

**SCHOOL OF PUBLIC HEALTH
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**FACTORS INFLUENCING ALCOHOL CONSUMPTION AMONG ADULT
RESIDENTS OF TEMA, COMMUNITY ONE IN THE GREATER ACCRA
REGION**



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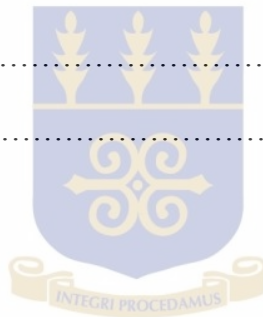
DECLARATION

I Rita Patricia Frimpong-Mansoh achieved this work independently under the supervision of Dr. Samuel Sackey. I declare that except for other peoples work which have been duly acknowledged, this work is the result of my own original research and that this dissertation either in whole or part has not been presented elsewhere for another degree.

Candidates Name: Rita Patricia Frimpong-Mansoh

Signature.....

Date.....



Supervisor's Name: Dr. Samuel Sackey

Signature.....

Date.....

DEDICATION

This work is dedicated to my husband Daddy Piero and my children Mawuena, Dzifa and Eyeram the thoughts of whom urged me on in this dissertation.



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My sincere thanks goes to the almighty God who kept me through my training at the School of Public Health, University of Ghana, Legon. I owe everything to him.

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ABSTRACT

Alcohol consumption is a long lasting widespread and varied man custom. It has become a growing challenge in many African countries of which Ghana is no exception. In spite of the numerous health and social problems associated with its use and abuse, data on alcohol consumption is insufficient and not collected consistently. This informed the inclusion of alcohol questions in the Ghana Demographic and Health Survey, 2008.

This study was a cross sectional study of 412 adults aged 18 years and above that sought to determine the proportion and the factors influencing alcohol consumption in Tema Community One. Data was collected using questionnaires and was analyzed by SPSS version 20. The proportion of adults who consumed alcohol in Community One was found to be 50%, men always consumed more alcohol than women. Majority of those who consumed alcohol were within the 18-29 age group. Alcohol consumption was significantly associated with sociodemographic factors (age, sex, educational level, marital status, employment and occupation), income level but not environmental factors.

Most people drink alcohol to have fun and cope with stress. They considered alcohol consumption as an adult way of life, as an appetizer or to satisfy partner(s) in bed citing peer influence and advertisement as major contributing factors.

Government through the Ministry of Health should enact laws to control the sale and use of alcohol and should be keen on regulating alcohol advertisements in the media.

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LIST OF ABBREVIATIONS

AUDIT	-	Alcohol Use Disorders Identification Test
GDHS	-	Ghana Demographic and Health Survey
GSS	-	Ghana Statistical Service
GACIS	-	Gender Alcohol and Culture: an International Study
IRGGA	-	International Research Group on Gender and Alcohol
WHO	-	World Health Organization
DHMT	-	District Health Management Team

DEFINITION OF TERMS

Alcohol consumption: This describes alcoholic beverage usage.

Availability: This determines access to beverage alcohol. It may be physical availability, such as when, where and under what conditions beverage alcohol may legally be purchased. It may also be economic availability, the extent to which consumers can afford to purchase beverage alcohol.

Beers: All drinks with the average pure alcoholic percentage as 5 according to set standards in Ghana. This includes club beer, Guinness, stone larger beer and others.

Binge drinking: This is defined as a pattern of alcohol consumption that brings the blood alcohol concentration level to 0.08% or more. This pattern of drinking usually corresponds to 5 or more drinks on a single occasion for a man or 4 or more drinks on a single occasion for a woman, generally within about 2 hours.

Heavy drinking: This is defined as consuming an average of more than 2 drinks a day for a man and an average of more than 1 drink a day for a woman.

Level of alcohol intake: This describes how much alcohol an individual consumes over a period of time

Moderate drinking: This is defined as having up to 1 drink per day for a woman and up to 2 drinks per day for a man

Spirits: This includes distilled beverages of at least 40% of pure alcohol content

Standard drink: This is defined as 12 ounces of regular beer, which is usually about 250mls of 5% alcohol 5 ounces of wine, which is typically about 150mls of 12% alcohol, 1.5 ounces of distilled spirits, which is about 44mls of 40% alcohol.

Wines: Includes wine made from grapes which is typically about 12% of pure alcohol

CHAPTER ONE

1.0 INTRODUCTION

1.1 BACKGROUND

Alcohol consumption is increasingly becoming a major health concern in our world today.

The use of alcohol has become an integral part of customary and cultural practices in Ghana. It is used in activities such as naming ceremonies, marriage, funerals and in the welcoming of visitors. However the commercialization and advertisement of alcohol has led to its increased consumption which is of public health importance. Alcoholic beverages come in the form of beers, wine or spirits.

The effect of alcohol on the body is directly related to the amount consumed but not the type of beverage. Many adults worldwide abstain from drinking alcohol however unrecorded consumption levels are higher.

Levels of alcohol consumption in many African countries are increasing, mainly because of the change in drinking patterns from low alcohol content which are traditionally home-brewed (Pito, Ogoro) to recreational use of high alcohol content that is commercial brews. There is also increased availability and accessibility of alcoholic beverages. Traditionally alcohol use among women in Africa are low. Many African countries have reported higher rates of lifetime alcohol abstention in women (WHO, 2004). However due to economic wealth and change in roles of women, consumption rates are increasing (Martinez et al, 2011)

For low income countries, there is a strong relation between economic wealth and alcohol consumption: the higher the gross domestic product, the higher the overall volume of consumption and the lower the proportion of abstainers (Jürgen Rehm et al., 2009).

Harmful patterns of alcohol consumption are strongly associated with increased morbidity and mortality. Alcohol related morbidities include mental health disorders such as substance dependence, depression and other medical problems such as cardiovascular diseases, liver cirrhosis, breast cancer, HIV infection and fetal abnormalities (Marmorstein, Iacono, & Malone, 2010, Hulka & Moorman, 2008). Women also experience unique negative social consequences of alcohol use that impact health, such as increased risk of domestic violence and stigma (Zemore, Mulia, Ye, Borges, & Greenfield, 2009, Schnitzer et al., 2010). The negative health and social consequences of alcohol use are further moderated by the volume of alcohol consumed and the pattern of use over time (J. Rehm et al., 2003). Poor populations and low-income countries have been known to have a greater disease burden per unit of alcohol consumption than do high-income populations and countries. Furthermore consequences attributable to alcohol account for large costs to societies; they are not limited to health-care costs but include also cost related to social harm.

With the globalization of media and markets, harmful drinking that was once limited to higher income countries is now being observed within lower income countries. In addition, the promotion, popularity, range and availability of inexpensive alcoholic beverages have increased. These environments have likely contributed to most people initiating heavier drinking at younger ages than before. (Jernigan, 2001).

Before the advent of colonialism, Ghanaians brewed a local spirit called “akpeteshie”, this was however not only peculiar to Ghana but other African countries including Nigeria. The drink was the toast of the rich and powerful, the elderly and those who mattered most. However such local brewing was outlawed in Ghana by the colonial masters till after independence when it became legalized. The first factory was established in the Volta Region because the area had a large supply of sugar cane which is the raw material for the drink (Akyeampong, 2001). This legalization gave not only local producers but also importers the ability to distribute it across the country making the beverage available and accessible to all.

