cancer Council Victoria, 2009; Longnecker, 1994). Larynx and pharyngeal cancers have also been found to be related to alcoholic beverage consumption (Longnecker and Enger, 1996; IARC, 1988). Report has also revealed that alcohol may play a causal role in pancreatic cancer (American Association for Cancer Research - *AACR*, 2009; World Health Organization - *WHO*, 1998). The existing lists of cancers linked to alcohol use include cancers of the mouth, oesophagus, bowel, liver and breast (Longnecker and Enger, 1996; NIAAA, 2007). There is now enough evidence to say that *acetaldehyde*, a chemical that is produced when alcohol is broken down in the body, can cause cancer. This strengthens the evidence on how alcohol and cancer are linked (Cancer Council Victoria, 2009; *WHO*, 1988).

3. Emotional and Psychological Effect: This is of interest to this study. It has been found out that alcoholic beverage consumption reduces cognitive and psychomotor performance (Saunders, 1998). That is why people under the influence of alcohol (especially large amounts) tend to do or say things that they would not have done if sober.

However, it has also been documented that moderate intake of alcohol medically helps to curb cardiac abnormalities (e.g. hypertension) and helps in reducing the risk of coronary heart diseases (CHD) by 30-50% compared with abstainers and also physically alleviates anxiety and worry (Saunders, 1998). This will be discussed under the beneficial effects of alcohol. Earlier studies on alcohol use in Nigeria identified young and middle aged male adults as the group that consumed most alcohol (Odejide, 1987). These studies have also shown the increasing involvement of the female gender (Odejide, 2006). The following factors were found to encourage alcohol use and abuse.

1. Peer influence: Researches have shown that influence of close friends and age-mates increases susceptibility to or over indulgence in any behaviour. (Kaplan and Leslie, 1996; Schulenberg, Maggs, Dielman, Leech**,** Kloska, Shope and Laetz, 1999)
2. Stress: This relationship is still unclear but Childs (2011) postulated that stress alters alcohol's effect, e.g. if stress alters the intoxicating effect of alcohol, the individual may drink more and also, the release of cortisol and the increase in heartbeat as a response to stress and result of alcohol consumption vary in individuals (NIAAA, 2010; Pohorecky, 1995).
3. Self efficacy: Taylor (2000) proposed that low general self efficacy (GSE) was associated with higher substance use which subsequently leads to high alcohol use among respondents.
4. Parental moderating effects: A parent as a moderating factor exerts a great influence on alcohol use in a child in form of deprivations and delinquency (Hayes, Smart, Toumbourou and Sanson, 2004). For example, a child that grew up with alcohol dependent parents might likely use / abuse alcohol at a point in his life.
5. Low economic status: Oyefara (2007) proposes that many alcohol sellers and users engage in alcohol use / abuse due to their low economic status.
6. Polygamy: There seems to be a relationship between polygamous family background

and alcoholism. It was discovered that people who are products of polygamous homes are more likely to consume alcohol compared to products of monogamous homes (Fatoye, 2003; Buddy, 2008)

7. Low academic self esteem: Students who believe they are never-do-well and that they can never improve academically have been found to consume alcohol in order to do away with failure-associated depression (Fatoye, 2003; Nash, McQueen and Bray, 2005).
8. Dearth (lack) of religious devotion: A study conducted by Morakinyo and Odejide, (2003) shows that religiously committed people hardly take alcohol. In order words, religious devotion discourages alcohol abuse or addiction.

It was also found out that the majority of attendees at a typical Sexually Transmitted Infections (STIs) clinic in a large city in the South of England consumed alcohol (binge drinking) to a significant extent (Standerwick, Davies, Tucker and Sheron, 2007). Alcohol consumption has a causal relationship use with unprotected sex. This claim is substantiated with the attitude of some commercial sex workers who do not bother to negotiate condom use whenever they consume alcohol before sex (Wang**,** Li**,** Stanton**,** Zhang and Fang**,** 2010).

Women alcohol brewers and sellers are a considerable part of Ibadan Township. Some of them, being exposed to alcohol use or sales at a tender age and sometimes as the only means of livelihood, they tend to engage in risky behaviors as a means of sustainability. Alcohol use before sex according to Stueve and O'Donnell (2005) was associated with sexual contacts where the woman was having sex with her partner for the first time, the woman having sex with a casual partner or the sex was transactional. Also, alcohol use before sex was also reported if the woman was having sex in an unfamiliar location or the partner had been drinking or using drugs before having sex. This project gives an insight into the knowledge of women alcohol sellers about sexually transmitted infections (STIs), their sexual practices and alcohol consumption trends as related to high risk sexual behaviours. For the purpose of this study, high-risk sexual behaviours / practice is defined as any behaviour that increases the probability of negative consequences associated with sexual contact, including STIs and unplanned pregnancy. These behaviours are divided into two major categories.

1. Risky sexual behaviours: this includes having multiple sexual partners, having casual partners and failure to discuss issues such as: 'ever tested for HIV or any other STI, do you have other sexual partners, do you normally use condoms with other men/women, or can we use condoms now?' prior to sexual intercourse.
2. Failure to take protective actions such as use of condoms and birth control.

Measures of risky sexual behaviour include but are not limited to the followings:

a. Multiple concurrent sexual relationships

b. Inconsistent Condom use / unprotected sex

c. Early sexual initiation

d. Sex with high risk partners e.g. injection drug users and commercial sex workers (CSWs)

e. Exchange of sex for money or drugs (Windle, 1997)

1.2 Problem Statement

The use of alcohol and other substances have been associated with at-risk sexual behaviour in early studies (Millstein and Ellen, 1996; Halpern-Felsher, Ferguson and Lynskey, 1996; Leigh, 2004). Also, a well-established relationship between drinking and sexual activity exists in some cultures (Obot, 1999; Cooper, 2002; Lawal 2002). A history of alcohol use has been correlated with a life time tendency toward high risk sexual behaviours including multiple sexual partners, unprotected intercourse, sex with high risk partners (e.g. injection drug users, prostitutes) and the exchange of sex for money or drugs (Cromley, Schensul, Singh, Berg, Coman, 2010; Wang et al**,** 2010, Kongnyuy and Wiysonge, 2007; Windle, 1997). Frequent binge drinking has been found to be significantly associated with same sex-attraction in adolescents (Smith, Lindsay and Rosenthal, 1999). Various reasons exist for these associations:

1. Alcohol can act directly on the brain to reduce inhibitions and diminish risk perception (National Institute of Alcoholism and Alcohol abuse (NIAAA), 2002).
2. Expectation about alcohol's effects may exert a more powerful influence on alcohol - involved sexual behaviour. Studies consistently demonstrate that people who strongly believe that alcohol enhances sexual arousal and performance are more likely to practice

risky sex after drinking (Dermen, Cooper and Agocha, 1998; George, Stone, Dermen and Cooper, 2000; Cooper, 2002).

High rates of risky sexual practices have been reported in a study done by Fuller, Vlahor and Ompad, 2002 and this has been correlated with alcohol consumption. This is why it was suggested by Dingle and Oie, (1997) that HIV prevention programme should target alcohol consumption in addition to injection drug use and sexual risk reduction (Fuller et al, 2002). Alcohol use is related to earlier and increased incidences of sexual acts, greater numbers of sexual partners and greater intentions to engage in sex (Epstein, Temple and Leigh, 1992; Dusenbury, Botvin and Diaz, 1994 and Cooper, 2002). In a study done by Fisher, Cook and Kapiga (2010) among women in Northern Tanzania, alcohol use before sex is associated with five times increased likelihood of condom failures and with high-risk sexual encounters and ones that have consistent situational characteristics regardless of whether condoms are used or not. In another study done in Cameroon by Kongnyuy and Wiysonge (2007), 25.8% of the respondents declared having taken alcohol before their last sexual intercourse and 21% of them indicated that the last sex was with a woman other than their wife or cohabiting partner. And so, alcohol use is associated with having multiple concurrent non-spousal sexual partnerships among married men in Cameroon.

The result of the research done in Uganda among sexually active adults by Mbulaiteye, Ruberantwari, Nakiyingi, Carpenter, Camali and Whitworth (2000) proposed that living in households where alcohol was sold was associated with a history of having ever drunk alcohol. In some African countries (e.g. Botswana), risky sexual practice is the main route by which HIV/AIDS is contracted (SAMHSA, 2004) and it was discovered that HIV prevalence of adults living in households selling alcohol was 15% compared to 8% among those living in household not selling alcohol. Also, individuals who had ever drunk alcohol experienced HIV prevalence twice than those who had never taken. Beer drinking is part of the success of Cambodia beer sales girls / women. This is common because it helps to please customers and increase beer sales. One woman said "*I force myself to drink, because if I don't drink with the customers, they wouldn't buy my beer."* A recent study in Cambodia confirmed that the beer girls consumed more than 5 standard drinks per night (Clark, 2008).

In a Focus-group discussion conducted by Odejide (2006) held in University College Hospital (UCH) Ibadan Nigeria, some college boys and girls actually confessed to enjoying sex better when they take alcohol. Both males and females drink alcohol to intoxication alike but young females prefer alcohol laced with fruit juice e.g. Calypso, Teezers, Gordon Spark, and Smirnoff Ice amongst others. In males however, alcohol use also predisposes to cigarette use. Early onset of sexual intercourse is associated with increased lifetime prevalence of sexual partners, thereby increasing the risk exposure to sexually transmitted diseases, including HIV/AIDS and pregnancy.

Some studies have examined this '*alcohol~risky sex'* link (Dingle and Oei, 1997; Halpern-Felsher, Millstein and Ellen, 1996) and they confirmed that although there is partial support for the transmission hypothesis in literature, it is not universal, i.e. alcohol use does not always lead to risky sexual practice. However, given the consistency with results of studies in Tanzania (Chersich, Rees, Scorgie, and Martin; 2009) and other settings, and the biologic plausibility of the link between alcohol intake and unsafe sex, findings underscore the need for integrating alcohol use and HIV prevention studies in most African countries.

Because alcohol sellers "need to please" their customers, they also have to take alcohol as many times as it's being required thereby leading to alcohol abuse. Another angle to this study is the observation that these women alcohol sellers especially the locally brewed alcohol, are more concentrated in garages and motor parks thereby exposing the drivers to alcohol intoxication. The drivers justify their addiction with reasons ranging from ''keeping them awake during night journeys to "charging them up" during day-journeys. These drivers do not mind the fact that alcohol addiction can lead to Public Health hazards such as road traffic accidents. This group of women (alcohol sellers and/or brewers) is oblivious to the fact that alcohol abuse is risky to both themselves and their customers in that it exposes them to risky sexual practices and other health hazards by making them lose their senses of judgment. This study therefore was designed to bring these oblivious practices to the fore by creating awareness of their existence and need for intervention.

1.3 Justification

Why women are mostly ignored in intervention programmes that involve alcohol use even though they become addicted to alcohol, nicotine and other illegally prescribed drugs and develop substance-related diseases quickly and even at lower levels of use compared to men (Center on Addiction and Substance abuse-CASA, 2003) is yet to be fully understood. The grave repercussions include the likelihood of STIs and unplanned pregnancies, abortions or deaths through lack or inconsistent use of condoms and other contraceptives which can result as a result of loss of judgment caused by alcohol (Ohene and Akoto, 2008).

Knowledge on sexually transmitted infections (STIs) was found to be low among women alcohol users in north rural Vietnam (Lan, Lundborg, Mogren, Phuc and Chuc, 2009) and this low STI knowledge has been shown to be associated with unsafe sex amongst them. In his study among women, Ikuesan (1994) found that the majority of the respondents were of the opinion that alcohol use only prevents the use of condom. In another study by Lawal (2002), some of the discussants interviewed disbelieved in the existence of heterosexual transmission of HIV and some did not believe in its existence and even those that believed, generally did not discuss it with their sex partners and their family members. The serious long-term complications of STIs in women and newborns are well-documented but more particularly, STIs imply considerable social consequences for women. In a study carried out in Cambodia (Clark 2008), STI knowledge was very high among the population. In Nigeria however, there is sparse information on alcohol addiction and sexual practice of women who live in households where alcohol is being sold and who sell alcohol. Assessing their level of knowledge and risky practices is necessary in order to plan for intervention programmes like educating the women on the dangers imminent in accepting drinks from their customers or having sex with their customers when they themselves are drunk or under the influence of alcohol. Drug-involved women are among the fastest growing groups with AIDS and sexual risk reduction intervention for such women is a public health imperative (Tross, Campbell, Cohen, Calsyn, Pavlicova, Miele, Hu, Haynes, Nugent, Gan, Hatch-Maillette, Mandler, McLaughlin, El-Bassel, Crits-Christoph and Nunes, 2008). The results of this study will enable stakeholders and organizations involved in alcohol use (e.g. IHRA and other NGOs)

to understand the baseline knowledge of women alcohol sellers on their STIs and risky behaviours they engage in for future intervention.

In summary, alcohol has independent effects on decision-making concerning sex and on skills for negotiating condoms and their correct use. Thus far, global initiatives to prevent HIV and other STIs have largely ignored the potential mediatory role of alcohol in unsafe sex especially among women. For example, the list of World Health Organization (WHO) HIV prevention priorities does not mention alcohol (WHO, 2007). It is therefore expedient to document the perceived association between alcohol and risky sexual practice among women alcohol sellers in Ibadan North East LGA – a community that contains one of the biggest motor parks in Ibadan and which has a fair share of local and industrial beer joints (through researcher's direct observation). This would enable development of interventions that would further increase their level of STI knowledge thereby empowering such women to protect themselves against the STIs. The result of this study can inform stakeholders of the importance of including alcohol use discouragement as a strategy in controlling the prevalence of HIV/AIDS preventing strategies in Nigeria. These interventions could emphasize the dangers of unprotected sexual intercourse with patrons, effects of alcohol and the dangers faced when having sex with an intoxicated man. This is in line most health awareness programmes in rural communities that emphasize safe sex as a way of preventing pregnancies. Additional advantage of this strategy is aimed at preventing STI transmission not only in this local government or among this group of women (alcohol sellers and brewers) but also in other developing countries.

1.4 Research Questions

The study provided answers to the following questions:

1. What are the socio-demographic characteristics of the women alcohol brewers and sellers?
2. What is the level of alcohol consumption of women alcohol handlers (brewers and sellers)?
3. What factor(s) promote alcohol use / abuse among this group of women?
4. What are the women's opinions about alcohol use and risky sexual practice?

5. What proportions of women that consume alcohol engage in risky sexual practice?
6. What is the women level of knowledge of the common STIs in the community?
7. What is/are the most inhibiting demographic characteristic(s) for alcohol use and risky sexual practice in women?

1.5 Objectives

1.5.1 Broad Objective

The broad objective of this study was to document the knowledge of STIs, sexual practices and alcohol use among women alcohol brewers and sellers in Ibadan North East Local Government Area.

1.5.2 Specific Objectives:

The Specific Objectives were to:

a. Assess the knowledge of STIs among respondents.
b. Assess the respondents' opinions on the relationship between alcohol use and risky sexual practice.
c. Identify the factors that promote or discourage alcohol use among respondents.
d. Determine the relationship between demographic characteristics of respondents, their alcohol use and sexual practices.

1.6 Hypotheses

The following **hypotheses** were tested by the study:

1. There is no relationship between knowledge of sexually transmitted infections (STIs) and socio-demographic characteristics
2. There is no relationship between marital status, age and risky behaviours.
3. There is a relationship between the hours spent on alcohol sales and risky behaviours

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Definition of Alcohol:

Alcoholic beverage or ethanol is essentially a drug. It is a primary and continuous depressant and in this respect, it shows the characteristic action of general anaesthetics. As a result of its depressant activity, it can cause sedation (Rutherford, 1997). Alcohol is sometimes also described as a stimulant, but scientifically speaking, it has no such property. Its action is almost entirely narcotic. When people drink, they do things they might not otherwise do, not because alcohol is a stimulant, but because it is a depressant. Under its influence, those functions of the brain which make humans to safeguard themselves such as judgement and self control are the first to be impaired (Rutherford, 1997). However, in another research, Pugh (1999) found out that ethanol exerts both stimulant-like and sedative-like subjective and behavioral effects in humans depending on the dose, the time after ingestion and the individual taking the drug. An alcoholic beverage is a drink containing ethanol (commonly called alcohol). Industrial alcoholic beverages are divided into three general classes: Beers, Wines, and Spirits.

a. *Beer* is the world's oldest and most widely consumed alcoholic beverage and the third most popular drink overall after water and tea. It is produced by the brewing and fermentation of starches which are mainly derived from cereal grains, (most commonly malted barley) although wheat, maize (corn), and rice are also used. Alcoholic beverages which are distilled after fermentation (fermented from non-cereal sources such as grapes or honey, or fermented from un-malted cereal grain) are not classified as beer.

b. *Wine* is generally of two types popularly known as grape wine and fruit wine. Grape wine is produced from grapes**,** and fruit wine is produced from fruits such as plums, cherries, or apples. Wine involves a longer (complete) fermentation process and a long aging process (months or years) that results in an alcohol content of 9%–16% ABV. Sparkling wine can be made by adding a small amount of sugar before bottling, which causes a secondary

fermentation to occur in the bottle. Unsweetened, distilled, alcoholic beverages that have an alcohol content of at least 20% ABV are called *spirits***.**

c. *Spirits* however are produced by the distillation of a fermented base product. Distilling concentrates the alcohol and eliminates some of the congeners**.** Spirits can be added to wines to create *fortified wines***,** such as Port Wine and Sherry (WHO Regional Office for South-East Asia WHO/SEA 2006).

However, other derivatives of these major groups of alcohol are also available. *Alcopops* are sweetened alcoholic beverages that are often bubbly and fruit-flavoured. They resemble soda or other soft drinks. In fact, a*lcopops* may start out as beer then the manufacturers remove all the beer-like characteristics, such as the colour, taste, and even the alcohol, and then add flavourings and distilled alcohol for the final product (Federal Trade Commission [FTC] 2003). *Alcopops* fuel underage drinking epidemic by serving as a transition or bridge from soft drinks to alcohol, especially for youth. The alcohol flavour in *alcopop*s is masked by sweeteners and young people love drinking it because they are easier to conceal and "go down easy." While these products derive much of their alcohol from distilled spirits, they are often branded with spirit names such as "Smirnoff Ice". Industries call them "flavoured malt beverages", because that makes them sound less like beer (Rosen and Simon, 2007). In Nigeria, Smirnoff Ice is marketed by Guinness Nigeria Plc. Alcopops and Malt alternatives (bottled alcoholic malt beverage) tend to have an alcohol content of approximately 5 percent, as opposed to 4.5 percent or slightly less for most popular beers. According to Scottish researchers, this increased alcohol content in sweet, colorful drinks targeted at young drinkers is attributable to a change in alcohol marketers' view of their market (Jernigan and O'Hara, 2004). Wine coolers, alcopops and malt alternatives share certain product attributes, resembling soft drinks in their fruity, sweet flavouring and their colourful single-serving sized packaging.

Traditional alcoholic beverages have been in existence and consumed in Nigeria before the advent of foreign alcoholic beverage. *Burukutu* is a popular alcoholic beverage in Northern Nigeria with an alcoholic content ranging from 3-6%. Palm wine is an alcoholic beverage tapped from palm trees in Southern Nigeria. It is the whitish sap collected from palm trees in

vessels attached to the base from where few palm fronds have been removed. Fresh wine from this source is sweet and contains little alcohol of between 3-6%. *Tash*i and *Ityo* are the main alcoholic beverage produced by the Tiv people of Central Nigeria. Both alcoholic beverages contain nutrients and are rich in vitamins C and B. *Pito* is the traditional drink of the Benin in the Mid-western Nigeria. It is popularly consumed throughout Nigeria owing to its low price. It contains lactic acid, sugars, and amino acids and has an alcohol content of 3%. *Ogogoro* (also known as *Kanakana, kanawi* and *Akpeteshi in traditional language*s) is a gin like drink, distilled from oil or raffia palm wine. In Nigeria, distillation takes place in small sheds dotted along the coastal areas and in villages across the south, usually controlled by women. The end product is a clear liquid with alcohol content often higher than 40% (WHO, 2004).

The consequences of alcohol use which include intentional and unintentional injuries, are far more common among younger people (Jernigan, 2001). Alcohol impairs the sense of judgement and damages vital organs of the underage. Its consequential effects on health of users as well as the risks or danger to themselves or society are very high (Rutherford, 1997). A wide range of physical, psychiatric/psychological and social consequences are associated with alcohol abuse (See table 2.2). Physical effects include liver cirrhosis, cancer of the oesophagus and worsening of stomach ulcer. Psychological and psychiatric effects include dependence, dementia, delirium tremens while social effects include death, accident, divorce, crime and suicide (Rutherford, 1997).

A study done by Carpenter (2004) who based his results on Zero Tolerance Level (a law enacted to control alcohol use in youth below the age of 21) revealed that Gonorrhoea rate was found to be lower in males and females of under 21 who were affected by the Tolerance law and also females between ages 20 and 24. Cheson, Harrison and Kessler (2001) also used United States of America panel data on STD rates over a 16-year period, and estimated that increase in the beer taxes were associated with statistically significant reductions in the States' gonorrhoea rate for 15-19 year old males. Sen (2002) also concluded based on policies involving beer taxes in a particular State, that alcohol use causes young females to have sexual intercourse. Alcohol consumption often has been cited as increasing the risk of

HIV transmission amongst other repercussions (Morrison, Gillmoore, Hoppe, Gay Lord, Leigh and Rainey, 2003) and several studies have also shown positive relationships between drinking and risky sexual behaviour especially among adolescents (Babikian, Freier, Hopkins, Diclemente, McBride and Riggs, 2004; Trocki and Leigh, 1991). Based on the experiment carried out on sexual offenders, majority of the men who committed rape (70%) and a third of the men convicted of child molesting were under the influence of alcohol (Brecklin and Vilman, 2002; Aromaki and Hindmann, 2001; Abracen, Looman and Anderson, 2000). Valois, Oeltmann, Waller and Hussey (1999) and Moris, Baker, Valentine and Pennisi (1998) also proposed that alcohol abuse would lead to increased number of sexual partners which predisposes one to a cluster of other risk behaviours such as unprotected sex, further leading to higher rates of STIs and pregnancies. Weiser et al (2006) found in a population-based survey in Botswana that men who abused alcohol were three to four times more likely to have multiple (concurrent) sex partners, engage in unprotected sex and to engage in transactional sex than non-drinkers (Weiser, Leiter, Heisler, McFarland, Percy-de Korte, DeMonner, Tlou, Phaladze, Lacopino, Bangsberg, 2006). Table 2.1 shows a summary of alcohol related problems and how they affect the society.

Table 2.1: A summary of the Alcohol-related Problems Facing Society and Policy Makers

Type of Problems	Acute		Chronic
Physical	• Accidental Injury	→	Brain Damage
	• Injuries from fights	→	Peripheral neuritis
	• Acute medical complications	→	High blood pressure
			Heart diseases
			Stroke
			Liver diseases
			Chronic pancreatitis
			• Cancer of : - Oropharynx - Larynx - Oesophagus - Stomach - Liver - Rectum - Breast
			Skin diseases
			Endocrine disorders
			Blood disorders
			Disorder of immune system
Physiological	Impaired reaction time	→	Short time memory impairment
	Impaired emotional control	→	Dementia
	Suicide	→	Alcoholic hallucinosis
			Withdrawal fits
			Delirium tremens
Social	Work problems	→	Family break down
	Crimes of violence	→	Debt
	Family violence	→	Housing problems
			Destitutions

Source: Rutherford, 1997

2.2 The Interrelationship between Alcohol and the Brain

Ethanol, the main component of alcohol, acts as a drug affecting the Central Nervous system (CNS). Its behavioural effects are as a result of its influence on the CNS and not on the muscles or on the senses themselves. Alcohol as already discussed is a depressant and depending on the dose, can be a mild tranquilliser or a general anaesthetic. It suppresses certain brain functions. At very low doses, it can appear to be a stimulant by suppressing certain inhibitory brain functions. However, as concentration increases, further suppression of nervous tissue produces the classic symptom of intoxication: slurred speech, unsteady gait, disturbed sensory perceptions and inability to react quickly. At high concentrations, ethanol produces general anaesthesia; a highly intoxicated person will be in a coma-like state and very difficult to wake. In extreme cases, if the alcohol concentration is high enough, it will inhibit basic involuntary functions such as breathing and can cause death (Baselt and Danhof, 1993). In order to examine this proposed relationship between alcohol and risk taking, there is need to look into how alcohol affects the brain which is the seat of cognitive reasoning and the Central Nervous system (CNS). This is clearly illustrated in Table 2.3.

Absorption: Alcohol is absorbed from all parts of the gastrointestinal tract largely by simple diffusion into the blood. However, the small intestine is by far the most efficient region of the gastrointestinal tract because of its large surface area. In a fasting individual, it is generally agreed that 20% to 25% dose of alcohol is absorbed from the stomach and 75% to 80% is absorbed from the small intestine. Because of this, peak alcohol concentrations are achieved in fasting people within 0.5 –2.0 hrs (average 0.75-1.35 hours - depending upon dose and time of last meal) while non-fasting people exhibit peak alcohol concentrations within 1.0 hour and in extreme cases up to as much as 6.0 hours (average 1.06-2.12 hours) (Baselt and Danhof, 1993).

Distribution: Alcohol has a high affinity for water and is therefore found in body tissues and fluids in as much as they contain water. Absorbed alcohol is rapidly carried throughout the body in the blood and once absorption of alcohol is complete, equilibrium occurs such that blood at all points in the system contains approximately the same concentration of alcohol (Baselt and Danhof, 1993).

Elimination: The liver is responsible for the elimination (through metabolism) of 95% of ingested alcohol from the body. The remainder of the alcohol is eliminated through excretion of alcohol in breath, urine, sweat, faeces, milk and saliva. The body uses several different metabolic pathways in its oxidation of alcohol to acetaldehyde, acetic acid and finally to carbon dioxide and water. Healthy people metabolize alcohol at fairly consistent rate. The body's ability to metabolize alcohol diminishes with age (Baselt and Danhof, 1993).

Table 2.2 Effects of Basal Alcoholic Concentrations on the Central Nervous System (CNS)

BAC (g/100 ml of blood or g/2101 of breath)	***Stage***	***Clinical symptoms***
0.01-0.05	Sub-clinical	Behaviour nearly normal by ordinary observation.
0.03-.012	Euphoria	Mild euphoria, sociability, talkativeness, increased self-confidence, decreased inhibitions, diminution of attention, judgment and control, beginning of sensory-motor impairment, loss of efficiency in finer performance tests.
0.09-0.25	Excitement	Emotional instability; loss of critical judgment, impairment of perception, memory and comprehension, reduced visual acuity; peripheral vision and glare recovery. Sensory-motor inco-ordination; Impaired balance - Drowsiness.
0.18-0.30	Confusion	Disorientation mental confusion, dizziness, exaggerated emotional states, disturbances of vision and of perception of colour, form, motion and dimension increased pain threshold. Increased muscular inco-ordination, staggering gait; slurred speech Apathy, lethargy.
0.25-0.40	Stupor	General inertia; approaching loss of motor functions, markedly decreased response to stimuli. Marked muscular inco-ordination inability to stand or walk, vomiting, incontinence impaired consciousness, sleep or stupor.
0.35-0.50	Coma	Complete unconsciousness. Depressed or abolished reflexes. Subnormal body temperature Incontinence. Impairment of circulation and respiration. Possible Death.
0.45+	Death	Death from respiratory arrest

Source: Reproductive Health 2007

2.3. Sexually Transmitted Infections (STIs)

Sexually Transmitted Infections **(**STIs) are infections that can be transferred from one person who is infected to another through sexual contact (Epigee Health, 2009; Epigee Health, 2010). They are caused by bacteria, viruses and other organisms (Schulte 2010). It is important to recognize that sexual contact includes more than just intercourse; it includes kissing, oral-genital contact, and the use of sexual "toys" such as vibrators. There really is no such thing as "safe" sex. The only truly safe sex is abstinence (Epigee Health, 2010). Many STIs are (more easily) transmitted through the mucous membranes of the penis**,** vulva**,** rectum**,** urinary tract (Human Physiology, 2010) and less often the mouth**,** throat**,** respiratory tract and eyes (depending on the type of infection). The visible membrane covering the head of the penis is also a mucous membrane, though it produces no mucus (similar to the lips of the mouth). Mucous membranes differ from the skin in that they allow certain pathogens into the body. Pathogens are also able to pass through breaks or abrasions of the skin, even minute ones. The shaft of the penis is particularly susceptible due to the friction caused during penetrative sex. The primary sources of infection in ascending order are venereal fluids, saliva, mucosal or skin (particularly the penis) and infections may also be transmitted from faeces, urine and sweat. STIs caused by bacteria can be cured while those caused by viruses cannot, but can be treated symptomatically. There are more than 20 types of STIs and they mostly affect both men and women, but in many cases the health problems they cause can be more severe for women (Medline Plus, 2010).

Sex in the context of a monogamous relationship where neither party is infected with a STI is also considered "safe". Most people think that kissing is a safe activity. Unfortunately, syphilis, herpes, and other diseases can be contracted through this apparently harmless act. All other forms of sexual contact also carry some degrees of risk. Condoms are commonly thought to protect against STIs and especially found to be useful in preventing certain diseases, such as HIV and gonorrhea. However, they are less effective protecting against herpes, trichomoniasis, and Chlamydia and they provide little protection against HPV - the cause of genital warts (Epigee Health, 2010).

According to the Centers for Disease Control and Prevention (CDC), there are over 15 million cases of STIs reported annually in the United States. There are more than 25 infections that are transmitted through sexual activity. Other than HIV, the most common STI in the United States are Chlamydia**,** Gonorrhea**,** Syphilis**,** Genital herpes**,** Human Papilloma Virus**,** Hepatitis B**,** Trichomoniasis**,** and Bacterial vaginosis and in Nigeria, Chlamydia, Herpes and Chancroid are more common. Gonorrhea is less common than any of aforementioned (Bakare, 2005). Approximately 19 million new infections occur each year; almost half of them among people ages 15 to 24 (Epigee Health, 2009). *Table 2.3* shows a few of these sexually transmitted infections reported in Nigeria, their symptoms, modes of transmission and their treatment methods.

Table 2.3 Examples of Sexually Transmitted Infections

S/ No	Names of STIs	Causes	Mode of transmission	Symptoms	Long-term effects	Prevention/Treatment
1.	**Chlamydia** (Schulte 2010; Weale, 2000;	Bacterium	Unprotected vaginal or oral sex.	Male: Abnormal genital discharge, burning during urination, Pain during intercourse Female: Pelvic Inflammatory Disease (PID).	*Male*: Epididymitis, Sterility *Female*: Pelvic Inflammatory Disease, Ectopic pregnancy, infertility, Chronic pelvic pain, e.t.c Infants: Premature birth, infant pneumonia, neonatal eye infection	Curable with Antibiotics
2.	**Gonorrhea** (Schulte 2010; Weale, 2000;	Bacterium Neisseria gonorrhea	As Above	Discharge from penis / vagina.	As above Blindness, meningitis, Infants: septic arthritis	Curable with Antibiotics.
3.	**Hepatitis B** (HBV) (Schulte 2010; Weale, 2000;	Virus	Contaminated needles and sharps, illicit IV drug use, transfusing unscreened blood infected mother to foetus.	Fever, headache, muscle aches, fatigue, loss of appetite, dark urine, abdominal pain, yellowing of the skin and sclera (eyes), e.t.c	Liver disease / cancer Immunological disorders.	No cure. HBV Vaccine for prevention.

4.	**Genital Herpes** (HSV- 1&2) (Schulte 2010; Weale, 2000;	Virus	Skin to skin contact, oral sex, genital infections.	Itching or burning sensations, vaginal discharge blisters / painful open sores on the genitals, buttocks and thighs	Create an entry point for HIV. Female: Premature delivery, Infants: Death or serious brain damage.	No cure. An antiviral drug can reduce the outbreak of the sores but cannot cure the virus.
5	**HIV/AIDS** (Schulte 2010; Weale, 2000;	Virus	Vaginal, Oral and Anal sex, Contaminated needles and sharps transfusing infected blood, mother to foetus.	Flu-like symptoms, fever, loss of appetite, enlarged lymph nodes.	AIDS related death.	No cure. Antiviral drugs to keep the virus in check, if given during pregnancy can prevent mother-to-child transmission.
6.	**Human Papilloma Virus** (Epigee 2010; Cates, 2005, Schulte, 2010)	Virus	Vaginal, Oral and Anal sex, Contaminated needles and sharps transfusing infected blood, mother to foetus.	Development of painless cauliflower-like warts around the genitals, anus / throat.	Cervical Cancer. Other cancers include cancers of the vagina, vulva, anal and penis. Infants: Warts inside the throat can obstruct breathing.	No cure

7.	**Syphilis** (Schulte 2010; Weale, 2000;	Bacteria	Vaginal, Oral and Anal sex, contact with chancres, rashes with a broken skin of an uninfected individual.	Rash, fever, sore throat, hair loss and swollen glands throughout the body.	Create an entry point for HIV. If untreated can lead to damage to the heart, brain, eyes, nervous system, bones, joints and even death. Infants: As above. Still birth.	Curable with Penicillin. Avoid chancres from infected individuals.
8.	**Trichomoniasis**	Protozoa (Trichomoniasis vaginalis)	Sexual contact. Can be transmitted by infected objects such as washcloths and towels.	Excessive foamy yellow-green vaginal discharge, difficulty / pain during urination or intercourse, vaginal pain or itching.	Create an entry point for HIV. Premature rupture of membranes in pregnancy, preterm delivery.	Curable with antibacterial medication.
9.	**Chancroid**	Bacteria (Haemophilus ducreyi)	Sexual contact. Uncircumcised men are most at risk.	Large painful blister which may or may not rupture.	Create an entry point for HIV.	

Other STIs that affect the reproductive tract include:

a. *Bacterial vaginosis* which causes pain during urination and if untreated can result in kidney failure.
b. *Candidiasis* - or yeast infection, which is not a true STI but can be contracted sexually, causing burning, itching and discomfort (Cates, 2005). It is treatable with over-the-counter medication, although it is commonly recurrent.
c. *Granuloma Inguinale* which causes painless ulcers which enlarge and easily bleed.
d. *Lymphogranuloma Venereum* is rare in the United States and is known to normally cause lesions, aching and abscesses in the groin.
e. *Molluscum Contagiosum* – which is the virus causes smooth, shiny lesions, which must be individually removed by a doctor.
f. *Mucopurulent Cervicitis (MPC*) - Causes discharge from the cervix, can result in Pelvic Inflammatory Disease (PID) or miscarriage in pregnant women.
g. *Non-gonococcal Urethritis (NGU)* – which afflicts men and causes urinary problems, can be caused by chlamydia (Epigee, 2010)
h. *Pelvic Inflammatory Disease (PID)* – which can be caused by a number of bacteria and can be transmitted sexually or through other means. It can result in pain, infertility, and even death. (Epigee, 2010).

2.4 Alcohol and Risky Sexual Behaviours among Women

2.4.1 Alcohol Uses

The consumption of alcoholic beverages in Nigeria (particularly palm wine) predates the introduction of beer and other forms of brewed /distilled alcoholic beverages in this country. According to Akingbade (1994), alcohol use in Nigeria has been a phenomenon that cuts across all cultural boundaries irrespective of religious inclination. Alcoholic beverages are the most widely abused psychoactive substances in Nigeria, and the Nigerian government has recognized the need to establish policies to control both alcohol production and consumption (Bennett, Campillo, Chandrasekhar and Gureje; 2003). In 1920, measures were established to control the importation, sale, and local fermentation and distillation of alcohol, including the requirement for a special permit (Abdullahi, Shuaibu and Hassan, 1998; Olowofoyeku, 2000). Because drinking is an integral part of daily and ceremonial lives of most Nigerians, government efforts to establish prevention and treatment programmes have had little effect (Bennett et al 2003). Compared with many other countries, the Nigerian government is not very strict in implementing policies regulating alcohol production, distribution, and consumption. For example, although existing laws regulate when and where alcohol can be sold, they are not strictly enforced (Bennett, Campillo, Chandrasekhar et al, 2003).

Women's roles are circumscribed. Women are least expected to engage in certain socially unacceptable behaviours (alcohol abuse included) that could at best only be pardoned if males were to behave in this way. Women who abuse alcohol in Nigeria therefore suffer enormous psychological and social damage, besides the physical complications experienced by alcohol abusers. They are considered as social misfits, and would in many cases end up in prostitution (Ikuesan, 1994). However, in most rural areas, women are strongly involved in the production of alcoholic beverages, which may promote their drinking. Also, it is generally considered acceptable for women to drink (except among Muslim Nigerians). Drinking problems among women however, cause great disruption to their families and result in stigmatization by the community (Bennett et al, 2003). Indigenous Nigerian societies discourage alcohol consumption among women, yet international trends show alcohol consumption increasing in population of developing countries especially among women.

Alcohol serves four major functions in the Nigeria society. It is an item of commerce (Johnson, 1921; Bascom 1969), an element of indigenous worship and sacrifice (Idowu, 1962), a component of local herbal medicines and an integral part of social life. In present day Nigeria, alcohol is available through many commercial outlets such as shops, pubs and restaurants, putting it within easy reach of women and youth. Alcohol is also freely available at parties and festivals. Women are intimately involved in each of these functions (Mamman, Brieger and Oshiname; 2002). In the commercial life, women are the only producers of guinea corn beer and they also sell their products in small shops near their homes or brewing sites. It has also been observed that sale of alcohol generally is mostly done by women.

Mamman, Brieger and Oshiname (2002) in their research on alcohol consumption pattern among women in a rural Yoruba community in Nigeria found out that as educational level of women increases, so did the proportion of women alcohol consumption increases. Most of the discussants (CSW, women alcohol sellers) admitted using alcohol as a means to fit in and flow with the beer parlor setting. However, majority of the CSW and sales girls said they tried not to get drunk at work so as not to lose money at work. Some even claimed not to drink at all. Some of the prostitutes used alcohol to be bold, to be able to cope with cold weather as well as to be able to hang out in the streets in the evenings and for treatment purposes. Some young ladies said they took alcohol to enhance their sexual performance with their boyfriends (Lawal, 2002).