Currently alcohol abuse is of increasing concern in Ghana and the highest prevalence is recorded in the Upper West Region (37%).The GSS et al, (2009) reported that alcohol consumption is considered one of the highest risk factors for death and disability and mentioned some potential consequences of alcohol abuse as increased risk of accidents, cirrhosis, hypertension, congenital malformations as well as cardiovascular diseases. Excess alcohol consumption also aggravates existing family problems as well as other social issues such as alcohol addiction, accidents, criminal behavior, inadvertent injuries, and violence and road traffic offences(Ghana Statistical Service (GSS), Ghana Health Service (GHS), & ICF Macro, 2009).

According to Luginaah and Dakubo, (2003), political, economic and cultural factors in Ghana influence the use and abuse of alcohol and this may imply that alcohol intake may vary from one location to another. It is in this light that this study would be conducted in Tema Metropolitan assembly in the Greater Accra Region of Ghana.

1.2 PROBLEM STATEMENT

Alcohol consumption is a growing challenge in many African countries.(Fisher, Bang, & Kapiga, 2007) of which Ghana is no exception with increasing number of drinking bars dotted in every corner of every street. Ghana was ranked 132nd out of 185 countries based on per capita pure alcohol consumption of 1.5litres of only industrially produced beverages (WHO, 2004). This means that Ghanaians consume about 30million litres of alcohol yearly. Not only are the lives of those who drink severely affected but others such as their spouses and children as well.

In spite of the numerous health and social problems associated with its use and abuse data on alcohol consumption is insufficient and not collected consistently (GSS et al,2009) even though some studies have been done earlier on its use among drivers (Asiamah, Mock, & Blantari, 2002) among others.

Inadequate data inhibits government's response to alcohol concerns therefore it is necessary to conduct a community based study which provides data on community specific situations in relation to alcohol use among the residents.

The study would therefore collect community based data on the proportion of adult residents who consume alcohol, the factors influencing alcohol consumption and the reasons for alcohol consumption.

1.3 JUSTIFICATION OF STUDY

Studies from different parts of the world point out how alcohol use and abuse with its health and social effects are increasing of which Ghana is no exception. Yet available data on alcohol consumption in Ghana remain a problematic issue.

The lack of data has negative impact on the capacity of government to plan and implement appropriate public health intervention. Therefore conducting such a study would provide a community based data that could help in planning public health interventions and also inform education campaigns and behavioral change communication. The study also explores pertinent issues which could inform a larger scale community based study.

1.4 OBJECTIVES

1.4.1 General Objective

The general objective of the study is to determine the prevalence of factors influencing alcohol consumption among adult residents of Tema, Community One

1.4.2 Specific Objectives

The specific objectives are:

1. To determine the proportion of adult residents who consume alcohol and the level of drinking
2. To determine factors that influence alcohol consumption
3. To determine reasons for alcohol consumption

CHAPTER TWO

2.0 LITERATURE REVIEW

Studies on alcohol consumption are reviewed under the following heading: alcohol consumption, factors influencing alcohol consumption and reasons for alcohol consumption.

2.1 ALCOHOL CONSUMPTION

Alcohol use is one of the top three risk factor to health globally (WHO, 2009) following childhood underweight and unsafe sex. Alcoholic beverages have been a part of social life for many years, however, societies have always found it difficult to understand or restrain their use. Proportion of adult residents who consume alcohol describes the number of adult residents among the respondents who drink alcohol. An estimated 2.5 billion people worldwide consume alcoholic beverages as at 2005; on average 6.1 litres of pure alcohol per capita of adult (15+) population, including 1.8 litres (28.6%) of “unrecorded” alcohol. An estimated 45% of the world adult population has never consumed alcohol; 35% men and 55% women (WHO, 2011a). At the time of the survey 13.8 % of men and 12.5% of women had not consumed alcohol during the past year.

Though alcohol has been consumed for thousands of years, the quantity and patterns of alcohol consumption varies between different cultures and societies and the last 20 years have seen significant changes (Room et al., 2002). The most important of these changes has been the replacement or in some cases the complementing of traditional and locally produced beverages with industrial beverages-in particular Western-style commercially produced beer (Riley and Marshall, 1999).

Alcohol use differs from country to country. Karl and Ramalghan (2009) found that in countries such as Mexico prevalence among men was 77% while among women it was 44%, in Thailand it was 77% among men and 47% among women, in Namibia it was 61% in men and 47% in women while in South Africa in the general population it was 30% but among men it was 40% and 16% in women. In Ghana prevalence of alcohol use in the general population was 26.8% while it was 36.7% among men and 17.5% among women. Prevalence was found to be highest in the Upper West region 37% followed by the greater Accra region with 32.5 % (GDHS, 2008)

Different countries have different definition of standard drinks or units equal to a specified amount of pure ethanol. It is usually expressed as a certain measure of beer, wine, or spirits .One standard drink always contains the same amount of alcohol regardless of the container size or the type of alcoholic beverage, but does not necessarily correspond to the typical serving size in the country in which it is served. A standard drink is frequently defined as 12 ounces of regular beer, which is usually about 350ml of 5% alcohol, 5 ounces of wine, which is typically about 150 ml of 12% alcohol, 1.5 ounces of distilled spirits, which is about 44mls of 40% alcohol. Using these measures researchers can categorize subjects into groups based on the amount of alcohol consume.

An important aspect in understanding alcohol consumption is the context in which it is drunk, that is the patterns of drinking. Patterns of drinking vary a great deal between societies. In much of the developing world, the predominant pattern is of infrequent heavy drinking, particularly by men. Many of the developing sub-regions are characterized by hazardous drinking patterns (WHO 2002). Hazardous drinking is defined as a quantity or

pattern of alcohol consumption that places patients at risk for adverse health events, while harmful drinking is defined as alcohol consumption that results in adverse events (e.g., physical or psychological harm) (Reid, Fiellin, & O'Connor, 1999) Moderate consumption refers to alcohol consumption which is below the levels identified as risky or hazardous by national or international evidence based guidelines

A study conducted in South Africa by (Peltzer, David's, & Njuho, 2011) on Alcohol use and problem drinking in South Africa found that Current alcohol use was reported by 41.5% of the men and 17.1% of women. Risky or hazardous or harmful drinking was reported by 9%: 17% among men and 2.9% among women. In men, risky drinking was associated with the 20-54 year age group; lower economic status; and lower education. Among women, risky drinking was associated with: urban residence; lower education; and higher income.

Worldwide consumption in 2005 was equal to 6.13 litres of pure alcohol consumed per person aged 15 years or older with the highest alcohol consumption levels found in the developed world, including Western and Eastern Europe. A large portion of this consumption – 28.6% or 1.76 litres per person – was homemade, illegally produced or sold outside normal government controls. However, despite widespread consumption, most of adult population actually abstains from drinking alcohol (45 % of men and 66% of women) most of them for their life time. (Rehm et al, 2009). Abstention rates are low in high-income, high consumption countries, and higher in North African and South Asian countries with large Muslim populations. Female abstention rates are very high in these countries. Abstention from alcohol is very important in the global picture on alcohol consumption; it is one of the strongest predictors of the magnitude of alcohol-attributable

burden of disease and injuries in populations. Obviously, lifetime abstention from alcohol means exemption from personal alcohol-attributable disease, injury and death. Because abstention is so prevalent in the world, any diminution in abstention trends could have a big impact on the global burden of disease caused by the harmful use of alcohol. (WHO, 2005)

Considering the preference for alcoholic beverage geographical differences do exist. Globally more than 45% of total recorded alcohol is consumed in the form of spirits predominantly in south East Asia and western pacific. Approximately 36% of total recorded alcohol is consumed in the form of beer. Beer consumption is highest in the Americas, 54.7% of total recorded adult per capita .wine constitutes the proportion of alcohol consumed in some European countries and the South American wine growing countries. However worldwide consumption of wine is low. Other beverages than wine, beer and spirits are consumed mostly in sub-Saharan Africa, which has generally low alcohol use levels (WHO, 2011b).

In Ghana a WHO report showed that reported adult alcohol consumption by type of alcoholic beverage was 27% beer, 5% wine 2% spirits and 66 percent of several other alcoholic beverages including fermented beverages made from sorghum, maize millet rice or cider, fruit wine and fortified wine (WHO, 2011).

The context of drinking refers to the frequency of drinking in different contexts for example during meal time, at a party or celebration, in own home at friend's house at workplace, in a bar or in a restaurant.

2.2 FACTORS INFLUENCING ALCOHOL CONSUMPTION

Factors influencing alcohol consumption are either external or internal however these factors mutually interact. External factors include both the physical or structural environment that is the number and location of alcohol outlets as well as the socio-cultural environment. The socio-cultural environment includes: the broad society (major institutions and the media); sub-cultural groups; the family-immediate and extended; peers and membership of other groups; and the promotion of alcohol by the marketers (advertising; price specials on packaged alcohol). Internal factors relate to the individuals beliefs, attitudes ,values, personality factors, life experiences and perceptions of morality (Pettigrew & Donovan, 2003)

Parents' attitudes and behavior with respect to alcohol are a major influence on at least early drinking patterns, before peer influences become more influential. Children of heavy drinking parents (through initiation /modeling) and children of strictly prohibitive parents (through defiance of authority) appear to have a higher risk of drinking excessively. However there are exceptions as some children of heavy drinking parents deliberately avoid alcohol because of the damage they see alcohol doing in their family. Other factors which have substantially affected alcohol consumption in developing countries includes urbanization, changes in gender roles and high intensity mass and promotion of alcoholic beverages (Parry, 2000). The pattern of alcohol use varies depending on age, religion, education, type of drink and other socio-demographic characteristics.

A study conducted by Wilsnack, Wilsnack &Obot (2005) which aimed at examining the consistency or variability of gender differences in drinking behavior cross culturally found that while there was little difference between women and men in the probability of current

drinking versus abstaining, men always exceeded women in drinking frequency and quantity and in rates of heavy drinking episodes and adverse drinking consequences. Consistently, women were more likely than men to be lifetime abstainers (Wilsnack, Wilsnack, & Obot, 2005).

Alcohol consumption varies by age, sex, marital status, educational level, employment status and religion. Mostly it is observed that men generally consume alcohol more than women. A study conducted in Nigeria found out that, the highest proportion of drinkers (40 %) fell within the age bracket of 45 years and above and the least was among respondents who were between the ages of 18–29 years (21.1%). In regards to religion, those adhering to traditional African religion were much more likely to be current drinkers (50%) than Christians (36.1%). Muslims were significantly less often current drinkers (8.8%). With respect to marital status, those who were cohabiting, single or married (23.9%, 30.2%, and 32.4%, respectively) had lower rates for alcohol consumption than those who were widowed (35.5%). The higher proportions of alcohol consumption were found in the divorced and separated groups (50% and 48.6% respectively). It was found that 82.4% of those who were married but separated drank heavily, followed by the divorced (58.3%), and the married (52.6%). Those that were cohabiting had the lowest rate of 20%. People in the rural areas had a higher proportion of drinkers (35%) than those in the urban centers (Karick & Ojiji, 2005)

In Ghana the GDHS 2008 found that 18% of women drank alcohol but it was not frequent. The consumption increased from 7% in the age group 15-19 to 26 % in the age group 45-49. Women who were employed were as twice as likely to drink alcohol (20 %) as compared to unemployed women (10%). Similarly women who were formerly married (26

%) and those currently married (20%) consumed more alcohol than women who were never married.

It was also found that by level of education women with middle/JHS level of education were least likely to drink alcohol (15%) while women with no education and women with highest education are most likely to drink.

It was also found that 18 % of women in their late 30s and late 40s drank alcoholic beverages 4 or more times in the week before the survey, compared with 2 percent in Brong Ahafo region.

The proportion of men who drink alcoholic beverages was higher than women, and men tend to drink more frequently than women. Consumption of alcohol increased rapidly from 8% in age group 15-19 to 27 percent in age group 20-24, 44% in age group 25-29 with little variation through to age 40. Over half of men in Ghana drink alcoholic beverages (52%). Among men who drink there is difference in alcohol consumption by background characteristics such as level of education. Among the men the lowest consumption was in the Northern region, (14 %). Men who are employed are more likely to drink than men who are unemployed (9%). Formerly married men and currently married men are more than twice as likely to drink alcohol, compared with men who were never married (21%) (Ghana Statistical Service (GSS), Ghana Health Service (GHS), & ICF Macro, 2009).

Parents' attitudes and behavior with respect to alcohol are a major influence on at least early drinking patterns, before peer influences become more influential. Children of heavy drinking parents (through initiation /modeling) and children of strictly prohibitive parents (through defiance of authority) appear to have a higher risk of drinking excessively.

However there are exceptions as some children of heavy drinking parents deliberately avoid alcohol because of the damage they see alcohol doing in their family (Pettigrew & Donovan, 2003).

Alcohol brewers have also become more aggressive in their advertising, making use of the radio, television, billboards and print media. The common theme in these advertisements is that drinking is a fun, modern and enlightening activity; it brings friends together; it is for the successful and comes with prestige. Usually the scenes depict young and upwardly mobile men pictured alongside women having fun. The impact of this form of advertisement is seen in the image of drinking as a substitute for other forms of recreation (Gureje, Vazquez-Barquero, & Janca, 1996). Adverts have also tried to capture the distinct nature and/or “good quality” of the particular alcoholic beverages (Obot, Ibanga, & Karick, 2002). More widely there is a drinking culture in which bottled beer is central, and which is to some extent ‘national’ in each African state (with the idea of bottled beer as a national drink playing an important part in advertising) but which also shows some similarity across the continent (Bryceson, 2002). This is a drinking culture which is associated with men in salaried jobs or in business, the advertising of which often stresses both maleness and nationality, and it is located in the urban bar or in clubs which are much less exclusive than those of the elite; the irony of the rhetorical celebration of the ‘national’ through drinking a product which is increasingly transnational is only occasionally noted (Mager, 2005; Willis, 2002)

A study conducted in South Africa on alcohol use and sexual risk for sub-Saharan Africa in 2007 found that alcohol consumption was associated with risks for sexually transmitted infections (STI), including HIV/AIDS burden. It was also found that clear gender

differences in alcohol use and sexual risks existed as men were more likely to drink and engage in higher risk behavior compared to women whose risks were often associated with their male sex partners' drinking. Closely related to alcohol and sexual risks included factors such as drinking venues and alcohol serving establishments, sexual coercion, and poverty (Kalichman, Simbayi, Kaufman, Cain, & Jooste, 2007)

2.3 REASONS FOR ALCOHOL CONSUMPTION

Many people do consume alcoholic beverages for diverse reasons. Emmanuel Akyeampong (1996) in his book on 'Drink Power and cultural Change' throws light on some of these reasons for alcohol consumption. He states that whereas some people consume alcohol after attaining an accomplishment others also consume alcohol to drown their sorrows. He explains that that young men who move to cities in search of jobs do consume alcoholic beverages as a way of peer group socializing and also to as a way to cope with the stress of life (Akyeampong, 1996).