2.4.2 Risky Sexual Practices

Safe sexual decision-making is a priority of such importance that it is included as a 2010 national health indicator in healthy people (United States Department of Health & Human Services, 2000). The results of risky sexual choices include sexually transmitted infections (STIs), unwanted pregnancies, or both, frequently causing long-term consequences. Despite the efforts of many providers, the U.S. pregnancy and STI rates in adolescents are at astounding levels (Weiss, Jampol, Lievano, Smith, Wurster, Joan, 2008). The use of condom protects one from contracting STIs after ejaculation if semen is contained in the condom and does not leak in to the vagina or anus. Even if the semen contains bacteria or virus, it cannot be transmitted since the other partner does not have contact with it. Obot (1999) observed

that the most significant contribution of alcohol use to AIDS is the increased likelihood of engaging in high-risk sexual behaviours, including unsafe sex when intoxicated. He also noted that the psychological propensity to take risks observed among excessive drinkers is related to the spread of the disease. Lawal (2002) has been able to show that alcohol users in Nigeria indulge in high risk sexual behaviours that could predispose them to HIV and other STIs. He also ascertained that one of the risky activities alcohol drinkers engage in is unprotected sex. According to him, focus group discussants in a research on "rapid situation assessment of alcohol in relation to sexual behaviour" in Lagos (Nigeria) were of the opinion that alcohol increased sexual arousal, enhanced sexual desire and performance as it gave users extra strength for sexual performance. Majority of the participants did not see anything wrong with oral sex and they are of the opinion that condom is not needed for oral sex. Most alcohol users in the high density area did not use condoms at all with their primary sex partners. Issues such as the social and cultural acceptability of alcohol in many Nigerian communities and the traffic delays encountered by workers returning home from work every day appeared to encourage the use of alcohol and consequently the associated HIV risk behaviours.

Previously in Cambodia, beer girls were rarely regarded as employees. Instead they were accounted for in the books as advertising and marketing costs, a scam that denied them Workers' Rights. In 2006, six brewers formed the Beer Selling Industry Cambodia (BSIC) and issued a code of conduct which aligned beer promoters' employment status with Cambodian labour law. The code sought to protect workers from sexual harassment and to put an end to forced work place alcohol consumption and ensure information and education is provided about safe sex. However, this code is silent on fair wages (Clark, 2008). During this time, more than 4000 girls were working in Cambodia as beer promoters in popular entertainment venues. They were usually young and attractive women outfitted in skimpy beer branded clothing competing with others to meet their sales quota. Some were surviving on subsistence wages. Many were exposed to extremely unsafe environments; over half supplemented their income wages with sex work and around 20% had HIV/AIDS. Their drinking had direct and harmful effect on their health. Unsurprisingly, the mortality rate for these women was high and climbing (Clark, 2008).

In a study conducted in four low-income urban slums in Mumbai – India (Singh, Singh and Singh, 2004), there were plenty of country liquor outlets (commonly known as '*daru ka adda')* in those areas and mostly women of the community sold liquor in these outlets. Presence of bar girls and eunuchs in the communities also heightened the risk of indulgence in unsafe and unprotected sex. Alcohol was used as sex stimulant and many of the respondents used it before having sex with a commercial sex worker leaving less scope for safe sex (Singh, Singh and Singh, 2004)

Risky sexual practices are enumerated as follows:

a. Early Sexual Initiation

Alcohol has been found to be a strong precursor of early sexual debut and likewise early sexual debut has been found to be a precursor for alcohol use (Langer, Lilly, War height et al, 2001). Having first sexual intercourse before 16 years of age was a predictor of extramarital sex compared to having the first sexual intercourse after 16. Determinants of multiple sexual partners and condom use among adult were assessed through a population based study in Tanzania and it was found out that early sexual debut was associated with having multiple sexual partners in both males and females. Also, demographic factors and early age at first intercourse are associated with young people's odds of having had multiple partners. Analyses from these studies reveal that alcohol and drug use are significant determinants of their lifetime number of partners. Alcohol-related behaviour is one of the most important risk factors for multiple sexual partners in the recent past.

Early initiation of intercourse has also been related to sexual abuse, which may influence personality variables such as self-esteem and perceived value of health that, in turn, could influence decisions about sexual partners (Wingwood and DiClemente, 1997). Age at first alcohol use is a predictor of risky sexual practice (Larger, 1998; Miller, Mc Coy and Olsen, 1986). Additionally, given the risk of pregnancy, early sexual initiators are less likely to complete their schooling thereby limiting their social and vocational futures. Staton, Leukefield and Logan (1999) also proposed a relationship between the early occurrence of substance use (especially alcohol) and risky sexual behaviour. Early sexual debut also

increases the risk of HPV infection, due to cervical immaturity; which increases the risk of cervical cancer (Ludicke, Stalberg, Vassilakos, Major, Campana; 2001). In another study done in Indonesia, well over half of the respondents (1,375) reported that alcohol contributed to their early and unprotected sex (Merati, Ekstrand, Hudes, Suarmiartha and Mandel, 1997).

b. Inconsistent Condom Use

Alcohol clearly decreases condom use (Cromley, Schensul, Singh, Berg and Coman; 2010) but certain situations for example if a new partner is involved, may override this effect. Encouraging men to treat casual partners as new partners may improve safe sex behaviours. In a sense, redefining who qualifies as a new partner may improve condom use. In a multiple-event assessment study (Weinhardt and Carrey, 2000), condom use declines with alcohol consumption particularly for individuals who see alcohol as a sexual disinhibitor. Alcohol also decreases condom use with a casual partner. This combination of casual partner and alcohol seems particularly detrimental to safe sex because a few previous sexual experiences with a partner might seem to create a false sense of security against STIs that can lead to more alcohol consumption than with a regular partner and less condom use than with a new partner (Weinhardt and Carey, 2000).

We can say this presents a partial support for the *transmission hypothesis*. Seventy per cent of respondents reported inconsistent use of condoms while under the influence of alcohol, almost twice the rate reported by Desiderato and Crawford (2004). This high rate of inconsistent condom use may have been attributable in part, to the fact that almost half of respondents reported they had only one sexual partner, perhaps making them feel less vulnerable to the risks associated with unprotected sex. Following the Theory of Reasoned Action (Ajzen, 1971) and the Theory of Planned Behaviour (Ajzen, 1991), sex researchers have predicted condom intention as a way of determining sexual risk (Corby, Schneiter-Jamner and Wolitski, 1996, Morrison Gillmore and Baker 1995; Sneed and Morisky, 1998). These theories propose that behaviour is a direct result of behavioural intentions. Consistent with these theories, condom intention had been found to be a good predictor of prospective safer sex. Condom failure was 5 times more likely if someone (woman, man, or both partners) had been drinking in advance of the encounter and was especially likely to occur if only the woman had been drinking before sex.

Results of the 26 analyses extracted from the individual studies of alcohol use and condom use show that people who used alcohol in conjunction with sex were slightly less likely to use condoms (Leigh, 2001). Though some other studies reported that drinking alcohol is not necessarily linked to unprotected intercourse or decreased condom use (Leigh, Aimes and Stacy, 2008; Senf and Price, 1994) and that this relationship between alcohol use and unprotected sex depends on context and sexual experience of the partners; still, alcohol is still implicated in the issue of unprotected sexual encounter (MacDonald, Zanna and Fong 1996; Journal on STDs, 2002). Fromme, Damico and Katz (1999) in two alcohol administration studies found that alcohol led to decrease in perceptions of the negative consequences of risk behaviour with no impact on recall of positive consequences. They also found out that, participants who held stronger beliefs that alcohol would disinhibit their sexual behaviour reported greater perceived benefits of and greater likelihood of engaging in unsafe sexual behaviours. Also Gordon, Carey and Carey (1997) used a placebo design in an alcohol administration study and found that alcohol and sex-related alcohol expectancies had a negative impact on motivation for condom use and performance of condom negotiation skills. Unfortunately, use of condom, which is known to offer some form of protection against STIs is problematic for many women and girls because of cultural taboos and societal expectations of more compliant female roles (Ajuwon and Shokunbi, 1997; Decker, Miller, Raj, Saggurti, Donta, Silverman, 2010).

c. Alcohol and Extramarital Sex

The concept of extramarital sex is a major heterosexual HIV risk indicator for both men and women. Various terms were used to describe this concept: Non-monogamy, non-monogamous sexual behaviour, relative monogamy, non-exclusive relationships, extramarital sex (coitus), multiple sexual partners, non mutually monogamous unions concurrency / non exclusivity and individual (partnership) concurrency (Robinson, Scheltema and Cherry, 2005). Mathematical models demonstrated that concurrent partnerships could amplify nascent HIV epidemics by as much as ten folds (Morris and Kretzschmar; 1995, 1997; Watts and May, 1992) especially in high prevalence communities (Finer, Darroch and Singh, 1999). Alcohol use and sex under the influence of alcohol were significantly associated with

multiple sexual partners (Muyinka, Klepp, Kvale and Ole-Kingori 1997). Alcohol use is associated with having extramarital sex, which is a sign of multiple concurrent sexual partnerships, among married men in Cameroon. In a research done in Cameroon, it was observed that drinking alcohol significantly increased the odds of extramarital sex. A quarter of the men (25.8%) declared having taken alcohol before their last sexual intercourse and 21% indicated that the last sex was with a woman other than their wife or cohabiting partner. After controlling for possible confounding by other socio-demographic characteristics, alcohol use was significantly associated with having extramarital sex (Kongnyuy and Wiysonge, 2007). This is higher than what has been reported in other African countries. For example in Nigeria, Mitsunaga et al.(2003) reported that 11% of men have extramarital sex within a year (Mitsunaga et al, 2003) due to the effects of alcohol use.

d. Sexual Activities with Commercial Sex Workers (CSWs)

Gibney and Squaib (2003) reported an association between alcohol use and having sex with commercial sex workers among truck drivers in Bangladesh and Tveit, Nyfors and Nelsen (1996) reported less frequent use of condom among Norwegian men who combined alcohol intake and casual sex. More recently, Weiser et al (2006) found in a population-based survey in Botswana that men who abused alcohol were three to four times more likely to have multiple (concurrent) sex partners and unprotected sex and to engage transactional sex than non-drinkers. Use of alcohol and sex without the use of condoms was not uncommon among Commercial Sex Workers (CSWs), especially with adequate financial incentives. And this is why they are seen as reservoirs of STIs and HIV/AIDS in the community. Inadequate financial income may have contributed to the decision of some to indulge in the practice. The CSWs also adopted self medication and traditional methods to prevent infection with HIV and other STIs and this gave them false sense of security and encouraged them to be more careless with HIV risk behaviours. Lawal (2002) in his study proposed that CSWs and the palm wine users engaged in sex without the use of condoms were proportionally more than the other subjects.

e. Alcohol and other Risky Activities

Studies (NIAAA, 2002) have found that drug injection is usually associated with prior use of

alcohol in conjunction with non-injection drugs especially among adolescents and that high rates of risky sexual practices have been reported among this population, which may be correlated with alcohol consumption. Rates of injection drug use are high among alcoholics in treatment and increasing levels of alcohol ingestion are associated with greater injection drug relation risk behaviours including needle sharing (Stein, Hanna and Natarajan, 2000). According to Odejide (2007) alcohol is also a strong precursor of cigarette use.

2.5 Effects of Alcohol on Women

Drinking behaviour differs with the age, life role and marital status of women**.** In general, a woman's drinking habit resembles that of her husband, siblings or close friend (Kaplan and Leslie, 1996; Schulenberg, Maggs, Dielman et al; 1999). Women who have multiple roles (e.g. married women who work outside the home) may have lower rates of alcohol problems than women who do not have multiple roles (NIAAA, 2002). Heath et al (2004) also reported that among women, marital status appears to modify the effects of the genes that influence drinking habits that is marriage or marriage like relationship lessens the effect of an inherited liability for drinking. Women's drinking habit is most common between ages 26-34 and among women who are divorced or separated and among racial groups, black women are more likely to drink heavily (NIAAA, 1998).

In a study done by Wingwood and DiClemente (1997) to investigate the association of alcohol use and African – American women, majority of the women (51.7%) had either used drugs or alcohol during the previous month and 31.3% had consumed alcohol. Results show that women were likely not to use condom if they used alcohol daily and if their partner insists condom not to be used. Analysis also predicted multiple sexual partners in moderate alcohol use among women. In an analysis of the hospital data of 12,480 women aged 70-81 (note the age group), women who consumed alcohol moderately were about 20% less likely than abstainers to experience poor memory and decreased thinking abilities (Stampfer, 2005; Heslam, 2005). This was one of the reasons for alcohol consumption. It did not matter whether the women drank beer, wine or liquors (distilled spirits), the positive effects of the alcoholic beverages were the same. Of note is the fact that the same amount of alcohol affects a woman more than a man. One of the reasons for this is that women have less water in their bodies than men, so alcohol is less watered down in women's bodies. Alcohol also

does more physical damage to women more quickly than men. In pregnant women, alcohol passes through the blood stream in to the foetus thereby affecting how it develops. This can result in under-weight babies at birth, premature delivery, miscarriages and the more serious foetal alcohol spectrum disorder (FASD). The FASD can involve brain damage, slow growth, blurred vision, hearing problem and other birth defects in babies' damage. It has also been known that a little bit of alcohol in breast feeding mothers passes in to the breast milk for the babies. Alcohol has also been known to interact with a lot of other drugs (Centre for Addiction and Mental Health - CAMH, 2007). All these effects are discussed in details in subsequent sections.

2.5.1 Physiology of Alcoholic Effects on Women Metabolism

Testa, Livingstone and Collins (2000) examined the impact of alcohol consumption on women's risk perceptions and intended behaviour. Using an attractive man in the vignette, the researchers examined three groups of women. The first group that was assigned to alcohol rated the male character more positively and anticipated less risk and more benefit in establishing a consensual sexual relationship with him under the influence of alcohol. They were only able to see the attraction of the man and did not foresee any risk associated with having unprotected sex with such a man. This was not applicable when compared with the other groups (Placebo - who were given drinks that were thought to be alcohol but were not and the 3rd group that was not given anything at all). In another study done by Ferris, Shtiegman and King (1998) on male hamsters that were voluntarily exposed to alcohol, testosterone levels were found to increase together with aggression. This suggests that voluntary alcohol exposure has specific neuro-endocrine effects with lasting behavioural consequences especially during adolescence. The interval between onset of alcohol-related problems and entry into treatment appears to be shorter for women than men (Hasin, Grant and Weinflash 1988; Piazza, Vrbka and Yeager, 1989; NIAAA 1999). Women alcoholics often experience greater physiological impairment earlier in their drinking careers despite having consumed less alcohol than men (NIAAA, 2002). Also, apart from the psychosocial and epidemiological differences, the sexes also experience different physiological effects of alcohol. Women become intoxicated after drinking smaller quantities of alcohol than are needed to produce intoxication in men (Jones and Jones, 1996).

Three possible mechanisms may explain this response:

1. Women tend to have a higher percentage of body fat and thus a lower percentage of water. They have lower total body water content than men of comparable size. After alcohol is consumed, it diffuses uniformly into all body water both inside and outside cells. Because of a woman's smaller quantity of body water, she achieves higher concentrations of alcohol in her blood than men after drinking equivalent amounts of alcohol. The resultant effect of this is that her brain and other organs are exposed to more alcohol before it is broken down. These differences play a role in both the short and long term effects of alcohol on women (National Institute of Health (NIH), 2003; Baselt and Danhof, 1993). Women also appear to eliminate alcohol from the blood faster than men. This can be explained by women's higher liver volume per unit lean body mass (Li, Beard, Orr and 1998; Kwo, Ramchadani and O'Connor, 1998) because alcohol is metabolised entirely in the liver (Levitte, Li and Demester, 1997).
2. Also, the diminished activity of *alcohol dehydrogenase* in the stomach may also contribute to the gender related differences in blood alcohol concentrations and a woman's heightened vulnerability to the physiological consequences of drinking. *Alcohol dehydrogenase* is the primary enzyme involved in the metabolism of alcohol. Animal studies by Julkunen *et al* (1985) revealed that a substantial amount of alcohol is metabolised by gastric alcohol dehydrogenase in the stomach before it enters the systemic circulation. This decreased first-pass metabolism of alcohol increases the concentration and availability of alcohol in a woman's system. This enzyme is non-existent in alcoholic women.
3. A woman has fluctuations in gonadal hormone levels during the menstrual cycle. These fluctuations may affect the rate of alcohol metabolism, making a woman more susceptible to elevated blood alcohol concentration at different points in the cycle. Research findings have however been inconsistent (NIAAA, 1999).

2.5.2. Detrimental Effects of Alcohol on Women

Aside the social and emotional effects alcohol exerts on the female, the following medical effects are also common:

a. Liver damage

Although the female liver is not more sensitive to alcohol than a male liver, the concentrations of alcohol reaching a woman's liver will be so much higher than that of a man after consuming less or the same amount of alcohol, making her liver to be damaged much more quickly (Atkinson, 2011). Compared with men, women develop alcohol-induced liver diseases over a shorter period of time and after consuming less alcohol (NIAAA, 1999). Women are also more likely to develop alcoholic hepatitis and die from liver cirrhosis. Animal researches suggest that this may be due to the physiological effects of the female reproductive hormones. Johnson and Williams (2006) suggest that the combined effect of oestrogens and alcohol may augment liver damage and because of diminished alcohol dehydrogenase in the first pass metabolism.

b. Brain damage

In a research done by Flannery (2007) the female alcoholics fared significantly worse in most instances than the male alcoholics, a finding that prompted Flannery to call for a "gender-sensitive public awareness campaign that highlights these cognitive deficits." The study corroborated previous researches that found female alcoholics scored lower than their male counterparts in tests that assessed working memory, visuo-spatial skills and psychomotor speed. Other studies have shown that female drinkers experience accelerated damage to the liver, heart and muscles, compared with male alcoholics, the researchers said. The higher percentage of body fat in females means alcohol is twice as toxic, he concluded, citing World Health Organization's guidelines that define at-risk females as those who consume at least seven drinks a week, and at-risk males as those who consume at least 14. Views of the brain obtained by Magnetic Resource Imagining (MRI) suggest that women may be more vulnerable than men to alcohol induced brain damage. MRI researchers found that a brain region involved in coordinating multiple functions was significantly smaller among alcoholic women compared with both non-alcoholic women and alcoholic men even after

measurements were adjusted for head size (Boyles, 2007).

c. Heart disease

Men and women who stay within the alcohol consumption limit (0 – 1 drink per day) have a lower death rate from coronary heart disease (CHD; e.g. heart attacks) than do heavier drinkers and abstainers (Alcohol Alert, 1999). The opposite is however the case among women heavy drinkers despite the reduced alcohol lifetime expectancy of 60% (NIAAA, 1999). The protective effect of alcohol on the heart however is only effective in woman over age 55, it has little or no effect in young women (NIAAA, 2008). Saunders (1998) in his research proposed that alcohol protects moderate drinkers from coronary heart diseases.

d. Breast cancers

Researchers have proposed that moderate to heavy alcohol consumption increases the risk for breast cancer (Smith-Warner, Spiegelman and Youn, 1999). Among women who consume alcohol regularly, reducing alcohol is a potential means of reducing breast cancer risk because it has been noted that women who drink run a higher risk of breast cancer and that risk is directly proportional to the amount of alcohol consumed, that is, as low as 1 drink per day ups breast cancer (RHM, 2003; Annals of Internal Medicine, 2003). There are many theories about what causes the risk of breast cancers. The first is that alcohol increases the production of oestrogen - a known cause of breast cancer according to Willet (2002). Also, acetaldehyde - a product of alcohol metabolism impairs a cell's ability to repair its DNA therefore increasing the likelihood of cell mutation - beginning of all kinds of cancers including those found in men. Another pathway by which alcohol contributes to breast cancer is by messing up the way the body processes nutrients. Reduced levels of Vitamin E, A, Folic acid and other B vitamins are common in people who drink more than 2 alcoholic beverages a day. The effect is felt on all the body organs but it is especially tough on the digestive system and liver. Meanwhile it is the same group of nutrients that alcohol consumption depletes that the body needs to prevent cancer and a variety of other illness. Zhang, Kreger, Dorgan (1999) however, found no increased breast cancer risk associated with consumption of up to one drink per day which was the maximum drinking level reported by most women.

e. Violent victimization

A survey of female college students found a significant relationship between the amounts of

alcohol the women reported drinking each week and their experiences of sexual victimization (Gross and Billingham 1998). Also, a history of heavy premarital drinking by both partners has been found to predict first year aggression among newlyweds. Some studies have also revealed that problem drinking by wives had been linked to husband to wife aggression regardless of husbands drinking levels (NIAAA, 1999).

f. Traffic crashes - Road Traffic Accidents (RTA)

Although women are less likely than men to drive after drinking and to be involved in fatal alcohol related crashes, women have a higher relative risk of driver fatality than men at similar alcohol concentrations (NIAAA, 1999).