A study conducted in the upper west region in 2003 on the consumption and impacts of locally brewed akpeteshie found that both the elderly and the young were engaged in alcohol consumption. Furthermore men drank mainly for coping responses such as increased self-confidence, adult status, and to cope with various social demands. Women also drank so as to socialize with peers and that drinking the alcoholic beverage was increasingly used for sexual abuse and rape (Luginaah & Dakubo, 2003).

CHAPTER THREE

3.0 METHODS

3.1 STUDY DESIGN

A cross sectional study of respondents aged 18 years and above from Tema Community One on factors influencing alcohol consumption was done. A sample representative of the population was selected.

Quantitative method of data collection was used. Cross tabulations (bivariate analysis) were performed and Pearson's chi square was used to determine the association between alcohol consumption and the factors that influence alcohol consumption

3.2 STUDY LOCATION

Tema Community One in the Greater Accra Region

This study was conducted in Tema Community One, an urban area within the Greater Accra Region. The area was chosen in order to determine the factors influencing alcohol consumption among adult residents in the Community. Tema, the harbor city is the capital of the Tema Metropolis, one of the ten districts in the Greater Accra region. It is a coastal city located 25 km east of Accra, the national capital. It is bordered to the west by the Accra Metropolis, the south by the Gulf of Guinea, the Ga municipalities on the North West, and the Dangme West district on the northern and eastern borders. It has a population of 387,045 according to the Ghana Statistical Service on the 2010 population and housing census with an annual growth rate of 2.6%. Tema has a male population of 189,659 and a female population of 197,389. About 63.3% of the population fall in the economic active age group (15-64 years) The Greenwich meridian passes through Tema. It has twenty six communities with communities 1, 2, 4, 7, 9, and 13 as the busiest. Tema was chosen for

the study because it is the hub of industrialization and the major harbor city in Ghana where most people of all classes in search of jobs relocate. There a quite a number of commercial activities as well that attract a lot of people. The stress and frustration many people go through make them tend to drinking whereas others also resort to drinking because of the access to money after getting the desired jobs as a way of rewarding themselves. Community one is popularly referred to as the center of Tema where most activities take place.

3.3 VARIABLES

The dependent variable was alcohol consumption. The independent variables were sociodemographic factors (Age, Sex, Marital Status Level of Education, Employment and Occupation), Environmental Factors and Economic Factors.

3.4 STUDY POPULATION

The study included adults (men and women) aged 18years and above who had resided in Tema for the past 1 year. The study population was chosen because in Ghana the legal age of drinking is 18 years and residence in Tema for 1 year to exclude people who may not be actual residents but on a visit or to conduct a business.

3.5 SAMPLING

3.5.1 Sample size

The prevalence of alcohol consumption in Tema is not known. It was however assumed that 50% of the population consume alcohol, the sample size was calculated using the Cochran 1977 formula on calculating sample size $n = \frac{Z^2 pq}{d^2}$ at 95% confidence level (Cochran, 1977). Where n=sample size, p=0.5 since the prevalence of alcohol consumption

among adult residents of Tema was assumed to be 50%, $d=0.5$, as the margin of error within 5% of the population prevalence and at 95% confidence level $z=1.96$

Therefore $n = \frac{1.96^2 * 0.50 * (1-0.50)}{(0.05)^2} = 384.16 \approx 385$

$$(0.05)^2$$

With upward adjustment of 10% to take care of incorrectly captured responses or refusal to answer certain questions on the questionnaire the total sample size became 423.5 approximately 424. However the response rate was 97.2%.

3.5.2 Sampling Method

Community One has 21 sites and a total population of 41,218. Population size differs in each of the sites so one of the sites was chosen to represent the entire community one. Site 19 which has the largest population size of 11,520 residents out of the total population of 41,218 with a female to male ratio is approximately 2:1 was chosen. Upon entering the site the centre was identified and in order to get the first house, a pen was spun. The direction that the head pointed was chosen as the direction to pick the first house from. Every other house in that direction was visited until all the houses in that direction were exhausted. Similar method was adopted for all the other direction that the spun pen pointed. Upon entering the house the first adult who was eligible was interviewed (one adult was interviewed from each house). This method was done in every other house in order to get the total sample size.

3.6 DATA COLLECTION METHOD AND TOOL

A face to face interview using a questionnaire was used to collect the data. A show card with pictures was used to illustrate what was meant by a standard drink as used in the study.

3.7 QUALITY CONTROL

This involved measures that were put in place to ensure that the results obtained in the research were accurate and valid. Five research assistants were recruited and trained on how to collect the relevant data and what to collect during the survey. Questions from the GSS (2009) and Alcohol Use Disorders Identification Test (AUDIT) as well as IRRGA were modified and used. The questionnaires were reviewed by my supervisors and further pretested at another site which has similar characteristics as site 19. This helped to correct any disparities and to remove any ambiguous information in the questionnaire.

3.8 DATA COLLECTION STAGE

Research assistant/field personnel were trained to conform to ethical guidelines regarding protection of subjects from harm in research. The principal investigator and (5) research assistants were most of the time on the field collecting the data. Completed questionnaires were audited after data collection to allow field workers obtain feedback from participants on unclear responses, omissions or blanks.

3.8.1 Data Entry

Only completed questionnaires were included in the processing and analysis. The questionnaires were coded and serialized. Data was entered and cross checked/cleaned to do away with all errors before analysis.

3.8.2 Data processing and analysis

Data analysis was done using SPSS version 20 and Microsoft Office Excel (2007). responses to questions were coded before data entry was done. Frequencies and percentages were run to determine the proportion of adults who consume alcohol as well as the level of drinking. Cross tabulations (bivariate analysis) were performed and Pearson's chi square was used to determine the association between alcohol consumption and the factors that influence alcohol consumption. A significance level of 5% was considered therefore all associations with a p-value less than 5% were significant.

To determine the strength of association between alcohol consumption and factors influencing it, logistic regression was run and odds ratio estimates of the associations between the significant factors and alcohol consumption were then determined at 95% confidence interval.

3.9 ETHICAL CONSIDERATIONS

Ethical clearance was obtained from the Ethical Review Committee of Research and Development Division of Ghana Health Service. Permission to conduct the study was obtained from the Tema Metropolitan Health Directorate.

Written informed consent was sought from all participants. The consent form included the purpose of the study, benefits, potential risks, privacy, confidentiality and conflict of interest. Participation was absolutely voluntary. Each study participant was given the opportunity to refuse to participate in the study at any point in the course of the interview.

Individuals were contacted individually and privately. Names were not used in the write-up since they were coded. Data was also reported such that it reduced the possibility of

tracing information gathered back to respondents. All information were treated as confidential.

Data was stored on an external disc and safely kept together under lock and key as well as any hard copies made. The soft copy was password protected. The data collected was accessed only by the principal investigator and the supervisor.

There was no risk associated with the study and respondents' information was protected from public knowledge. The community however stood to benefit from the results of the study as dissemination of its findings will help improve the health information and education in the community. Although participants were not compensated or paid for partaking in the research, their inputs were appreciated.

The entire project was funded by the principal investigator but I do not in any way have a conflict of interest of interest in the study.

3.10 PRE-TEST

Pretesting of the questionnaire was done at another site within Community One namely site one which has similar characteristics to site (19) nineteen. Eight questionnaires were pretested in order to ensure validity of the data.

CHAPTER FOUR

4.0 RESULTS

Data obtained from the study have been grouped under objectives defined in chapter one and are presented below.