Laboratory studies of the effects of alcohol on responding to visual cues and other tasks suggest that there may be gender differences in how alcohol affects the performance of driving tasks (NIAAA, 1999). Women's lower rates of drunk driving may be attributed to their lower tendency toward risk taking compared with men. Of note also is the 1996 Road Traffic Accidents (RTA) report that percentage of women drivers involved in alcohol related fatal crashes had increased from 12% in 1980 to 16% in 1996 (Yi, Stinson and Williams, 1998). Overall, it does not take much alcohol to impair driving ability. The chances of being killed in a single vehicle crash are increased at a blood alcohol level that a 63kg (140lb) woman would reach after having one drink on an empty stomach.

g. Effect on foetus/ child

The foetus is at risk when the mother consumes alcohol during pregnancy. Excessive consumption of alcoholic beverages during pregnancy is associated with the development of a syndrome of physical and mental manifestations in the offspring. The risks include overt birth defects and a less obvious group of effects known as Fetal Alcohol Spectrum Disorders (FASD). Disorders may range from minor anomalies, for example of the face, to adverse effects on brain development, including mental retardation (Green Facts 2006). Alcohol consumption during pregnancy can also cause spontaneous abortion, slower fetal growth in the womb, premature birth and low birth weight. Even after birth, parental drinking can lead to child abuse and numerous other impacts on the child's social, psychological and economic environment (WHO, 2004). Alcohol exposure in-utero also known as the fetal alcohol

syndrome (FAS) is offered as one possible explanation for the neurophysiologic abnormalities that appear to characterize a notable proportion of individuals within the paraphilic and sexually aggressive populations. The teratogenic effects of alcohol upon humans often lead to a number of behavioural and physiological abnormalities exhibited by these individuals. In humans, ethanol is a developmental toxin, and various effects have been associated with ethanol intake. It may also cause defects in the central nervous system, heart, kidney and limbs. Moderate consumption can be associated with reduced birth weight and behavioural deficits, but effects generally have not been observed with an intake of about one drink per day (WHO 1998). Ethanol at high blood levels affects the structure of the reproductive organs and causes significant reductions in fetal body weight, increased resorptions and teratogenic effects in a number of species. Ethanol crosses the placenta in a variety of species, and both ethanol and acetaldehyde have been found in fetal tissues after dosage of pregnant rodents with ethanol. Both ethanol and acetaldehyde can cause embryonic developmental abnormalities *in vitro* (WHO 1998).

h. Other Risks / Effects

Alcohol can interact with a wide variety of medicines, both prescription and over-the-counter. Alcohol can reduce the effectiveness of some medications, and it can combine with other medications to cause or increase side effects. Alcohol can interact with medicines used to treat conditions as varied as heart and blood vessel disease, digestive problems and diabetes. In particular, alcohol can increase the sedative effects of any medication that causes drowsiness, including cough and cold medicines, and drugs for anxiety and depression.

Aside the loss of sexual inhibition, recent studies of moderate and heavy drinking among women found that the study participants reported poorer psychosocial functioning with increasing daily alcohol consumption (Graham and Schmidt, 1999). The frequency of drinking (drinking days per week) however, was not related to psychosocial well-being, suggesting that the amount of alcohol consumption was a more significant factor. Ensrud *et al* (1994) found that, among older women, those with a history of regular alcohol use were 2.2 times more likely to have impaired activities of daily living compared with those with no history of regular alcohol use. Alcohol use was more strongly correlated with impairment

than were smoking, age, use of anti-anxiety medication, or stroke. Considering the mental conditions, the co-morbidity of alcohol dependence with other mental conditions is high, both in clinical and in general population samples (Grant & Harford, 1995; WHO, 2004). The crucial question in this respect is about causation. Sufficient evidence for a causal role of alcohol consumption at this point of research appears to exist mainly for depression. Since this relationship is controversial it will be discussed below in a separate section.

i. **Other Chronic Conditions:** Other risks of alcohol consumption currently discussed in literature include epilepsy (WHO 2004; Martín et al, 1995), acute and chronic pancreatitis (Ammann, Heitz & Klöppel, 1996; Skinazi, Lévy & Bernades, 1995; Damström Thakker, 1998; Robles-Diaz & Gorelick, 1997) and Psoriasis (English et al., 1995).

2.6 Benefits Associated with Alcohol Use

However in assessing the impact of alcohol on health, the healthy / potential benefits should also be mentioned. This is because cataloguing the harm without paying some attention to the benefits of drinking offers an unbalanced and indeed biased view of alcohol. This is particularly true given the increasing evidence for a protective effect against the development of coronary disease and of benefit in a number of psychological and social domains (Saunders, 1998). These benefits are described as they relate to life's activities.

2.6.1 Psychological

Relaxation: In a study among 60 clinicians from 17 countries (Saunders, 1998) it was found out that one of the main reasons for taking alcohol was that it was a pleasant and relaxing thing to do especially at that time and even for as long as the effect of the alcohol would last. A sense of relaxation is one of the commonest effects of drinking reported by respondents in general household surveys. The pattern of drinking reported as being effective was characterized by the consumption of small amounts of alcohol on a regular basis and most especially in the company of other people known to the individual.

Happiness: Howe and Taylor (1998) have reported that subjects who had consumed alcohol were happier and laughed more than a comparable group who had not consumed any alcohol. A sense of euphoria is one of the most predictable pharmacological effects of alcohol. This is often experienced particularly during the upswing of the *blood alcohol concentration* (BAC)

– time curve. The fall of BAC is replaced by dysphoria and malaise particularly among alcohol dependent individuals.

Cognitive: Most of the literature on the effects of alcohol on cognition has focused on impairment of cognitive function, based on tests of arithmetic ability and visual-spatial capacity, together with measures of psychomotor performance, such as reaction time. In summary, alcohol consumption reduces cognitive and psychomotive performance in a predictable, dose-dependent manner at BAC levels ranging from 20mg / 100ml to 150mg/100ml. There is, however, considerable individual variation in the effects. Indeed, a small proportion of subjects demonstrated enhanced performance at BAC levels in the range below 80mg/100ml (Saunders, 1996).

2.6.2 Creativity

Creativity is an aspect of cognitive function that is reportedly enhanced by the consumption of alcohol. This is a part of popular folklore, particularly in the United States, where six of the seven American Nobel Prize Winners for literature are regarded as having been alcohol dependent (Saunders, 1996). Popular assumption amongst many authors and journalists is that consuming alcohol helps the writer to concentrate on core themes and to ignore peripheral issues that might be distracting. The empirical basis for these views is meager, but the respondents of the survey cited here reported that intellectual and artistic creativity was enhanced by the use of alcohol. However, most made a distinction between well-known artists and literary figures whose creativity was claimed by themselves, biographers, and others to be heightened by the consumption of alcohol, and the rest of humanity whose creative spark would be dulled. Some respondents noted the claims that drinking alcohol enables people to focus on the task at hand and to ignore other issues, which could cause distraction. Although accepting that this might operate in creative writing, respondents were doubtful that this could be generalized to other areas of intellectual work, particularly to decision making. The patterns of drinking that were considered to have beneficial effects on creative capacity involved often substantial amounts of alcohol (Saunders, 1996).

2.6.3 Social

In nearly every society, drinking alcohol is a social activity. Drinking may occur with a peer group, family members, mixed age sex groups, as part of a ceremonial occasion, with members of a sports team, and with business colleagues. In few societies is drinking predominantly a solitary activity. Drinking alcohol may be for the express purpose of socializing. However alcohol consumption is generally associated with broader rather than narrower social purpose.

Sociability: Sociability is a major reason for drinking alcohol and this factor is of equivalent importance to the psychological dimensions of relaxation and happiness. It is identified as a predominant reason for drinking by people from a range of cultures in the developed and developing worlds (Heath 1995). Similarly, in other studies, sociability has been a main reason for drinking by college students, other young adults (Wilks and Callan 1990; Lowe 1994), and by older people (Roizen 1983; Hauge and Irgens – Jensen 1990; Hall et al. 1992). There is also an experimental literature, which demonstrates that after alcohol consumption, subjects are perceived to be more sociable (Smith et al. 1992). The results of the survey of clinicians (Saunders, 1998) showed that sociability was identified as a benefit of drinking alcohol by 82% of respondents. Frequently mentioned benefits included alcohol's function as a social lubricant and increasing someone's courage in approaching a person of the opposite sex. Six respondents (10%) reported that alcohol increased the truthfulness of people. According to the survey respondents, the patterns of drinking reported to have these effects involved intakes of 1 to 8 drinks per occasion, with a modal frequency of once per week, and predominantly at parties. Some respondents suggested the need for people drinking in this situation to ensure their safe transport home and to protect themselves from unwanted attention.

Social networks: This variable, which might be considered a product of alcohol's effects on sociability, refers to the number of friends and acquaintances and a person's "connectedness" with them. Drinking tends to bind people together, be it from shared experience, proximity with others in a drinking environment, or as a symbol of acceptance into a peer group. Drinking establishments and clubs serve as places to gather, separate from the work environment and from the home. They are described by Oldenburg (1997) as "the third place," where people can congregate and enjoy each other's company. Alcohol consumers

have larger and more heterogeneous social networks than abstainers. This has been reported by Lyons *et al* (1995) from a survey of social well-being and health in South Wales. Views among survey respondents on whether drinking expanded a person's social network were mixed. Beneficial effects on networks were seen to come through discovery of common interests (e.g. at parties, sporting clubs, parents' and citizens' meetings) and by identifying a previously distant acquaintance as a good person. Another important role of alcohol was to widen one's business contacts and sometimes to employ this network to conclude specific deals. Beneficial effects of this nature were associated with periodic convivial drinking, typically of moderate quantities at approximately weekly intervals. Harmful effects on a person's social network were related to heavier and more frequent drinking, leading to a situation where one's social circle would consist exclusively of regular drinkers.

Celebratory Events: In many societies, alcoholic drinks occupy a central role in celebrations – to toast people on their birthday, wedding anniversary, promotion, or retirement. Teams involved in competitive sports will drink to congratulate each other on a win and in heading the league table at the end of the season. Certain beverage types, such as champagne, may be preferred in some traditions. The survey of clinicians confirmed the central role of alcohol in celebratory occasions with 90% of respondents considering this a significant benefit. Some averred that celebration and alcohol could not be separated from each other and used such terms as "absolutely," "goes without saying," and "go hand in hand." Two respondents (3%) recognized this traditional role, but felt it was overstated and that good food and the expectations of participants were more important to the atmosphere (Saunders, 1996). The amounts of alcohol consumed on these occasions were not commonly specified, but were assumed not to be excessive. Frequency was indicated by the nature of the occasion. Typically, these were annual e.g. Christmas, New Year, birthdays, and after examinations. Two respondents described the symbolic use of alcohol in communion.

Social Credit: This term is borrowed from Heath (1998) to refer to the reciprocal hospitality shown by people when they offer drinks to friends (for example, when they have extra money) and by organizations when they host receptions and dinners. There is some expectation that what is provided will be repaid at some stage, although this is neither inevitable nor obligatory.

Leisure Time: Drinking often serves to draw a boundary between work and leisure time. This may occur in a bar at the end of a shift, or in the boardroom where partners and executives of a firm may gather at the end of a day's (or a week's) work. Sometimes the drinking partners are peers; sometimes it is a mixed status group. In Japan, for example, it is usual for men of various levels of seniority to drink together in the evenings. This setting allows junior people to express themselves to their superiors in a way that would be unthinkable in the office.

2.6.4 Health

Physical Health: As indicated earlier, interest in understanding the beneficial effects of alcohol increased drastically when consistent evidence for a cardio-protective effect of alcohol emerged. Specifically, for some groups of individuals (notably men from 35-40 years until their 70s and for women over 50), moderate alcohol consumption reduces the risk of morbidity and mortality from coronary heart disease (CHD) approximately by 30-50% compared with abstainers. As coronary heart disease is the most common cause of death in many developed countries. Any protective effect should have a substantial impact on reducing aggregate mortality (from all causes). All causes of mortality are approximately 20% lower in moderate drinkers than in total abstainers (Saunders, 1998). Other conditions for which a protective effect of moderate consumption has been demonstrated include gallstones, thrombotic stroke, endometrial cancer, and in some studies hypertension. Alcohol consumption also has beneficial effects on blood lipid levels, coagulation and clot lysis, and these are likely to represent some of the mechanisms by which the cardio-protective effect arises. The most frequently reported health benefit was reduction in risk of coronary heart disease. There was evidence for reduction in incidence, morbidity and / or mortality from this condition in drinkers compared with non-drinkers. Alcohol may offer some protection against *diabetes* and *cholelithiasis* (gallstones) lowering of blood pressure and blood cholesterol levels, treatment of influenza and as a laxative (Ashley, Ferrence, Room, et al. 2000). Health benefits were associated with consumption of what would be generally regarded as small or moderate amounts of alcohol and at a frequency that ranged from once per week to daily.

Subjective Well-Being and Quality Of Life: There has been increasing emphasis in the general health and treatment literature on measures of subjective well-being, quality of life, and reported contentedness. Quality of life is now regarded as an essential measure in assessments of new treatments for a range of disorders including rheumatoid arthritis and depression using controlled clinical trials. It is viewed as complementary to objective measures of function, impairment, and disability. Subjective perceptions of health and measures of quality of life correlate well with objective measures of function, freedom from pain and disease activity. In a large general population survey conducted in Finland, level of alcohol consumption correlated with self-perception of good health (Poikolainen *et al*; 1996). This does not imply a causal relationship. It is likely that people who feel well and are healthy have more opportunities to drink after work, at parties, and in other social settings. In the survey conducted for the purposes of this analysis (Saunders, 1998), the majority of respondents (73%) considered that subjective well-being could be enhanced by alcohol. Some provided specific examples, which were typically couched in general terms such as "contentment."

Medicinal: The medicinal benefits are classified separately from the medical and physiological effects described above. Alcohol containing drinks in the form of folk remedies have been used throughout history as cures for various illnesses, although the value of these preparations has not been investigated thoroughly. This aspect is separate from the use of alcohol to alleviate negative mood states, stress, and tension.

Cure for Common Ailments: Alcohol has a traditional role in many forms of medicine. In Chinese medicine various remedies containing alcohol were popular at least, 2000 years ago. Xiao (1995) describes the Compendium of Materia Medica in the Ming Dynasty, which listed 79 different alcohol containing drinks. In China and Western medicine alcohol has been taken as a general tonic for relief of the common cold, to treat kidney disorders, and to aid digestion. It has seen use in the treatment of gastroenteritis and has been shown recently to reduce pathogenic intestinal flora. Alcohol has also been used for millennia as an analgesic after injuries and during the resetting of fractured bones. Some of these uses continue today in folk remedies and alcohol is part of many pharmaceutical preparations, including cough syrups and iron supplements.

Stress Reduction: Just as alcohol can facilitate relaxation in company, it can also be used as a calmant in states of anxiety and tension. Stress reduction featured prominently in the review of beneficial effects by Baum Baicker (1985). This property of alcohol is cautiously placed among the medicinal effects. Repeated self-medication of anxiety with alcohol may lead to harmful patterns of drinking. Because anxiety occurs when blood alcohol levels decline, this may lead to a cyclical process whereby alcohol induces an anxiety state, which is temporarily alleviated by further drinking. Indeed, this was the basis of the tension reduction theory of alcohol dependence (Cappell and Greeley 1987). Krause (1995) reported that alcohol reduced the negative impact of some life events, but the effect was inconsistent. Minor problems had less adverse effects, but drinking may exacerbate the impact of major ones.

2.6.5 Spiritual and Existential

Religion: Alcohol has a central role in Christianity. The turning of water into wine, for example, is one of the miracles recorded in the New Testament (John 2:1-10; KJV). In the Last Supper, wine was used by Christ to signify his blood, which would be shed for man's salvation (Mark 14:22-26; KJV). This has formed the basis of the Christian Eucharist, or Communion, since that time. The Judaic tradition also adopts a ritual attitude towards drinking, using alcohol chiefly for the purposes of communion (Keller, 1979). Alcohol is integrated into religious ceremonies both in the home and in the place of worship, including meals and rites of passage. Alcohol's symbolic significance in this regard is not generally articulated in the literature as a benefit, but it should be noted as part of life of a substantial proportion of the world's population.

2.6.6 Gustatory

Taste and Texture: To most drinkers, alcoholic drinks taste pleasant and refreshing. How the drinker perceives them depends very much on the context of drinking. Beer's somewhat bitter flavour is sometimes regarded as desirable after a person has been undertaking heavy physical work. Sweeter drinks are more commonly taken as a cocktail or after a meal. The taste and texture are two of the characteristics of wines much discussed by connoisseurs.

Complement to Food: Various types of beverage have a clear relationship to meals. They may be taken before meals as an aperitif to stimulate the appetite. Wine and beer tend to be consumed during a meal, following which a fortified wine such as port, spirits, or liqueurs may be taken. Alcoholic drinks are regarded in many cultures as an invaluable aid to digestion. Stimulation of appetite by alcohol by specifically mentioned and the particular role of wine as a drink that would complement a meal was also noted. The context of drinking was mentioned far more frequently under this heading than were typical amounts or patterns of drinking. Highly specific associations of certain beverage types with particular foods were recorded. They included beer with potato chips, nuts, meat pies, and pizzas; red wine with various meats and cheese; white wine with oriental food and dessert; spirits based mixed drinks with Mexican or Caribbean food, and champagne with strawberries.

2.7 CONCEPTUAL FRAMEWORK

A conceptual framework presents a systematic way of understanding events or situations. It is a set of concepts, definition, and propositions that explains or predicts events or situations by illustrating the relationship between variables (United States Department of Health and Human Services [USDHHS], 2005). The aim of theories in research is to help the researcher identify and understand elements that affect seemingly diverse classes of behaviours and how these elements function (USDHHS, 2005). Several theories have been propounded to explain the association between alcohol and risky sexual practice. Two of these theories are Alcohol Myopia Theory and Expectancy Model.

a. Alcohol Myopia Theory

This theory was propounded by Steele *et al*. (1985). The theory explains that the acute effect of alcohol intoxication causes one to take sexual risks that otherwise would not be taken. It further explains that alcohol dis-inhibits behaviour primarily as a result of its pharmacological effects on information processing. By reducing the scope and efficiency of information processing, simple highly salient cues that instigate behaviour (e.g. sexual arousal) continue to be processed whereas more distal and complex cues that would ordinarily inhibit behaviour (e.g. the possibility of getting AIDS, using a condom etc) are no longer adequately processed. Accordingly, alcohol is hypothesized to have its strongest

effects when behaviour is controlled by instigatory and inhibitory cues that are strong and are nearly equal in force. When instigatory cues are strong and inhibitory cues are weak, the behaviour is likely to occur regardless of the individual's sobriety. Under the reversed circumstance; the behaviour is not likely to occur, again regardless of the individual's sobriety. Thus, only in situations where both sets of cues are strong should the reduced processing of inhibitory cues lead to more extreme (or different) social behaviour. In sexual encounters, the most salient cues (high) are usually those that involve intimacy and the immediate pleasure of the sexual contact. More abstract or distal cues (low) such as suspicion that the sexual partner could be HIV-infected or a public service announcement seen on television are less salient and require additional cognitive resources to process. Thus, when intoxicated, the ability to consider these abstract inhibitory cues decreases and protective behaviour is less likely to be enacted.

b. Expectancy Model

This model, unlike the alcohol myopia theory, exhibits a different line of thought. Propounded by Lang (1985), it posits that an individual's behaviour after drinking is driven by pre-existing beliefs about alcohol's effects on behaviour, in the manner of a self-fulfilling prophecy. Many of the effects of alcohol are not actually physical but psychological. These are called expectancy effects. They are based on the reasons for taking alcohol. For example if one expects to feel more relaxed and aroused after taking alcohol, it happens. This is important because it shows that one can achieve this same sexual effect without alcohol. Thus, individuals who believe that alcohol promotes risky sexual behaviour would be more likely to engage in risky behaviour when they drink than those who do not hold this belief. This is explained by the fact that when one expects or anticipates a certain physical effect, it is often experienced and reported. This means that one's expectation of an effect can actually influence one's sexual experience. Expectancy formulations thus indicate the strength and nature of individually held beliefs about alcohol's effect and would moderate the acute effects of alcohol or sexual risk taken. See Table 2.4a and b

Table 2.4a

<table>
<tr><td>Belief toward an outcome
e.g. would make sex sweeter, would make me bolder e.t.c</td><td>Attitude
To drink or not to drink alcohol</td><td rowspan="5">Intention</td><td rowspan="5">Behavior</td></tr>
<tr><td>Evaluation of the outcome</td><td></td></tr>
<tr><td>Beliefs of what others think</td><td rowspan="3">Subjective norm</td></tr>
<tr><td>What experts think</td></tr>
<tr><td>Motivation to comply with others</td></tr>
</table>

Table 2.4b

<table>
<tr><td>Behavioral Beliefs</td><td>Attitude Toward the Behavior</td><td rowspan="4">Intention</td><td rowspan="4">Behavior</td></tr>
<tr><td>Normative Beliefs</td><td>Subjective Norm</td></tr>
<tr><td>Control Beliefs</td><td>Perceived Behavioral Control</td></tr>
<tr><td></td><td>Attitude Toward the Behavior</td></tr>
<tr><td colspan="4">Actual Behavioral Control</td></tr>
</table>

Culled from Steele and Johnson's (1974)

$$BI=(W_1)AB[(b)+(e)]+(W_2)SN[(n)+(m)]+(W_3)PBC[(c)+(p)]$$

BI: Behavioral intention

AB: Attitude toward behavior

(*b*): the strength of each belief

(*e*): the evaluation of the outcome or attribute

SN: Subjective norms

(*n*): the strength of each normative belief

(*m*): the motivation to comply with the referent

PBC: Perceived Behavioral Control

(*c*): the strength of each control belief

(*p*): the perceived power of the control factor

W' : empirically derived weight/coefficient

To the extent that it is an accurate reflection of actual behavioral control, perceived behavioral control can, together with intention, be used to predict behaviour.

CHAPTER THREE

3.0 METHODOLOGY

3.1 Study Design and Scope

The study was descriptive in design. It focused on the views and opinions of women who were alcohol sellers (both foreign and local alcohol beverages), bar attendants and bar owners about the alcoholic beverages and its role or connection with risky behaviours e.g. inconsistent use of condoms during sexual encounters and multiple sexual practices.

3.2 Study Variables

The major independent variables of interest were the socio-economic characteristics of the respondents which include: the age, religion, educational levels, occupation (whether they were local sellers / brewers or sellers of packaged / bottled beers, wine and imported drinks), marital status, hours devoted to work daily, peak sale periods and residential address of respondents. The intermediate variables included their knowledge of sexually transmitted diseases, level of alcohol use, sexual practices when sober and intoxicated their number of sexual partners and the perceived purposes of alcohol use. The dependent variables are the perceived relationship between alcohol use and all kinds of risky sexual behaviours like having multiple concurrent sexual partners and inconsistent use of condoms.

3.3 Study Site

The local government area chosen for this research was Ibadan North-East Local Government Area (LGA). It is bounded in the West by Ibadan North LGA. It is one of the 33 local government areas located in Oyo State. It is also one of the five local governments areas located inside Ibadan City. This Local Government was created on the 27th of August 1991 as one of the Federal Government Reform Agenda in bringing Governance to the grassroots. The headquarters is located at Iwo road, a park that serves as a major exit and entry park for travelers. It has a population of 330, 399 (NPC, 2006), 12 Political wards and 35 localities / Communities like Agodi, Atiwo, Isale Alfa, Oke Offa Atipe, Oluyoro, Old Ife

Road to mention a few. The local Government is a home to mixed ethnic tribes, Yoruba, Hausa and Igbos. The inhabitants include traders, artisans, civil and public servants especially those working in the State Secretariat and other Federal Parastatals.

Ibadan North East LGA has an appreciable number of joints, alcoholic hawkers, roadside sellers of alcohol, more around the garages and markets in all parts of the area and localities. It is also characterized by a high number of motor parks in which the most popular is named "*Abee Bridge*" i.e. under the bridge, which is like a final stop for most commercial buses and cars coming from major cities all over Nigeria. These motor parks are popular relaxation centres for motorists both before and after their journeys making the number of beer and hot drink joints there to increase by the day. Most of these joints are being owned or controlled by women. The motor parks are the most patronized areas for local alcohol brewers because of the high sales of alcohol normally recorded there and around its periphery by the women alcohol sellers. This particular locality is predominantly occupied by the Yoruba tribe, some of who are non-indigenes of Ibadan. However, people of other ethnic groups (Ibo, Calabar and Hausa) are found in different parts of the local Government area. Christianity and Islam are the predominant religions, though the activities of traditional religionists could still be perceived. For the purpose of this study, the women that own bars or alcohol stalls are categorised as skilled while those that hawk spirits and locally brewed alcohol are categorised as unskilled.

3.4 Study Population

The study population for this study were females who brewed and / sold alcohol (both industrial and local alcoholic beverages), bar attendants and bar owners who were aged 20 years (self attestation) and above as at the time of the study and who consented to take part in the study.

3.5 Sampling procedure and sample size

3.5.1 Sampling Procedure

All the 374 alcohol hawkers/ brewers, identified, contacted and who consented to be part of the study were interviewed for the research.

3.6 Instrument for data collection

The instrument used for data collection, a semi-structured questionnaire was divided into 4 sections.

Section 1: Introduction

Section 2: Socio-Demographic Characteristics

Section 3: Knowledge about sexually transmitted infections (STIs) including names, mode of transmission, e.t.c

Section 4: Practice: Use of Alcohol and Sexual Practice (See Appendix 3)

The introductory section explained the scope of this study and solicits for cooperation. . It helped the research assistants to create rapport with the respondents, to encourage them to answer the questions enquired freely. It also contains an added clause in which respondent can opt out of the study at any time. The second section contained information about the Socio-demographic characteristics of respondents. This was followed by the third section, which sought the knowledge of respondents on the names of sexually transmitted diseases, mode of transmission and also what she thought about the relationship between alcohol use and risky sexual practice.

The third section concluded by inquiring about respondent's opinions on the association between HIV/AIDS and alcohol use. The last section was divided into two sub-sections, containing information about respondent's practices. The first sub-section sought information about respondents alcohol four weeks prior to data collection, known uses of alcohol, their alcoholic consumption level (practice) and the second subsection deals with the respondents' sexual practices. This last section ended by seeking opinion of respondents on the risks and problems faced by alcohol consumers especially heavy alcoholics.

3.7 Pretest of Instrument

The instrument was pretested in Ibadan South–East Local Government Area among thirty-eight (38) women alcohol brewers and sellers. During the pre-test exercise, the period of highest sales (between 3-6pm and after 9pm) was discovered and it was at this time that the

respondents were approached to fix a convenient time for the interview. The interviews were conducted in the mornings (for bar owners) and evenings (for hawkers) and also based on the appointments given by the women which sometimes ran till late in the night. The pretest which was slated for 1 week ended up lasting for 4 weeks due to location of some bars and the lack of co-operation of some of the respondents. The pretest provided an opportunity for the researcher to address logistics, procedural challenges and to modify the instrument for more clarity, understanding, acceptability and respondent friendly.

3.8 Validity

The questionnaire used for the research was adapted from the Family Health International (FHI) Questionnaire Format and Coding guide on alcohol use and sexual practice among youth, questions were formulated and modified to fit into the objectives of the research. The compiled questions were given to specialists in the area of drug use (especially alcohol) in our local setting for corrections and necessary modifications. The content validity was equally ensured through the review of literature in the area of study, corrections made by the research supervisor and pre–testing of the draft questionnaire. The result obtained was used to adjust the items on the questionnaire especially the key areas that deals with practice. Content validity of the items in the questionnaire was addressed by ensuring that they were all understood in the local cultural content during the pre-test session. Research assistants were well trained and re-interpretation of items was made by them to ensure that the items were well understood. The questionnaire was also reviewed by peers, senior colleagues and the researcher's supervisor and was finally undertaken to ensure face validity.

3.9 Reliability

This is the measure of the degree to which the instrument produced constant and near constant response. To ensure this, the research assistants who collected the data were trained appropriately. The questionnaire, which was prepared in English, was translated to Yoruba by a language expert to ensure proper understanding among the non-English speaking respondents. It was again back-translated to English to ensure proper interpretation of variables. Questions were first asked in English and then interpreted into Yoruba to ensure proper understanding. Each research assistant was given permission to explain any difficult

area to some respondents. The pretest was done to ascertain the reproducibility of research findings and analyzed using the Cronbach's Alpha model. A reliability coefficient of 0.73, higher than the average correlation of 0.5 was obtained thus showing that the instrument was very reliable. Also, based on the responses from the pretest, the researcher added more questions that would ensure in-depth opinions about the study variables to be obtained at the same time avoid questions that would put respondents on the defensive. These questions include: ''what is your occupation''? ''How many hours do you work daily?'' ''Who are your most frequent patrons?'' ''What time and season do you normally have highest patronage?'' ''Talking about sex do you think alcohol can improve one's sexual performance"? ''What is/are the occupations of your sexual partners?'' (See Appendix 1)

3.10 Data Collection process

One day training was conducted for the four research assistants (4) who assisted with the data collection process by the researcher. The research assistants who are mainly public health educators and students of higher institutions of learning were already knowledgeable in data collection processes especially in the field of public health. They were re-trained on the basics of questionnaire administration and the use of local languages in the interpretation of important variables during the pre-test exercise. During the training, each research assistant was assigned to localities based on her fluency in both English and Yoruba. Role-Play, demonstrations and return demonstrations were used to reduce inter-variations. The researcher supervised data collection and screened returned questionnaires in the field at the end of each day to ensure completeness and consistency. The women to be interviewed were each contacted, either directly or indirectly through networking and snowballing and were notified of the interview. The filled questionnaires were collected and crosschecked at the end of each day to ensure accuracy and completeness.

Networking: The researcher established a rapport with a bar owner and through her was able to get the meeting days of the Women Bar Owners Association in the target area. It was at this meeting that the women were approached and their consent sought for the study. And the researcher even got women who were not at the meeting but had their shops in Ibadan North East LGA. This method worked mainly for bar owners and the researcher was able to locate more women this way.

Snowballing: The researcher also got some local women brewers at their stands through one of them that linked with another and through the second contact got through to some others too. This method was slow (may be because it was usually one woman to another one) in reaching the women because most of the local brewers did not choose their localities as their sale points, this was particularly true for hawkers.

3.11 Ethical consideration

Approval was sought and obtained from the local Government authorities and the association of bar owners in order to gain access into the bars. This was during one of their monthly meetings. Also, the study instrument contained an Informed Consent Clause to respect the voluntary participation of the respondents and protect their individual identity. The researcher approached the women bar owners at their usual meetings and explained the purpose of the research, assured the respondents of confidentiality of the information given and an option to choose to participate or not to. The respondents were also informed of their freedom to stop at any stage they were no longer comfortable with the interview. Then the interviewer formally requested for the participation of the respondents and when consented, interview began.

3.12 Data Management and analysis

The questionnaires were first serially numbered for control and recall purposes. A coding guide was developed for the instrument after a careful review of the responses. All the questionnaires were analyzed using the Stastical Package for Social Sciences (SPSS) and later reconverted to EPI-info. Data entry was done twice (independently) and cleaned. Frequency distribution, means, standard deviation and percentages were computed for all variables. Chi-square statistical tests were carried out in order to determine significant associations between the variables of interest. Knowledge on sexually transmitted infections (STIs) was determined with a set of 21 questions that addressed the knowledge of the STI names, modes of transmission and cure (for the curable STIs) and for each correct response, with one point each allotted to respondents. Respondents with mean score lower than 11points were counted to be low in STI knowledge while above 11 were high. The risky

practices were also scored with one and a half (1.5) points representing each risky sexual practice (having more than one sexual partner, inconsistent condom use, alcohol use before sex and drunkenness.

3.13 Limitations

Limitations in this study were likely to occur in the respondent's report of sexual frequencies. This was treated as underreporting rather than over reporting. In order to reduce this limitation, respondents were assured of anonymity and confidentiality of information. Also, though this study may provide associations among behaviours, it does not provide causality. For example reasons why married women engaged in multiple concurrent relationships or why women use alcohol before sex were not explored.

Also, based on the different alcoholic concoctions involved (ale, afato, jedijedi, etc) the alcoholic concentrations of each concoction could not be determined and so consumption frequencies were reported in bottles which can be measured in 3 cups per bottle on the average.

CHAPTER FOUR

4.0 RESULTS

4.1 Socio-demographic characteristics of respondents

4.1.1. Age, Educational level, Marital Status, Religion, Ethnic group, Occupation and length of exposure (hours spent on sales)

Table 4.1 shows the percentage distribution of respondents' socio demographic characteristics. The mean age of respondents was 36 ± 9.1years with ages ranging between 20 and 63 years. In respect of occupation, majority of the respondents 208 (55.6%) were sellers and brewers of locally made alcohol compared with sellers of industrially brewed alcohol 166 (44.4%). A greater number of respondents 96 (25.7%) had dropped out of secondary education while 70 (18.7%) respondents had little or no formal education, while Yoruba was the dominant ethnic group (92.5%) followed by Igbo (5.3%) Calabar (1.1%) and Hausa (0.8%). A greater proportion (62.6%) of the respondents was Moslems and 34.8% were Christians. The mean working hour for both categories was 11 ± 3.4 hours.

TABLE 4.1: Socio-demographic characteristics of respondents (N=374)

Description	Frequency	%
Age (years)		
20-29	103	27.5
30-39	138	37.0
40-49	109	29.1
50-68	29	6.4
Educational level		
No formal education	38	10.2
Islamic Education	23	6.1
Didn't complete Pry. School	64	17.1
Completed Pry. School	64	17.1
Did not complete Sec School	96	25.7
Completed Sec School	76	20.3
Post Sec School	13	3.5
Work Hours per day		
2-9	121	32.4
10-19	250	66.8
20-24	3	0.8
Marital status		
Single	61	16.3
Married	167	44.7
Separated	53	14.2
Widowed	19	5.1
Cohabiting	45	12.0
Divorced	29	7.8

4.2 Respondents level of knowledge of sexually transmitted infections (STIs)

Names of STIs mentioned by respondents:

Respondents were asked to mention all the sexually transmitted infections (STIs) known in English and other languages and these were re-translated to English (Multiple choice responses). A greater percentage of the respondents 313 (83.7%) had heard of sexually transmitted infections and out of this number, 71.9% mentioned HIV/AIDS and other infections they were aware of and 35.1% mentioned it as the only sexually transmitted infection. The various STIs given are stipulated in table 4.2. For this section, respondents had the choice of mentioning as many as they know or have heard of (multiple responses). The overall mean STI knowledge of respondents was 10.4 ± 3.4 out of a total of 21**.**

Routes of transmission of STIs and methods of treatment:

Respondents were further tested on their knowledge of STIs. They were asked to attest to the given possible routes of STI transmission (multiple responses) and also the methods of managing or treating STIs (multiple responses). Highest number of responses (97%) for modes of transmission was recorded for transmission through sexual intercourse with an infected partner, contact with needles and sharps (69%) and also kissing an infected partner (60%) while transmission through body contact with infected partners (31%) had the lowest number of responses. Majority of the respondents claimed that STIs could only be treated at government health centers (69%), through prayers (62%) and also with local concoctions (58%). Responses are represented by figures 1 and 2 respectively.