4.1 SOCIO DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

A total of 412 respondents aged 18 years and above were involved in the study. The males constituted 61.7% (254) of the study population while the female constituted 38.3%. Approximately half of the respondents; 207 (50.2%) were within the 18-29 age groups while 10 (2.4%) of the respondents were 60 years and above. The mean age for females was 30.7 years and the mean age for males was 33.4 years. There was a decrease in the number of respondents with increasing age. More than half numbering 240 (58.3%) of the respondents were not married. Only 2.4% of the respondents had no formal education. About two-thirds (65.5%) of the respondents were employed with a major occupation of trading. (Table 1)

Table 1: Demographic characteristics of participants

Variable	Frequency N=412	Percentage (%) / Relative frequency
Age group		
18-29	207	50.2
30-39	100	24.2
40-49	72	17.5
50-59	23	5.6
60+	10	2.4
Sex		
Male	254	61.7
Female	158	38.3
Marital status		
Married	172	41.7
Not married	240	58.3
Educational level		
No education	10)	2.4
Primary	31	7.5
JSS/Middle	164	39.8
Secondary/Vocational	164	39.8
Tertiary	43	10.4
Employment status		
Employed	270	65.5
Unemployed	142	35.5
Occupation		
Trader	104	25.2
Artisan	92	22.3
Professional	50	12.1
Other*	24	6.0

*Other occupation include farmers, fishermen, factory floor workers, housewives, loading boys/drivers' mates, sea men.

4.2 PROPORTION AND LEVEL OF ALCOHOL CONSUMPTION

Proportion of respondents who currently consume alcohol in the community was 50%. However, 314 (76.2%) of the respondents had ever consumed alcohol and out of this 65.6% were current drinkers. Table 2 shows that more males (72.8%) consume alcohol than females (27.2%). Respondents in the 18-29 age group were the highest current alcohol consumers (38.3%) followed by those within 30-39 age group (29.1%) whereas respondents within the 60+ age group had the lowest proportion of alcohol consumption (1.9%). Individuals who are married (50.5%) currently consume more alcohol than the unmarried ones (49.5%). Respondents who were employed (76.2%) consumed alcohol more than unemployed respondents (23.8%). Though traders were the majority of the employed respondent's artisans formed the greater part (25.7%) consuming alcohol.

Among respondents who currently consume alcohol 55.8% consume 1-2 standard drinks, 36.9% consume 3-4% standard drinks, while 7.3% consume 5 or more drinks on a typical day. Males (72.3%) were found to consume more alcohol on a typical day than females (27.7%) as shown in figure 1.

The frequency of drinking within the week preceding the study showed that 32.5% of the respondents did not consume any alcoholic beverage. However 39.6% of the respondents consumed alcohol only once, 19.4 % consumed alcohol thrice and 8.5% consumed alcohol more than thrice. Again males (67%) consumed more alcohol the preceding week as compared to females (33%) as shown in figure 2.

Of the respondents who consumed alcoholic beverages the previous year, 38.5% consumed alcohol monthly and 39.5 % consumed alcohol 2-4 times in the month, 13.3% drank

alcoholic beverages 2-3 times a week whilst 8% drank alcoholic beverages more than 4 times a week as shown in figure 3.

Figure 1 Percent distribution of Alcohol consumption by sex on a typical Day

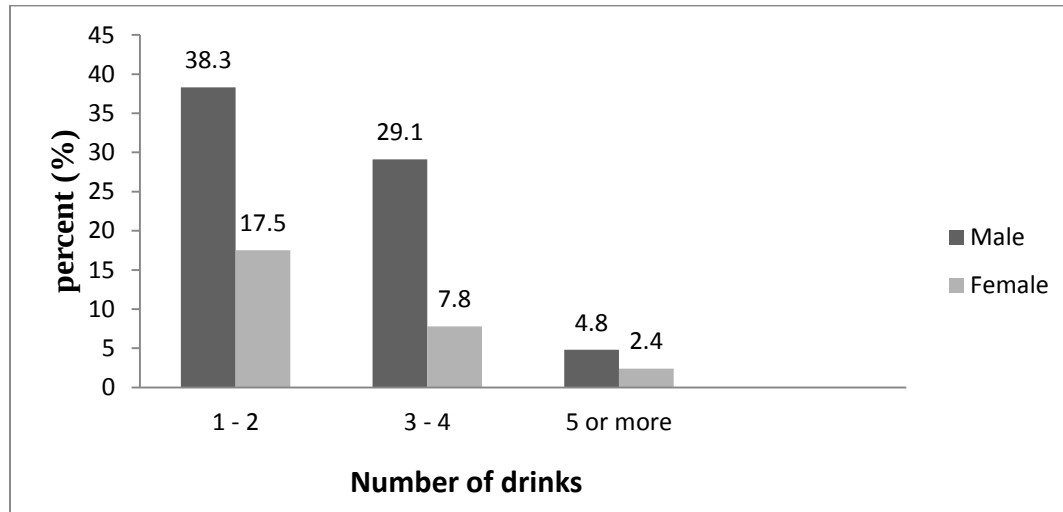


Figure 2: Percent distribution of alcohol consumption by sex within the preceding week