Table 4.2 Types of Sexually Transmitted Infections as mentioned by respondents

Total no of responses = 759

Names of Sexually Transmitted Infections (STIs)	Number of multiple responses	Percentage (%) of responses
HIV/AIDS	269	35.4
Gonorrhea/ Atosi-oloyun/ Atosi oju ara	237	31.2
Syphilis / Jerijeri	96	12.7
Atosi sugar (Diabetes)	66	8.7
Gonococcus / Staph locus	31	4.1
Atosi eleje (Schistosomiasis)	24	3.2
Cancer / Jejere	10	1.3
Tuberculosis	8	1.0
Idoti / Kokoro inu eje	8	1.0
Chlamydia	5	0.7
Epilepsy	4	0.5
Magun / thunderbolt	1	0.1

*Multiple responses

Fig. 1: Respondents knowledge of Modes of Transmission of STIs

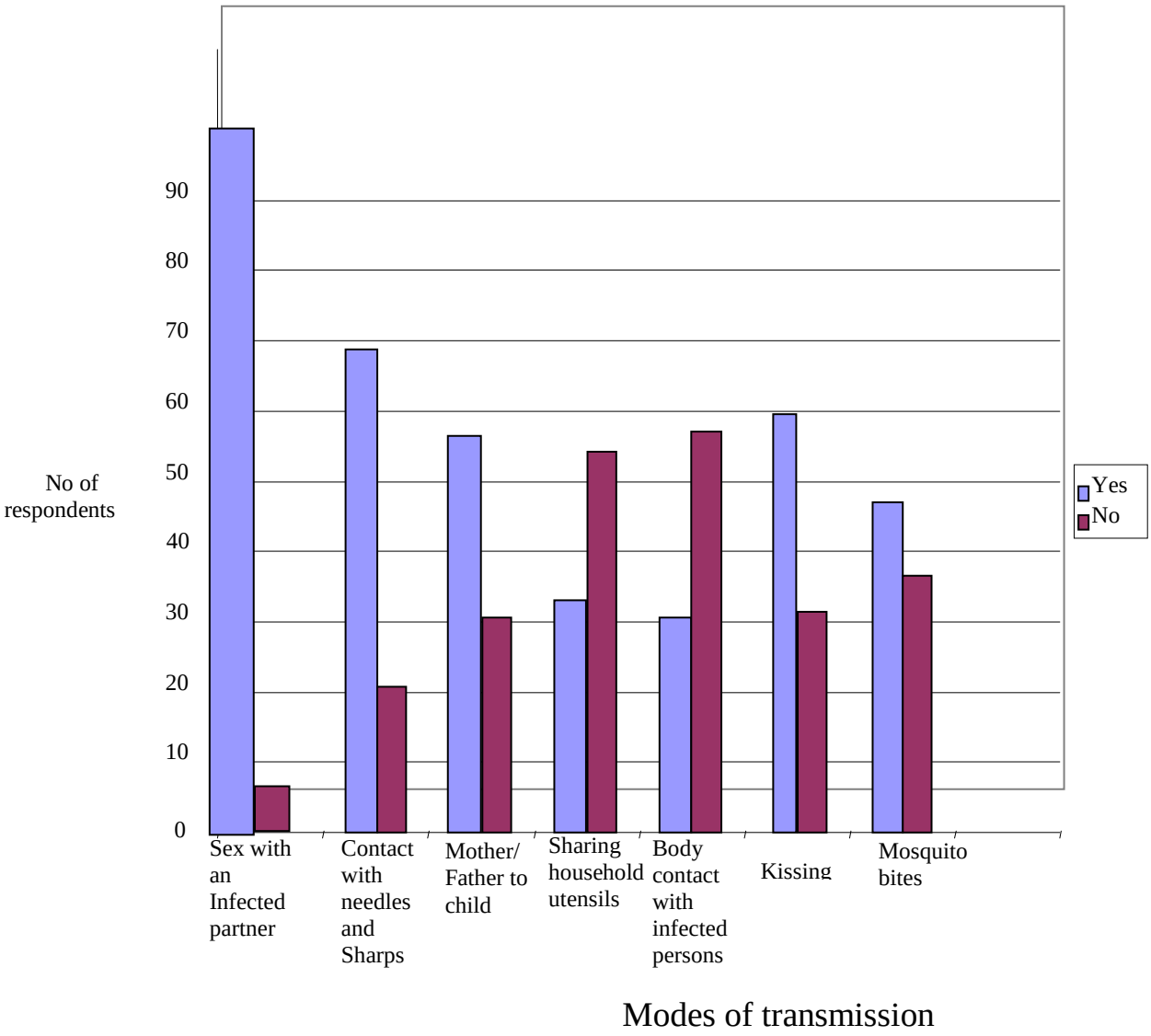
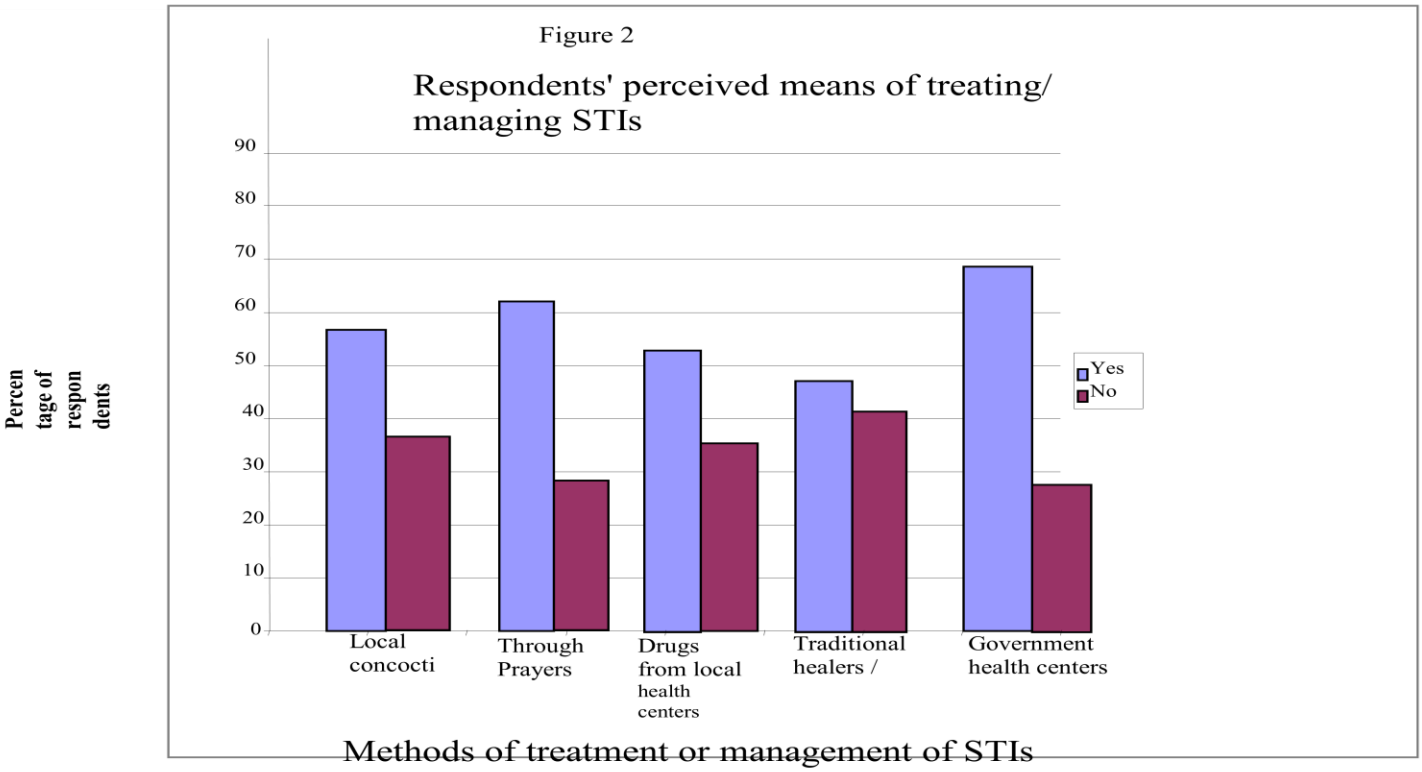


Fig. 2: Respondents STI Knowledge: Cure or Management methods



4.3 Opinions about risk of infection

In an open ended question (coded multiple responses), respondents were asked if they could be infected with any STI based on their knowledge about transmission and their individual sexual practice, responses were then coded into the following categories: Yes, I am susceptible to STI infection and No, I am not susceptible to STI infection. One hundred and fifty-four respondents were in the affirmative (41.2%) and gave reasons that they thought could put them at risk of STIs while 220 (58.8%) respondents affirmed non-susceptibility. Some of the reasons given were genuine although most of them had only HIV infection influencing their general judgment on STIs. See figs 3 and 4.

Fig 3: Reasons for respondents' susceptibility to STIs

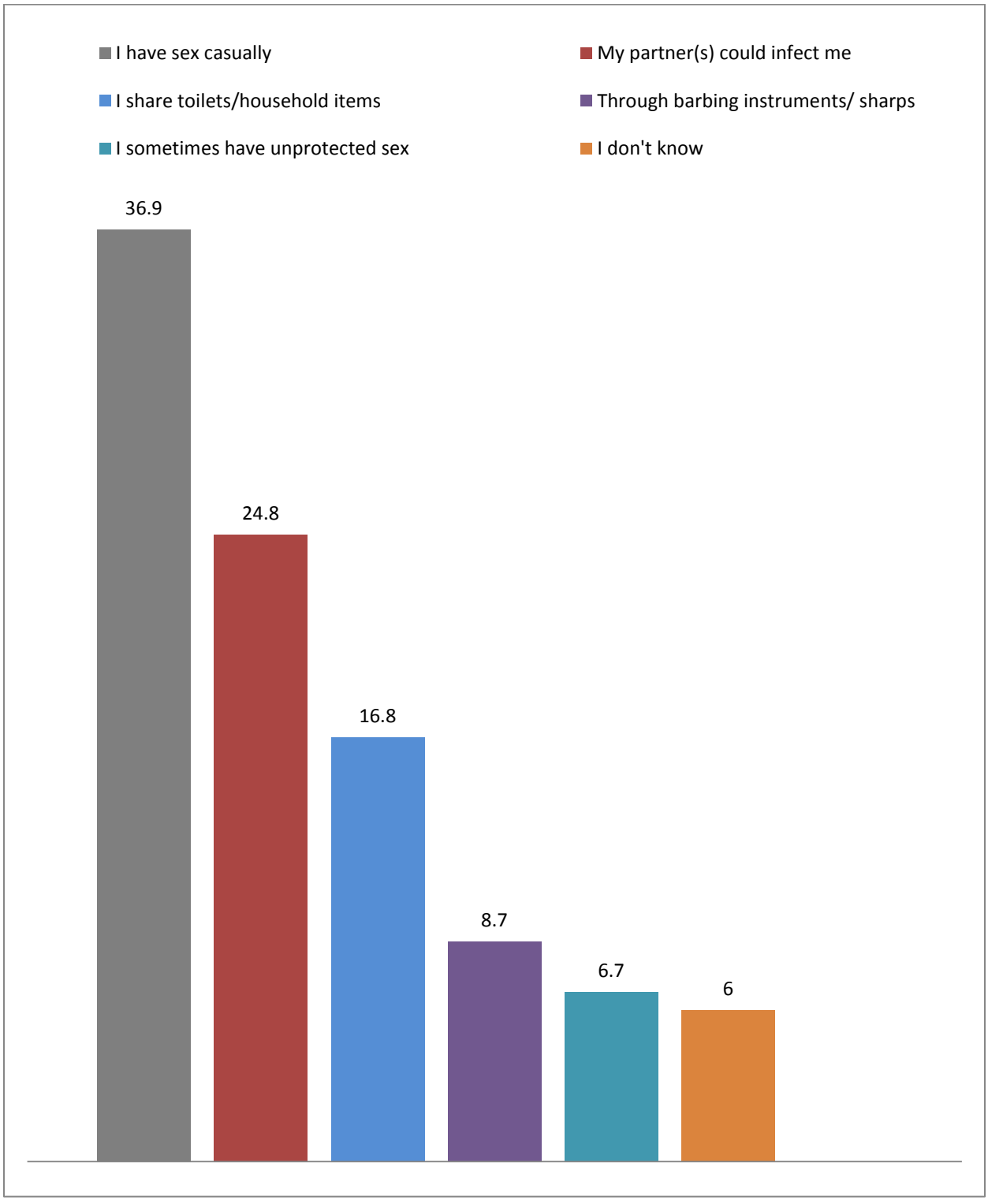
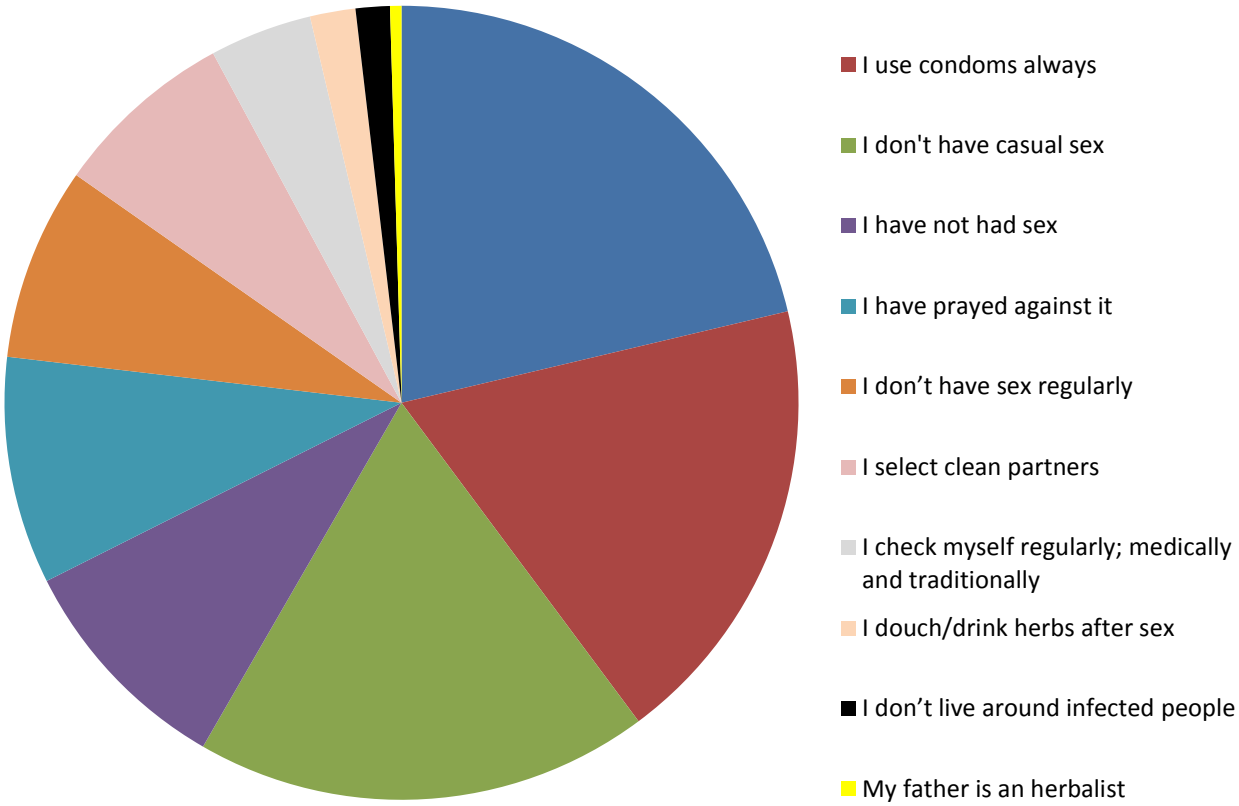


Fig 4: Reasons for respondents non-suceptibility to STIs



4.4 Alcohol consumption

Respondents' alcohol use

A history of respondents' alcohol use was investigated. Majority of respondents (81.3%) had ever consumed alcohol and of this, 70.4% still consumed regularly. Mean age at alcohol initiation was 19.7±0.4years. This revealed that under-age drinking was not common in this society as other developing countries. Alcohol consumed by respondents included beers (Guilder, Star, Big / Small Stout e.t.c) and locally brewed alcohol called names like *shekpe, ale, Jedijedi, afato* e.t.c. The locally brewed alcohols were measured to consumers in stainless steel cups an equivalence of 3 shots/ cups per bottle. Table 4.3 shows a breakdown of respondents' alcohol history.

According to NIAAA (2004) and United States Department of Agriculture (USDA) moderate drinking for a woman is defined as 0-7 drinks per week (not more than one drink per day) and heavy drinking as more 7 drinks per week or more than 3 drinks per sitting or per day. However, in this survey respondents were asked for their drinking status in the previous four (4) weeks preceding the survey, 118 (55.1%) had taken alcohol at least once in the last 4 weeks, 96 (44.9%) took alcohol four or more times per week and for some, more than one drink on those drinking occasions. Based on the USDA guideline and available data, 108 (50.5.9%) respondents were moderate drinkers (less than 7 bottles per week), 51 (23.8%) sometimes got intoxicated while 55 (25.7%) were heavy drinkers (above 7 bottles per week) for the penultimate 4 weeks. One of the indicators for alcohol dependency was finding it difficult to stop drinking once they started or getting drunk on a regular basis.

Table 4.3 Respondents' alcohol history

Respondents' alcohol history	Frequency	Percentage %
Ever drank alcohol		
YES	304	81.3
NO	66	17.7
No response	4	1.0
Total	374	100
Age at alcohol initiation		
5-9yrs	2	0.7
10-14yrs	23	7.6
15-19yrs	81	26.6
20-24yrs	52	17.1
25-29yrs	29	9.5
30-34yrs	6	1.9
35yrs and above	3	0.9
Can't remember/ I don't know	108	35.5
Total	304	100
Currently drinking alcohol		
YES	214	70.4
NO	75	24.7
No response	15	4.9
Total	304	100
Length of years respondents had been steadily drinking alcohol:		
1-5years	101	47.2
6-10yrs	72	33.7
11-15yrs	17	7.9
Over 16yrs	19	8.9
No response / Can't remember/I don't know	5	2.3
Total	214	100

4.5 a. Respondents perceived relationship between alcohol and sex

When respondents were asked if they thought any relationship existed between alcohol and sex, a greater percentage (64.4%) thought there was no relationship between alcohol and sexual encounters while 35.6% (133) respondents thought there was a relationship. Respondents were asked to mention the connections or relationships they knew existed between alcohol consumption in the general population in a multiple choice response, and why they thought alcohol consumption was rampant in the society. Various reasons were given for this. Two hundred and fifty two respondents (58.2%) believed it gave men sexual prowess by prolonging ejaculation and that alcohol especially the local preparation is believed to work as an aphrodisiac. Other reasons for alcohol use were highlighted in multiple responses in table 4.4.

b. Respondents' perceived reasons for public alcohol consumption

The same question was again asked but this time the question was directed at respondents who were still consuming alcohol as to why she consumes alcohol and what purpose(s) the alcohol fulfils in her day-to-day activities. Although majority of the respondents (58.2%) said alcohol was believed to be taken for sexual prowess, they as respondents took alcohol not for that reason alone but for a variety of other reasons. This is observed in table 4.5 (Multiple choice responses.)

Table 4.4: General reasons for public alcohol consumption

Reasons for alcohol consumption	No of respondents	%
Sexual prowess, creates the urge, boldness to have different kinds of sex	252	67.4
Cause misbehaviours	20	5.4
It enhances your motive of consumption	18	4.8
Can lead to unprotected sex with risk partner / lack of fear	13	3.5
Gives boldness to approach a partner	7	1.9
It leads to sexual aggression, rape	5	1.3

Table 4.5: Respondents' reasons for the use of alcohol (Multiple responses)

Reasons for respondents' use of alcohol	No of respondents N=214	%
Whenever I feel like, enjoyment and relaxation	202	94.4
To cure common ailments e.g. colds, catarrh	91	42.5
For peer or societal acceptance	73	34.1
To create sexual urge	48	22.4
To test or taste the alcohol for its potency	14	6.5
To improve my wisdom, retentive memory	9	4.2
To increase sexual function, prolong ejaculation	9	4.2
To see very well, visual acuity	8	3.7
To enforce law and order among patrons	5	2.3
To induce sleep	5	2.3
To abort pregnancy, as a contraceptive, douche after sex	3	1.4
Strength rejuvenation, physical strength to make trouble	3	1.4
For boldness to approach a man	1	0.5
No response	26	12.1

4.6 Respondents' perception of the link between alcohol consumption and sexual practices.

When respondents were asked of the perceived relationship between alcohol and sexual encounters, a greater percentage 237 (63.4%) still maintained that there was no link or relationship between alcohol consumption and sexual behaviour, 128 (34.2%) said there was a slight relationship between the two variables while 9 (2.4%) said that there is a strong relationship between alcohol consumption and sexual encounters. However on a general belief, 107 (28.6%) respondents believed that alcohol especially local alcoholic beverage mixed in the right proportion can improve one's sexual function while 106 (28.3%) believed it doesn't, 2 (0.5%) respondents did not give any response. Various relationship strengths were given for the variables as highlighted in the Table 4.6.

Table 4.6: Respondents perception of link between alcohol and sexual practice

Respondents perception of link between alcohol and sexual practice	Responses	%
It makes one sexually aggressive	**3**	**33.3**
It can lead to rape of a child or a minor	**2**	**22.2**
It can forcefully taking advantage of a partner or being taken advantage of	**4**	**44.**

4.7 Respondents' Sexual Behaviour:

Respondents' sexual history:

Out of a total of 374 respondents, 355 (94.9%) had been sexually exposed, 19 (5.1%) were not. Of the 355 who had been sexually exposed, 259 (73.0%) were still sexually active in the last 12 months, while 96 (27.0%) said they were not.