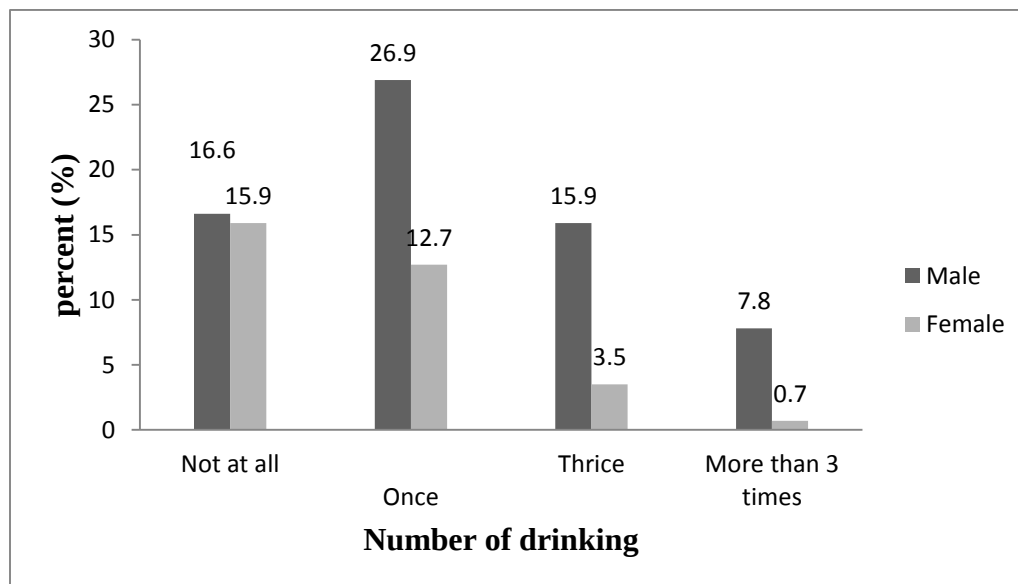


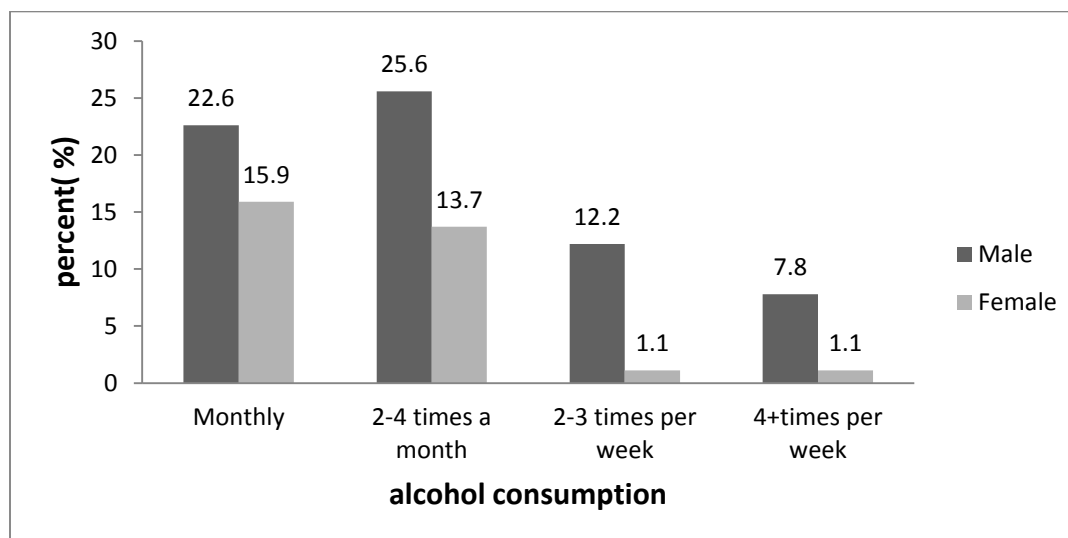
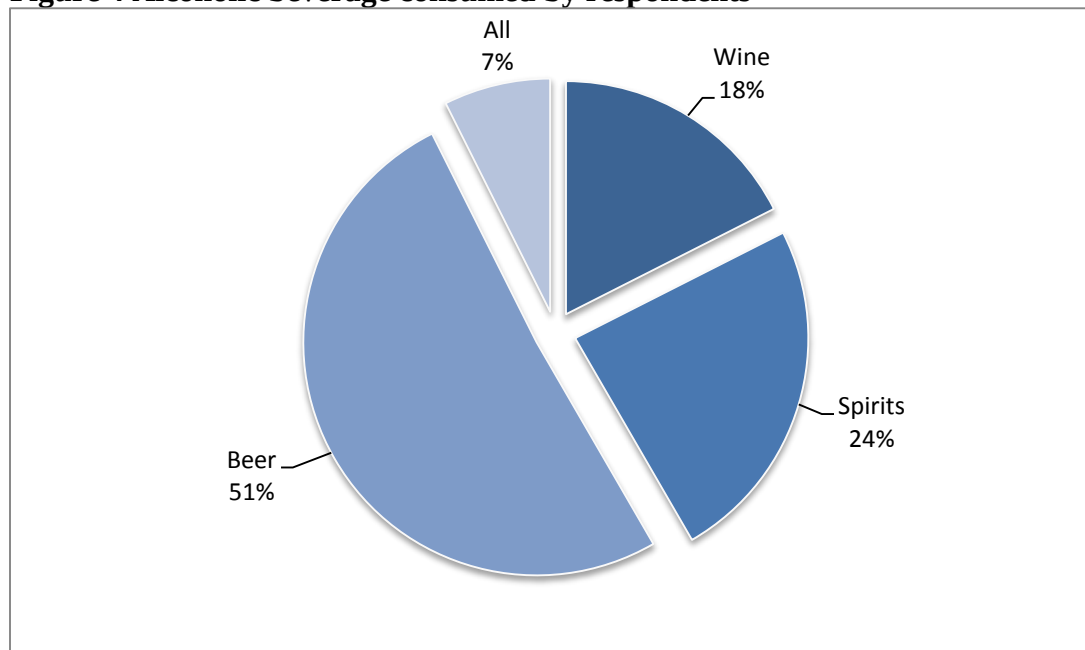
Figure 3. Percent distribution of alcohol consumption by sex in the past year

Figure 4 shows that the most consumed alcoholic beverage in the community was beer (51%) followed by spirits (24%) then wine (18%). Consumption of all the three drinks however was lower (7%).

Figure 4 Alcoholic beverage consumed by respondents

4.3 FACTORS INFLUENCING ALCOHOL CONSUMPTION

Factors influencing alcohol consumption are Sociodemographic, Economic and Environmental Factors.

All the sociodemographic factors (age, sex, education, marital status, employment status and occupation) were significantly associated with alcohol consumption.

Respondents in the 18-29 year group (38.3%) were the highest current alcohol consumers in contrast with 1.9% in the 60+ age group. Increasing age was significantly associated with reduction in alcohol consumption.

Majority (73.5%) of current alcohol consumers were males as compared with females (27.5%). The results show that there was a significant association between sex and alcohol consumption. Being a female was protective (OR=0.381, 95% CI 0.252-0.57). This means that the odds of drinking when one is a woman is reduced by 62%.

Married individuals (50.5%) consumed just a little higher than unmarried ones (49.5%) but the association was highly significant and being an unmarried person was protective (OR=0.43, 95% CI 0.324-0.720). This implies that the odds of a person consuming alcohol when he/she is not married is reduced by 57%.

Employed individuals (76.2%) consumed more alcohol than the unemployed ones (23.8%). This was also significant in that the odds of an employed person taking alcohol was 2.6 times compared with an unemployed person.

Education in general was found to influence alcohol consumption. The least consumption was found among individuals who had no education (0.5%), while the highest was among those who had a Middle School or Junior High School Education (41.7%).

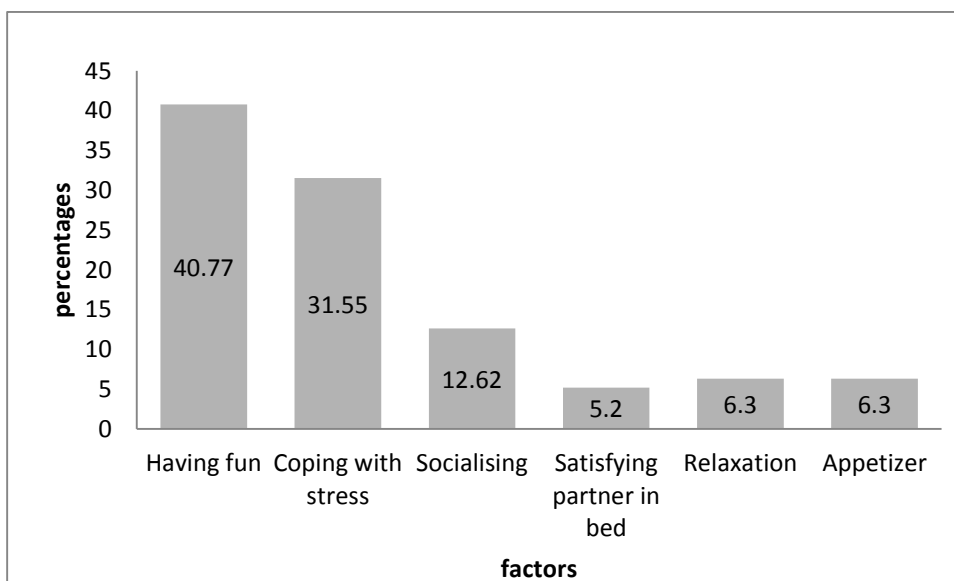
Table 2: Sociodemographic factors influencing alcohol consumption

Variable	Proportion that currently consume alcohol (n=206)	Chi square, p value	Odds ratio	95% Confidence Interval
Age				
18-29	38.3%	26.1, p<0.0001	Ref	0.296-3.947
30-39	29.1%		1.080	
40-49	23.3%		0.444	
50-59	7.3%		0.333	
60+	1.9%		0.356	
Sex				
Male	72.8%	21.7, p<0.0001	Ref	0.252-0.574
Female	27.2%		0.381	
Marital status				
Married	50.5%)	12.94, p<0.0001	Ref	0.324-0.720
Not married	49.5%)		0.483	
Educational level				
No education	0.5%	12.55, p < 0.05	Ref	1.543-118.104
Primary	4.5%		13.50	
JSS/Middle	41.7%		3.54	
Secondary/Vocational	39.8%		1.53	
Tertiary	13.1%		1.69	
Employment status				
Employed	76.2%	20.8, P<0.0001	Ref	1.729-4.022
Unemployed	23.8%		2.637	
Occupation				
Trader	22.8%	40.3 P<0.0001	Ref	2.628-32.896
Artisan	25.7%		9.298	
Professional	17%		5.642	
Other	11.2%		3.286	

4.4 ENVIRONMENTAL FACTORS INFLUENCING ALCOHOL CONSUMPTION

Figure 5 shows the factors influencing alcohol consumption. Most of the respondents ascribed alcohol consumption to Peer influence (40.8%), Advertising (34.6.1%), Availability/easy accessibility to the beverages (14.7%), Parental influence (5.1%) and Social networking (4.8%). All these factors were not significantly associated with alcohol consumption ($p>0.05$).

Figure 5. Environmental factors influencing alcohol consumption



4.5 ECONOMIC FACTORS INFLUENCING ALCOHOL CONSUMPTION

Table 3 shows that alcohol intake varies among the various income levels. It was found that alcohol consumption significantly reduced with increasing income. Half (50.6%) of the current alcohol drinkers were receiving less than ₵400cedis and 1.9% were receiving ₵1200 and above.

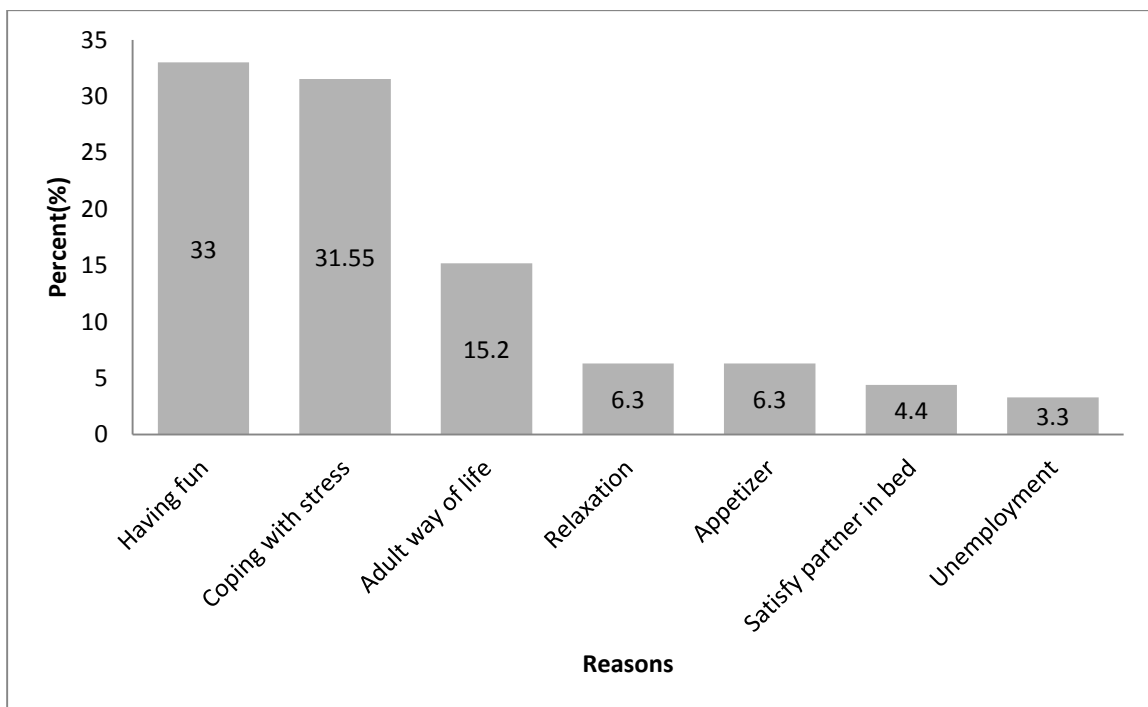
Table 3: Economic Factors influencing alcohol consumption among respondents

Reported Income (GH₵)	Frequency N(270)	Proportion currently consuming alcohol N (158) (%)	Chi square, P value	Odds Ratio	Confidence Interval
0-399	159	80(50.6)	14.7 P=0.002	Ref	Ref
400-799	82	55(34.8)		0.988	0.193-5.041
800-1199	23	20(12.7)		0.491	0.93-2.595
1200+	6	3(1.9)		0.150	0.020-1.118

4.6 REASONS FOR ALCOHOL CONSUMPTION

Respondents gave diverse reasons to drinking alcoholic beverages as shown in figure 6. Having fun was the most reason given (33%), followed by coping with stress (31.5%) drinking alcohol as an adult way of life was the third highest reason given (15.2%) and unemployment was the least reason given (3.3%) for drinking alcohol among the respondents.

Figure 6. Percent distribution of reasons by respondents



CHAPTER FIVE

5.0 DISCUSSION

5.1 SOCIO-DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

A total of 412 adults aged 18 years and above participated in the study. More males (61.7%) than females (38.3) participated .This may be due to the fact men in our society are more assertive when talking about alcohol than women. The age distribution of respondents showed that the proportion of respondents decreases with increasing age. The GSS et al (2009) had similar findings and attributed it to the comparative youthful structure of the Ghanaian population which is mirrored in Tema Community One. A similar result was found in a study in India on alcohol consumption patterns in the middle aged and elderly in western India (Gupta, Saxena, Pednekar, & Maulik, 2003).

5.2 PROPORTION AND LEVEL OF ALCOHOL CONSUMPTION AMONG RESPONDENTS

The prevalence of alcohol consumption in Tema Community One was 50%. This was higher than the 32.5% that the GSS et al (2009) reported for the Greater Accra Region. The

difference may be due to the fact that this current Tema study is a community based study with a smaller sample size compared with the national study by (GSS et al 2009).

Males numbering 150 (72.8%) were found to constitute the majority of current alcohol drinkers than 50 females (27.2%). This is consistent with the GSS et al (2009) findings, (36.7% of men consume alcohol as compared with 17.5% of women). Karl and Ramalghan in their study in 2009 also had similar findings in Mexico(77% males, 44% females) Thailand(77% males, 44% females) and Namibia(61% males, 47% females) that males consume more alcohol than females. The reason may be that alcohol consumption has long been considered as a male thing.

According to a World Health Survey (2011) an estimated 45% Of the world adult population had never consumed alcohol and from this current study in Community One 23.8% of the respondents had never consumed alcohol before. This rather is not surprising as Tema Community One is a place where young people who have moved from far and near in search of jobs at the harbor city first settle to make new friends, look for jobs and get acquainted with city life. The excitement and anxiety that come along with these push the people into taking alcohol

Responses on the alcohol consumption frequency revealed that whether on a typical day, weekly or in a year men consume more alcohol than females. These findings agree with the GSS et al (2009) findings that women who drink alcohol do so infrequently whereas men drink more often. This perhaps may be as a result of the fact that men drink to cope with the various social demands coupled with unemployment or engage in group drinking as a way of socializing with their peers.