Respondents number of sexual partners and their occupations

Slightly more than a third (32.1%) of the respondents had only one sexual partner but majority of the respondents had more than one sexual partner as highlighted in table 4.7. Also, business men, traders / market sellers, video tape lenders/ sellers were the major occupations of the sexual partners of the respondents.

Respondents' condom use

Level of condom use among respondents could not be ascertained since some respondents were married. However, among respondents with multiple sexual partners, various reasons were given by for engaging in unprotected sex, these responses are contained in table 4.8.

Table 4.7: Respondents' Sexual Behaviour

Respondents Sexual Behaviour	Number	%
Respondents sexual activities in the last 12 months		
Yes	259	76.8
No	115	30.8
No of respondents' sexual partners		
One	120	32.1
Two	180	48.2
Three	45	12.0
Four	5	1.3
Five	5	1.3
No sexual partner	19	5.1
Total	374	100
***Occupations of respondents' sex partners**		
Business men, traders / market sellers, video tape lenders/ sellers	136	36.4
He doesn't have a job yet / He is jobless	80	21.4
Commercial drivers of buses and motorcyclists	57	15.2
No response / I don't know/ I don't have	50	13.4
Civil servants	45	12.0
Students, Apprentices	6	1.6

Table 4.8: Respondents' reported condom use

Respondents responses	Number	%
How often do you normally have unprotected sex?		
Seldom / Occasionally	173	49.0
Never	154	43.6
Always	25	7.1
The last time you had sex did you and your partner(s) use condom?		
Yes	163	45.9
No	130	36.6
I can't remember	62	17.5
Reasons respondents had inconsistent condom use (Multiple responses)		
After taking some alcohol/when drunk	1	0.4
If the lady or man is very good looking	16	6.8
If it's my husband / fiancé, I can't use condom for my husband	25	10.6
I trust my sexual partner (s)	26	11.0
If I want to get pregnant	45	19.1
My lover(s) don't like condoms	56	23.7
If I want to enjoy sex / Condom is not comfortable	96	49.7
If there is no condom around	115	48.7
If my partner is visibly safe	107	45.4

Table 4.8: Respondents' reported condom use

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If I want to get pregnant		
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If I want to enjoy sex / Condom is not comfortable	56	23.7
If there is no condom around	96	49.7
If my partner is visibly safe	115	48.7

4.8 Respondents' and their sexual partners' alcohol use

A greater percentage of the sexual partners of the respondents use alcohol and also more respondents also use alcohol before their sexual encounters. Responses are also contained in table 4.9 and 4.10

Table 4.9 Respondents' sexual partners' alcohol use

Respondents responses	No of respondents	%
Do you have sexual partners who take alcohol? n=355		
Yes	227	63.9
No	115	32.3
No responses	13	3.7

Table 4.10: Respondents' alcohol use before sex

Respondents responses	No of respondents	%
Do you take alcohol before sex?		
Yes	205	91.1
No	20	8.9
Frequency of alcohol use before sex		
Seldom / Occasionally	185	90.2
Always	20	9.8

4.10 Risky practices: Alcohol intoxication

Of the 214 respondents who were still taking alcohol, 106 (49.5%) respondents were alcohol dependent out of which 55 (25.7%) respondents said they normally got drunk. A question was poised at them in order to expose some of their risky practices. Respondents were asked to inundate what they normally do when they are drunk or when they think they had had too much to drink. Multiple responses were given per respondent.

Table 4.11: Respondents' actions when drunk

Respondents actions when they have had too much to drink	Number	%
Public / private display of drunkenness (Physical, temporary madness)	45	42.5
It leads to hangover	23	21.7
Verbal display of drunkenness, talking jargons/ I sing a particular tune	13	12.3
I feel good, relaxed	11	10.4
It makes me sleep too much, dizzy	6	5.7
Boldness to confront any situation	1	0.9
Leads to health problems: Malaria, liver problems	1	0.9
I do nothing	1	0.9
I feel intellectually capable, my brain becomes sharp, gives wisdom	1	0.9
I withdraw from people / activities	1	0.9
I look for a sexual partner, to lessen my sexual tension	3	2.8

4.11 Means of STI knowledge score by socio-demographic characteristics of respondents

Mean Knowledge of STIs was significantly different among the different age groups:
Respondents that fall within the age-group of 20-29 years had the highest STI Knowledge followed by 30-39 and the least is respondents aged between 50-68 years.

Mean Knowledge of STIs was significantly different among the different religions: Respondents who were atheists had the highest STI Knowledge followed by Muslim respondents. Traditional respondents had the least mean knowledge score.

Mean Knowledge of STIs was significantly different among the different marital status:
Single / never married respondents had the highest STI knowledge closely followed by Married respondents. Separated and Divorced respondents had the least knowledge score.

Mean Knowledge of STIs was not significant among the 2 classes of brewers and sellers and the sellers of industrially brewed alcohol. Sellers of industrially made alcohol had the higher STI knowledge has compared to their counterpart who sold and /or local made alcohol

Mean Knowledge of STIs was also not significant among the number of hours exposed to alcohol sales. Respondents who sold alcohol beyond 20 hours had the highest STI knowledge followed by those who sold for 9 hours below.

Table 4.12: Mean knowledge score of STI by socio-demographic characteristics of respondents ((N=363)

Variable	Mean	SD	*P*-value
Age-group (years)			
20-29	10.2	2.0	
30-39	8.7	2.3	0.000
40-49	7.6	2.6	
50-68	6.9	2.6	
Religion			
Christianity	9.5	2.6	
Islam	9.6	2.4	
Traditional	6.3	3.0	0.000
Atheism	10.5	1.7	
Marital status			
Single	10.3	2.2	
Cohabiting	8.4	2.7	
Married	8.6	2.5	0.000
Separated	7.7	2.7.	
Divorced	7.7	2.2	
Widowed	8.5	1.9	
Occupation			
Sellers of industrial alcohol	8.7	2.7	0.759
Sellers/brewers of locally brewed alcohol	8.6	2.5	
Hours exposed to sales/brewing			
0-9 hours	9.2	2.5	
10-19 hours	8.4	2.6	0.310
20 hrs and above	9.7	3.8	

4.12 Means of risky behaviours by socio-demographic characteristics of respondents

Risky behaviours cover a wide range of activities. But for the purpose of this research, risky behaviours include having multiple sexual partners, inconsistent condom use, overuse of alcohol (alcohol intoxication) and alcohol use before sexual encounters e.t.c For each demographic characteristics, these behaviours were examined in respondents and the mean for each group was evaluated.

Means of risky behaviours was significantly different among the different age groups.
Age group 30-39 years had the highest risky behavioural practices; followed by age-group 40-49. Age-group 50-68 years had the least mean for risky sexual practices.

Means of risky behaviours was significantly different among the different marital status.
Cohabiting respondents followed by married respondents had the highest risky behavioural practices while the single respondents had the least risky behaviours.

Means of risky behaviours was significantly different among the different religious orientations. Respondents who were Atheists had the highest mean for risky behaviours closely followed by respondents who were Muslims. Traditional respondents had the least mean for risky behavioural practices.

Means of risky behaviours was not significantly different among the sellers of locally brewed alcoholic drinks and sellers of industrially made alcohol. However, sellers of locally brewed alcoholic drinks had the higher risky behaviours as compared to sellers of industrially made alcohol.

Means of risky behaviours was also not significantly different among the different age groups. Respondents who were exposed to alcohol sales or brewing for 10-19 hours had the highest risky practices followed by respondents who were exposed for 0-9 hours.

Table 4.13 Respondents' means of risky behaviours by socio-demographic characteristics of respondents:

Variable	Mean Risky behaviours	SD	*P*-value
Age-group (years)			
20-29	3.5	1.8	
30-39	4.4	1.8	0.000
40-49	3.9	1.8	
50-68	2.9	1.5	
Marital status			
Single	2.9	0.8	
Cohabiting	4.4	0.7	
Married	4.3	0.8	
Separated	3.8	0.8	0.000
Divorced	3.8	0.8	
Widowed	3.9	0.5	
Religion			
Christianity	3.9	1.6	0.046
Islam	3.9	1.9	
Traditional	3.0	1.3	
Atheism	5.8	3.3	
Occupation			
Sellers of industrial alcohol	3.9	1.7	0.310
Sellers/brewers of locally brewed alcohol	4.1	1.9	
Hours exposed to sales/brewing			
0-9 hours	3.7	1.9	
10-19 hours	4.1	1.8	
20 hrs and above	2.7	1.3	0.05

4.13 Respondents means of risky alcohol use and socio-demographics

As discussed earlier, variables measuring risky alcohol use include; taking alcohol before sexual encounters, having more than 3 bottles of industrial alcohol or 3 cups of local alcohol at one sitting and drinking to intoxication. The age group that had the highest incidences of risky alcohol use was women between the ages of 40-49 years followed by 30-39 years. Women aged 20-29 years had the lowest risk. Cohabiting women also had the highest risky alcohol use while single women had the least. Religion appeared not play a role in this as the highest incidence was found among atheist closely followed by Muslims. Women who sold local alcoholic beverages had the higher risk of alcohol use while respondents who were exposed to alcohol sales for 10-19 hours had the highest risk.

Table 4.14: Respondents' means of risky alcohol use and socio-demographics

VARIABLE	N	Mean	SD	*P*-value
Age-group (years)				
20-29	103	3.7	1.8	
30-39	138	4.7	1.6	0.000
40-49	109	4.7	1.6	
50-68	24	4.4	1.2	
Marital status				
Single	61	3.1	1.7	
Cohabiting	45	5.2	1.7	
Married	167	4.6	1.5	
Separated	53	4.7	1.6	0.000
Divorced	29	4.0	1.3	
Widowed	19	4.0	1.5	
Religion				
Christianity	130	3.9	1.6	
Islam	234	3.9	1.9	
Traditional	6	3.0	1.3	0.046
Atheism	4	5.8	3.3	
Occupation				
Sellers of Industrial alcohol	166	4.5	1.7	
Sellers/brewers of locally brewed alcohol	208	4.3	1.7	0.391
Length of exposure				
0-9 hours	121	4.3	1.7	
10-19 hours	242	4.4	1.8	0.05
20 hrs and above	3	4.0	1.3	

4.14 Test of Hypotheses

Hypothesis 1: There is no relationship between knowledge of sexually transmitted infections (STIs) and age group, marital status and religion of respondents.

A significant statistical association was found among respondents' age-group, religion and marital status and their knowledge of sexually transmitted infections (STIs) $p<0.05$. From Table 4.15, 81 respondents (78.6%) of age-group 20 - 29 years, 89 (68.5%) Christian respondents (48.7%) and 51 Single respondents (83.6%) had the highest STI knowledge. Hence the null hypothesis stated above is rejected.

Therefore, alternative hypothesis which stated that there is a relationship among age group, marital status and religion of respondents and knowledge of sexually transmitted infections is therefore accepted.

Table 4.15: Respondents STI knowledge by Age, Religion and Marital Status

Socio-demographic characteristics	Knowledge of STIs		X^2	*P*-value
	High	Low		
Age-group				
20-29	81 (78.6%)	22 (21.4%)		
30-39	75 (54.3%)	63 (45.7%)	39.22	0.000
40-49	44 (40.4%)	65 (59.6%)		
50-68	7 (29.2%)	17 (70.8%)		
Religion				
Christianity	89 (68.5%)	41 (31.5%)		
Islam	114 (48.7%)	120 (51.3%)	17.47	0.000
Traditional	1 (16.7%)	5 (83.3%)		
Atheism	3 (75.0%)	1 (25.0%)		
Marital status				
Single	51 (83.6%)	10 (16.4%)		
Cohabiting	23 (51.1%)	22 (48.9%)		
Married	88 (52.7%)	79 (47.3%)		
Separated	25 (47.2%)	28 (52.8%)	26.00	0.000
Divorced	11 (37.9%)	18 (62.1%)		
Widowed	9 (47.4%)	10 (52.6%)		

Hypothesis 2:

There is no relationship between respondents' age-group and marital status, and risky behaviours.

A significant statistical association was found between respondents age-group and marital status and their risky behaviours as $p<0.05$. From Table 4.16, 93 (67.4%) respondents of age-group 30-39 years and 116 (69.5%) respondents that are married had the highest risky behaviours.

Therefore, alternative hypothesis, which stated that there is a relationship between age and marital status of respondents and risky behaviours, is therefore accepted.

Table 4.16: Respondents Risky behaviours by Age and Marital Status

Socio-demographic characteristics	Risky behaviours		X^2	*P*-value
	High	Low		
Age-group				
20-29	55 (53.4%)	48 (46.6%)		
30-39	93 (67.4%)	45 (32.6%)	14.3	0.002
40-49	66 (60.6%)	43 (39.4%)		
50-68	7 (29.2%)	17 (70.8%)		
Marital status				
Single	24 (39.3%)	37 (60.7%)		
Cohabiting	31 (68.9%)	14 (31.1%)		
Married	116 (69.5%)	51 (30.5%)	22.9	0.000
Separated	26 (49.1%)	27 (50.9%)		
Divorced	14 (48.3%)	15 (51.7%)		
Widowed	10 (52.6%)	9 (47.4%)		

Hypothesis 3: There is a relationship between the hours of exposure to alcohol and risky behaviours.

There is no significant statistical association between respondents risky behavious and the length of alcohol exposure as $p>0.05$. From Table 4.17, respondents that were exposed to alcohol sales for 10 to 19 hours had the highest risky behaviours.

Therefore, alternative hypothesis, which stated that there is no relationship between length of alcohol exposure and risky behavious of respondents, is therefore accepted.

Table 4.17: Respondents risky behaviours by length of alcohol exposure

Length of alcohol exposure	Risky behaviours		X^2	*P*-value
	High	Low		
0-9 hours	62 (51.2%)	59 (48.8%)		
10-19 hours	151 (62.4%)	91 (37.6%)	4.92	0.085
20-29 hours	1 (33.3%)	2 (66.7%)		

CHAPTER FIVE

5.0 DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Socio-demographic Characteristics of Respondents

The respondents recruited for this study were women who were involved in the brewing and selling of locally brewed alcohol as well as sale of industrially brewed alcohol in Ibadan North East LGA. This is because in Nigeria and elsewhere in Africa, there are some businesses that are designated as women business; the brewing and selling of locally made alcohol is mostly practised by women. Women are also in the forefront of selling industrially brewed alcohol in Nigeria (Holtzman 2001**;** McCall 1996**;** Obot 2007; Aldrich, 2012).

Another reason for using women as the target population in this study was because findings in previous study on alcohol sales in Africa show that women who were involved in the brewing and sales of alcohol were more exposed to alcohol consumption abuses and its attendant consequences more than other women in the community. Of note also is that many sexual activities that go on around beer parlours and roadside stalls are usually conducive for risky sexual practices (Morojele, 2006).

More of the respondents were within the age group of 30-39 years. This agrees with Mamman (2002) who reported that the average age of women in the alcohol business was around 32 years. More of the respondents had secondary school education. This may be due to the free education programme introduced in the region in 1955 which made it possible for the people to have a head start above those in other parts of the country and thus made the literacy rate in the area far higher than the literacy rate in other parts of the country (Kolawole and Adepoju, 2007).

Majority of the respondents brewed and sold locally made alcohol as opposed to industrially made alcohol. This may be due to the fact that there are no guiding rules or regulation on the brewing of local alcohol in Nigeria and materials for the brewing are cheap to get. Also, the locally brewed alcohols are far cheaper than the industrially brewed ones. It might also be as a result of the fact that in the 1980s, peasant households in many African countries faced a

collapse of crop marketing infrastructure and removal of subsidized productive inputs because of the harsh economy which was experienced in most of these countries. In this context, rural alcohol production became an important income-diversifying activity, particularly for women and because many of these women had no other marketable skills, alcohol production and sales represented a lucrative and probably, the only option for them (Niger-Thomas, 2000). This business however exposed them to negative consequences of alcohol abuse which include risky sexual behaviour including sexual abuse and rape as asserted by Luginaah and Dakubo (2003).

The result shows that majority of the respondents are of Yoruba extraction. This may be due to the fact that the study site is in the south-western part of Nigeria predominantly inhabited by the Yoruba. Majority of the respondents were Muslims and this is at variance with the findings of Mamman et al (2002) which revealed that there are more Christians involved in the brewing and selling of local alcohol business as opposed to other religions. This finding may be due to the fact that there are no strict Islamic laws which prohibit the brewing and sales of alcohol in the southern part of Nigeria compared to the Northern part of the country where there are strict Islamic laws that prohibit both brewing and selling.

5.2 Knowledge of Sexually Transmitted Infections (STIs)

The socio-demographic characteristics of respondents in this study were also explored to know their level of knowledge of STIs. Respondents that were single were found to have higher knowledge of STIs than others. This is at variance with the study of Lan et al (2009) which shows that young women and women who had never married had the lowest knowledge on STIs.

The highest knowledge of STIs was also found in age group 20-29 years. This is in agreement with previous study done by Oyebanji (2011) and Mbizvo *et al* (1997) who found out that STI knowledge was higher in respondents that were above 19 years. In their study, Lan *et al* (2009) proposed that knowledge of STIs in age group followed a progressive

pattern. This was true of this study group in a downward trend. The knowledge was higher in younger respondents and it got lower as age group progressed.

Though this study shows that respondents who spend more time selling alcohol have the highest STI knowledge this might as well serve as an avenue for exposure to risky sexual behaviours as several studies around the world have shown that contextual factors within which alcohol and sexual behaviors intersect are critical in understanding how alcohol influences sexual behavior (Singh 2009, Hong et al. 2009, Sivaram et al. 2008, Kalichman et al. 2008, Grov et al. 2007, Xia et al. 2006, Zachariah et al. 2003, Weir et al. 2003, Kapiga et al. 2003, Kapiga et al. 2002 and Fritz et al. 2002).

Majority of the respondents knew that HIV and AIDS are STIs. This may be due to the saturated information about HIV/AIDS in Nigeria since the discovery of the first case of the disease in country. Every available medium has been utilized in educating the vulnerable groups including women of the epidemiology of the disease. The finding also agreed with the NDHS findings which revealed that majority of women in the survey had heard of HIV/AIDS (NDHS, 2008).

5.3 Risk of infection based on knowledge on STIs

Majority of the respondents reported non-susceptibility to HIV/AIDS as a result of misconception they had about means of contracting the disease. This is revealing because it is now more than two decades after the first case was discovered in Nigeria and the resources that have been committed to the fight of taming the spread of the disease have been immense. The persistence in misconception among vulnerable population like the respondents in this study calls for attention from concerned stakeholders. Efforts should be made to intensify programmes that will adequately reach this population with the right message.

Most of the respondents were of the view that alcohol give sexual prowess to consumers and that they consumed alcohol themselves due to societal acceptance. This corroborates the findings of Le beau and Yoder (2008), Oguntola (2012), Mamman, (2002), and Heath *et al*,

1998 which shows that their respondents reasons for alcohol consumption include boldness, contraception, inducing sexual urge and societal approval.

5.4 Risky behaviours:

5.4.1 Alcohol Use

Few studies have been carried out on the use of alcohol among women in Nigerian but studies carried out in developing countries elsewhere showed an increasing trend among women. In this study, a number of the respondents initiated alcohol consumption before they were 20 years old. This might have occurred at a family setting since in most African countries, alcohol is a ubiquitous part of everyday life, cutting across the rural/urban, gender, and class divides (Bryceson, 2002). Its presence is prominent in several life domains, including religious, social, psychological, economic, and political spheres.

Majority of the women in this study still consumed alcohol as at the time of this study. This is at variance with the findings of the study done by Mamman et al (2002) which show that fewer women consumed and abused alcohol in their community but that alcohol use among women is on the increase yearly. The same study done by Mamman however agrees with the result of this study which puts respondents' mean age of alcohol initiation at approximately 20 years. This result also corroborates the assertion by WHO that age of alcohol initiation in women is between the ages of 20-34 years (WHO, 2005).

In this study, more married / cohabiting women consumed alcohol than others who were not in a stable marital relationship. This is at variance with the findings of Heath *et al*. (2004) which revealed that marital status appears to modify the effects of inherited probability for drinking. It does not also agree with the findings of Hanna, Faden and Harford (1993), Jonas and Dobson (2000), and Mamman et al (2002) which showed a decrease in alcohol consumption among married women, widowed or those who had remarried but increased among those who were unmarried, separated and divorced.

Respondents who were exposed to alcohol for 10-19 hours engaged more in risky behavior compared to others. This agrees with the study done by Mbulaiteye *et al*.(2000) which revealed that risky behaviours were related to hour of exposure to beer sales. Respondents aged 40-49 years had the highest risky alcohol consumption and this corroborates with the results of the study done by Rosenberg, Palmer, Rao and Adams-Campbell (2002) which also found the prevalence of current drinking highest among women who were between 40-49 years of age. The finding of this study also agrees with the findings of Singh and Singh (2004) which shows that reasons for alcohol consumption by women ranged from societal acceptance, sex stimulant and peer influence.

Women in this study generally took alcohol to relax and as a form of peer acceptance also corroborating studies done by LeBeau and Yoder (2008), Mamman (2002), and Heath *et al*.(1998).

5.4.2 Sexual practice

Majority of the respondents had been sexually exposed. This is in agreement with Mazengia and Worku (2009) who postulated that the mean age for initiating sex in urban women is 17.18+2.3. Also, majority of the respondents were sexually active in the twelve (12) months preceding the study and more had more than one concurrent sexual partner. This corroborates the study done by Oguntola (2012) which showed that most of the respondents were sexually active and even had concurrent sexual partners.

Most of the respondents' sexual partners were artisans. This may be due to the fact that then, and up till now in the country, many able-bodied men and women have not been gainfully employed. This has led to various intervention efforts on the part of the various state and the federal governments in encouraging people to acquire basic skills that they would need to create jobs where government could not offer any so that they could start their own jobs (Kolawole and Adepoju, 2007). Of note also is the increase in number of sexual partners who were not employed as at the time of the study. This may be due to the fact that in the country the unemployment rate is alarming. To address this problem (unemployment), governments

at various levels have taken steps to ensure that individuals acquire basic skills needed to be self reliant (Kolawole and Adepoju, 2007).

In this study majority of the respondents especially those who had more than one sexual partner were seldom consistent in condom use. This is in agreement with the study done by Kebede *et al*. (2005) which shows that sex after drinking alcohol is more likely to be unprotected because alcohol decreases self control and sexual negotiation skills of people, it also agrees with Aphyra's (2012) study which reported that respondents who consumed alcohol before their last sexual encounter also reported inconsistent condom use and that drinking alcohol significantly increased the odds of unprotected sex not only in men but also in women. Also Ikuesan (2002) in his study reported that alcohol use can lead to risky sexual practice.

Women aged 30-39 years in this study engaged more in risky behaviours. This might be due to the fact that more women in this study fell between this age group. Divorced respondents had the highest risky sexual practices as compared with the other marital status. This is similar to the findings of a study carried out by Lagarde, Pison and Enel (1996) which reported that widowed and divorced women were more likely to engage in higher risk behaviour, low rate of condom use and seldom protective measures against HIV infection. Cohabiting women had the highest risky alcohol use coefficient and were found to engage in all risky behaviours more than the other statuses followed by separated women and married women. High risky behaviours were also found among respondents who were Muslims compared to those of other religions. Respondents who were exposed to alcohol sales for 10-19 hours had the lowest STI knowledge but the highest risky practices. Also, sellers of industrial alcohol had higher STI knowledge yet they engaged more in the risky behaviours especially risky alcohol use as compared to their counterparts.

5.5 Relationship between sexual behaviour and alcohol consumption

More of the respondents believed that there is a relationship between alcohol consumption and sexual encounters. This agrees with previous studies (Baselt and Danhof, 1993; Babikian *et al*. 2004; Trocki and Leigh, 1991; Lawal, 2002) which revealed that alcohol consumption

impairs behaviour. The effect of alcohol on the brain cannot be overemphasized and this effect increases as its quantity in the blood increases (Baselt and Danhof 1993). The findings of this study also reveal that some of the respondents believed that alcohol addiction could lead to rape and even murder. This further affirmed the result of studies done in others countries in Africa which shows that uncontrolled consumption of locally brewed alcohol often lead to trauma and injuries from fights and family violence, prostitution and child neglect, poor personal hygiene and malnutrition (Molamu and MacDonald, 1996), high rate of HIV prevalence among those who have ever consumed alcohol compared to nondrinkers (Mbulaiteye *et al*., 2000) sexual abuse and rape (Popova, Rehm, Patra and Zatonski; 2007)

The level of Knowledge of STIs was low in this population and this is in agreement with findings of Lan *et al*. (2000) which revealed that STI knowledge among women who participated in the study was low. Anwar *et al's* (2010) study supports this claim. Knowledge, Attitude, Belief, and Behaviour (KABB) models have been used through questionnaire copies to measure behaviour change. It is a general belief that increased knowledge, along with positive attitudes and beliefs about HIV/AIDS and other STIs, will lead to positive behaviour changes, e.g. less risky behaviours such as use of condoms, abstinence, and reduction in number of partners. However, some studies indicate that increased knowledge of HIV/AIDS does not always result in a positive behaviour change (CDC, 1995). This study differs in its finding; a low level of STI knowledge informs a high susceptibility to risky behaviours.

5.6 Implications of the study

The findings of this study have several implications for planning, development and implementation of STI prevention programmes among women in the informal sector of the economy in Nigeria. Health education principles and strategies can be used to address the challenges identified in this study.

The low knowledge level of epidemiology of other STIs apart from HIV/AIDS and the attendant noticed risky sexual behaviours among participants in this study is revealing. The

last two decades in countries in sub-Saharan Africa, including Nigeria, has witnessed huge investment in both human and material resources to enlighten the general public on the epidemiology of HIV/AIDs and other STIs, and its prevention. The results of this study show that concerted efforts are still needed to reach out to women and other target groups who are engaged in the informal sector of the economy and are mostly not covered in HIV/AIDS campaigns. It is imperative then that future programmes should make provisions to reach out to the informal sector of the economy where actors are also vulnerable to STIs and their consequences.

The results of this study also show that abuse of alcohol was noticed among this population. This can impact negatively on their socio-economic, health and other commitments as alcohol addiction can lead to road traffic accidents, domestic troubles etc. There is need for a well planned prevention programme targeted at the participants in this study to correct the noticed lapse in alcohol consumption among the study population.

Majority of the people recruited for this study were found around the motor parks where they operated to meet the perceived needs of their customers. This affirms the assertion of Federal Road Safety Corps that alcohol is one of the reasons of road traffic accidents in Nigeria. The continuous allowance for the sale of alcohol in motor parks suggests an approval by concerned authority of drivers using alcohol before they drive (Odero and Zwi, 2005).

5.7 Conclusion

In conclusion, the findings of this study show that there is a low level of knowledge of STIs and also, risky sexual behaviours exist among participants in this study. More explorations still need to be done in the area of intensive public enlightenment on the danger involved in uncontrolled use and abuse of alcohol and its consequences, if efforts to consolidate on the recent achievements of lowering the prevalence of HIV will be built on and maintained.

5.8 Recommendations

1. Risky patterns of drinking overlap with other risky patterns of behaviour to compound the spread of HIV/AIDS. Interventions must consider individual/ group perceptions and expectations surrounding alcohol use and sex in the context of the broader socio-economic conditions that simultaneously influence risk behaviours. Prevention initiatives must identify key patterns of alcohol use and sexual risk behaviours (e.g. dissuading acceptance of alcohol as a facilitator for sex, encouraging condom use among these women by making it popular, cheap and easily available in the beer parlors and local wine stalls and other places where sexual activities take place).

2. Research-based interventions that target these overlapping behaviours can provide a unique opportunity to strengthen HIV/AIDS prevention activities. For example, prevention education in treatment facilities or high risk sites such as bars, night clubs and guest houses can address both problem drinking and risky sexual behaviours. More general education programmes will inform local communities about the potential intersections of alcohol and HIV/AIDS and the merit of responsible drinking thereby reducing problem drinking behaviours. Religious centers should also endeavor to emphasize this link between alcohol and risky sexual practices. The religious leaders in the various religious institutions should be involved in this campaign in order for it to be effective.

3. The role of macro socio economic conditions in fostering unsafe sexual relationships also deserves greater attention. Causes of socioeconomic vulnerability includes lack of decently paid work for a great majority of women living in developing countries, employment and migration policies that force large numbers of men and women to migrate for work leaving behind their spouses and poor families thereby exposing young females to early hawking of products especially ones that are mainly consumed by men such as alcohol, drugs and sex. All these support proliferation and selling of sex for money. Reducing these conditions would be far more effective in promoting women sexual health (Berer, 2003). Currently, women and girls are more vulnerable to sexual

transmission of HIV/AIDS and other STIs particularly in a developing country like Nigeria. This could have been prevented if social consciousness about it had been developed in 1985 and prevention policies adopted to block all its loop holes.

4. Legal drugs like alcohol cause as much harm if not more than illicit drugs. This enormous cost of harmful use of alcohol in terms of health and social harms cannot be ignored and calls for regulation of alcohol. Governments should consider more education programmes to specific populations and / or raising the price of alcohol so it becomes less widely available. For the same end governments should also place stringent measures on those that brew locally made alcohol (which sometimes have higher alcoholic content). In the majority of African countries, regulatory and legislative mechanisms regarding trade, industrial and agricultural decisions on alcohol that consider public health, advertising and marketing, availability, pricing and illicit marketing do not exist or are not enforced. Existing policies have been gradually weakened or dismantled, often from pressure of increasing trade globalization.

5. The predominant mode of transmission of both HIV and other STIs is sexual intercourse. Measures for preventing sexual transmission of HIV and STIs are the same, as are the target audiences for interventions. Delaying sexual debut is the pillar of HIV/STIs prevention among youths especially women. This can be achieved through sexual education programmes at earlier life both for in-school and out-of-school youths. To address the out of school youths, it is recommended to conduct repeated community conversation programmes that are youth-driven and motivated. One of these measures could be establishing rural reproductive health and anti-AIDS clubs in community schools and gatherings. Parents and teachers should be trained in a way that enables them to acquire the necessary skills to be imparted on the children and wards. Strengthening the norm of virginity, which delays sexual intercourse, should be advocated. Equally for those who have initiated sex, the skills and service to practise safe sexual life should be availed. In addition, strong evidence supports several biological mechanisms through which STIs facilitate HIV transmission by increasing

both HIV infectiousness and HIV susceptibility. Thus, health education as prevention, early detection and treatment of individuals with STIs is an important part of an HIV control strategy.

In summary, if the incidence / prevalence of STIs is high in a country, then there is the possibility of high rates of sexual transmission of HIV. Monitoring trends in STIs provides valuable insight into the likelihood of the importance of sexual transmission of HIV within a country and is part of second generation surveillance. These trends also assist in assessing the impact of behavioural interventions, such as delaying sexual debut, reducing the number of sex partners and promoting condom use. Clinical services offering STI care are an important access point for people at high risk for both STIs and HIV. Identifying people with STIs allows for not only the benefit of treating the STI, but also for prevention education, HIV testing, identifying HIV-infected persons in need of care and partner notification. Consequently, monitoring different components of STI prevention and control can also provide information on HIV prevention and control activities within a country.

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APPENDIX 1

STI KNOWLEDGE, ALCOHOL USE AND SEXUAL PRACTICE OF WOMEN ALCOHOL SELLERS / BREWERS IN IBADAN NORTH EAST LOCAL GOVERNMENT AREA

Greetings. My names are AWOLADE Victoria Opeyemi. I work for a Research Project at the Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan.

We are working our ways towards improving women's knowledge on the sexually transmitted infections especially HIV/AIDS and the socio-cultural characteristics affecting its prevalence like alcohol use among women of this profession. Data gathered would be analyzed to improve on the vulnerable people's knowledge and practice about sex and different levels of alcohol use. Your response would be kept strictly confidential. Feel free to share your ideas and you are also at no obligation to answer any question. You can opt out of the interview at any time.

This interview should take about 30 minutes of your time. Please tick ☑ the appropriate boxes that correspond to your views.

Serial Number…….

Interviewer…….

Checked by Supervisor …….

DEMOGRAPHIC CHARACTERISTICS

1. Date of Birth: Day…… Month…….. Year…….
2. Have you ever attended school? 1. Yes □ 2. No □ If no skip Q3a
3a. What is highest level of education ever attained? 1. Islamic /religious studies □
   2. Did not complete Primary 3.Completed Primary School □
   4 Did not complete Secondary□ 5 Completed □ 6. Tertiary□ 7. Still in school □
   (Specify)……..
3b. Occupation Skilled□…… Unskilled□…….

3c How many hours do you work daily?……

4. Religion: 1. Christianity□ 2. Islam □ 3. Traditional □ 4. Atheism □
5.Others Specify……..

5. Marital Status: 1.Never-married □ 2. Co-habiting □ 3. Married □ 4. Separated □
5. Divorced □ 6. Widowed □

6. Ethnic group: 1.Yoruba □ 2.Hausa □ 3. Igbo □ 4.Others specify……..

7. Where do you live? …….

KNOWLEDGE

8. Have you ever heard of sexually transmitted infections (STIs)? 1 Yes □ 2 No □

If yes mention the ones you know (in your language)……..

9. What are the ways by which one can be infected with STIs? Tick all the appropriate boxes.

1. Through sex with an infected partner	1 Yes	□	2	No	□
2. Contact with contaminated needles and sharps	1 Yes	□	2	No	□
3. From mum /dad to child (In-utero)	1 Yes	□	2	No	□
4. Sharing household utensils with infected partner	1 Yes	□	2	No	□
5. Body contact with infected person	1 Yes	□	2	No	□
6. Kissing	1 Yes	□	2	No	□
7. Mosquito bites	1 Yes	□	2	No	□

10. What are the ways by which one can cure the STIs?

1. Local concoctions	1 Yes	□	2	No	□
2. Through prayers	1 Yes	□	2	No	□
3. Through drugs from local health centres/PMVs	1Yes	□	2	No	□
4. Traditional healers	1Yes	□	2	No	□
5. Treatment at Government health centers	1 Yes	□	2	No	□

11a.Do you think you can be infected with any sexually transmitted infections?

1. Yes □ 2. □ No

b. If yes why do you think you can be infected?.....

……

c. If no why do you think you can't infected…….

……

12. What do you know about the relationship between sex and alcohol use? (Pick one of the options below)

1. There is no relationship at all

2. They are slightly related, how? …….

3. There is a strong relationship, how?.....

13. How do you perceive the relationship between HIV AIDS and alcohol use?

1. There is no relationship at all

2. They are slightly related, how? ……..

3. There is a strong relationship, how? ……..

PRACTICE

Alcohol Use

14a. Have you ever taken alcohol? 1. Yes □ 2. No □ If No Skip Q15-16

b. How old were you when you had your first alcoholic drink.....

15a. Are you still drinking? 1. Yes □ 2. No □

b. If yes, for how long have you been drinking? .....

16. What brand of alcohol do you usually take?

1. Beer, Guldermax, Stout e. t. c Specify brand……..
2. Wines Specify brand/type…….
3. Spirits, Brandy……..
4. Palm wine, burukutu e. t. c
5. Local gins e. g shekpe ale, opa eyin e. t. c

17. What are the uses of alcohol that you know? ……

18. Who are your most frequent patrons? Men □ Women□□

18b What is/are their occupation(s)?……

19. What times (hours, days and season, do you have highest sales?…….

20. During the last 4 weeks, how often have you had bottles of drinks containing alcohol? 1. Never □ 2. Less than once a week □ 3. At least once a week □ 4. Four or more times a week □ 5. At least every day □

21. How many bottles of drinks containing alcohol do you have on a typical day when you are drinking? 1. 1 to 2□ 2. 3 to 5 □ 3. 6 or more □

22. How often do you have 5 or more bottles of alcoholic drinks in one occasion?
1. Never □ 2. Occasionally (special gatherings) □ 3. Monthly □ 4. Weekly □
5. Daily/almost daily □

23. How often during the last year did you find out that you were not able to stop drinking once you had started? 1. Never □ 2. Occasionally (special gatherings) □ 3. Monthly □ 4.Weekly □ 5. Daily/almost daily □

24. How often during the last 12 months have you been unable to remember what happened the night before? 1. Never □ 2. Occasionally (special gatherings) □ 3. Monthly □ 4. Weekly □ 5. Daily/almost daily □

25. Why do you take alcohol?.....

26. When people take alcohol do they normally get excited to have sex without precautions? 1. Yes □ 2. No □
27. Talking about sex, do you think alcohol can improve one's sexual performance? 1. Yes □ 2. No □

28. What is your belief about alcohol use and sex? …….
……
29. What are the common things people do when they have taken too much alcohol?

1. Rape (Individual or Gang)	1.	Yes □	2.	No	□
2. Sex with Spouse(s)	1.	Yes □	2.	No	□
3. Sex with unmarried spouse(s)	1.	Yes □	2.	No	□
4. Sex with paid partner(s)	1.	Yes □	2.	No	□
5. Sex with unpaid partner(s)	1.	Yes □	2.	No	□
6. Sex without condom(s)	1.	Yes □	2.	No	□

7. Others specify……

30. What do you do when you think you have had too much of alcohol to drink? ……..……..

SEXUAL PRACTICE

31. Have you ever had sexual intercourse (Anal, oral or vaginal)? 1. Yes □ 2. No □ (if No skip section to Q40)

32. How many sexual partners do you have……..?

32b. What is/are the occupation(s) of your sexual partners?……

33. Do you have sexual partners who take alcohol? 1. Yes □ 2. No □

34. Have you had sex in the last 12 months? 1. Yes □ 2. No □

35. How often do you take alcohol prior to sex? Never□ Occasionally□ Very Often□

36. The last time you had sex, did you or your partner use condom? 1. Yes □ 2. No □

37. How often do you normally have unprotected sex? 1. Never □ 2. Seldom □ 3. Occasionally □ 4. Often □

If **NEVER**, terminate the interview and thank the respondent.

38. In what circumstance(s) do you normally have unprotected sex?

1. Never _____					
2. If there is no condom around	1.	Yes □	2.	No	□
3. If my partner is visibly safe	1.	Yes □	2.	No	□
4. After taking some alcohol/when drunk	1.	Yes □	2.	No	□

5. If the lady or man is very good looking 1. Yes □ 2. No □

6. Other reasons? Please specify……

Thank you very much for your patience and for sparing time out for this interview.