5.3 FACTORS INFLUENCING ALCOHOL CONSUMPTION

All the socio-demographic characteristics were found to be associated with alcohol consumption as well as the economic factors. However the environmental factors were not significantly associated with alcohol consumption.

Alcohol consumption was significantly associated with age, sex, educational level, marital status, employment status and occupation.

It was found that among the respondents who currently consume alcohol, consumption decreased with increasing age. The highest proportion was found among the 18-29 age groups (38.3%) while the least consumption was among the 60+ age groups. These findings were not consistent however with the GSS et al (2009) and the study that was done in Nigeria (Karick and Orjiji, 2005) that found that increasing age was associated with increasing consumption of alcohol. The reason for this disparity may be linked to the population structure of Tema where about 63.6% of the population falls in the economic active age group, (15-64 years). Also the GSS et al (2009) was a nationwide study while this study was an exploratory community based.

More males (72.8%) were found to be current alcohol drinkers than females (27.2%). This finding is consistent with GSS et al (2009) and Wilsnack and Obot (2005) who also found out from their study that men always exceeded women in drinking frequency and quantity. These similarities may be explained possibly by the fact that our society does allow men to drink or drinking is a man thing but not women, or the fact that men are the bread winners in our societies so can afford to get any alcoholic drink when they want to, or as explained by Akyeampong (1996) that young men who move to cities in search of jobs do consume

alcoholic beverages as a way of peer group socializing and also to as a way to cope with the stress of life.

From this study it was found that of the respondents who were married (50.5%) formed majority of current alcohol consumers than those who were not married (49.5%). This is consistent with the GSS et al that found that both men and women who were either married or were previously married consumed more alcohol than those who were not married. Education was found to be significantly associated with alcohol consumption. Respondents with no education were the least consuming alcohol (0.5%) whilst those with Junior High School/Middle School education formed the majority (41.7%). There was a reduced odds of being a current drinker as one attained a higher education. This was not consistent with Droomers, Schrijvers, Stronks, van de Mheen, & Mackenbach, (1999) who found from their study that alcohol consumption increased with increasing level of education that one attains.

Employed individuals (76.2%) consumed more alcohol as compared to unemployed individuals (23.8%) (OR=2.637, 95% CI 1.729-4.022, $p<0.01$). Thus the odds of drinking when one is employed is more than twice as compared to unemployed individual. This may be due to the fact that employed individuals have the money to purchase alcohol when they feel like drinking and they tend to have a lot of social gathering for fun and for networking. This is consistent with Akyeampong (1999) in his book *“Drink Power and cultural Change, A social history of Alcohol in Ghana”* that alcohol or liquor was a preserve of the rich and powerful.

Income in general was significantly associated with alcohol consumption. It was found that the odds of someone drinking alcohol when he receives a higher income was reduced as compared with those with lower income. This however was not consistent with the findings of Rehm et al (2009) who found that worldwide, high income countries consume larger proportions of alcohol than low income countries. The difference may be due to the fact that individual with higher income have a lot of responsibilities and their focus in life changes which is manifested in a comparatively low alcohol consumption.

The environmental factors did not show any significant association with alcohol consumption although drinking as a result of peer influence was given as the highest factor (40.8%), followed by advertising (34.6%), availability or easy accessibility to the beverages (14.7%). Parental influence however was however lower (5.1%) and the least was social networking (4.8%). These findings agree (Pettigrew & Donovan, 2003) who also made mention of some of these factors in his study.

This shows that the environmental factors alone in themselves may not necessarily cause someone to consume alcohol but rather there should be interplay of other factors or reasons. The results also show how parental influence is given way to peer influence in the society especially a place like Tema Community one. The settlement is mostly made up of settlers in search of greener pastures.

5.4 REASONS FOR ALCOHOL CONSUMPTION

It was found out that, having fun was the most reason given for alcohol consumption, followed by, advertisement and availability/accessibility to alcoholic drinks. The other reasons given includes parental influence, social networking, satisfy partner in bed and

unemployment. These diverse findings are consistent with the findings by Luginaah and Dakubo (2003) during their qualitative study on the impacts of locally brewed akpeteshie.

5.5 LIMITATIONS

1. Some of the respondents were quite hesitant on providing information on the alcohol consumption especially when frequency of drinking was involved so this might have affected the generalizations made.
2. Study participant had to recall alcohol consumption frequency on a typical, the week preceding the study and the past year thereby subjecting the study to recall bias.

CHAPTER SIX

6.0 CONCLUSION

Alcohol consumption is a major public health issue in Tema considering the high proportion (50%) of current alcohol consumers and the fact that 69.1% of those who had ever consumed alcohol were still current drinkers.

Majority of the respondents who consumed alcohol were in the younger age group (18-29). This is not a good sign considering the health implication of chronic alcoholism. This will necessitate the government spending more resources on managing these health implications associated with chronic alcoholism.

Majority of the respondents who drank alcohol did so to have fun or while having fun given reasons as peer influence or advertisement. This is an indication of how powerful the media and having a sense of belonging is.

6.1 RECOMMENDATION

1. The Government through the Ministry of Health should enact policies regarding alcohol advertisement in the media so as to control the sale and use of alcohol. Some of the suggested policies include:
 - i. There should be boldly imprinted on alcoholic beverage bottles the implications of taken alcohol and the percentage of pure alcohol in that beverage as well as warning labels so that consumers would be well informed.
 - ii. Information that advertising agencies bring to the public domain about alcohol should be scrutinized so that vulnerable individuals do not succumb to such falsehoods.

- iii. Using the same media counter advertising could be done to bring to mind the health hazards of alcohol consumption
2. The DHMT (District Health Management Team) should as part of routine data collection add alcohol data so that they could get the real prevalence of alcohol consumption in their communities and link it to the alcohol related diseases that the hospitals would present in their annual reports.
3. Since the majority of those who were current alcohol consumers were the young adults, school based programmes can be organized to sensitize the students on the health implications of chronic alcoholism.

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APPENDICES

APPENDIX A CONSENT FORM

Title of Research/research topic: - Factors influencing alcohol consumption among adult residents of Tema Community One in the Greater Accra Region

Principal Investigator: Rita Patricia Frimpong-Mansoh

Address: School of Public Health, College of Health Sciences, University of Ghana, Legon. **Tel:** 0243522556 .E-mail-patrita10@yahoo.com

In the event of someone needing to call or withdraw from the study, the principal investigator may be contacted on the above number and address.

If any respondent needs any further information the person can contact the

Ghana Health Service Ethical Review Committee Administrator: Abena Kwaa Addai Donkor on **Tel:** 0244712919

General information

The aforementioned research will be conducted among adult residents of Tema Community One. It is to find out the factors influencing alcohol consumption among the residents.

The following shall be observed:

Confidentiality- the identity of the participants will not be made known. Any information from the respondents would not be linked to them.

Anonymity: No name will be written on the questionnaire, ensuring that the respondents' privacy is respected.

Benefits and Risks: There is no risk associated with participation in the study. The community however would rather benefit from the study as the findings would be disseminated to them and any public health interventions including health education made. Respondents are at liberty to ask questions about the research they would be participating in and gain satisfactory explanation before joining the study.

Respondents are free to withdraw from the study at any point with no consequences to them.

The above document describing the benefits, risks and procedures for the study has been duly explained to me. I am at liberty to ask questions at any time.

I, of my own volition agree to participate in the study.

.....

Date

.....

Signature/Thumb print of volunteer

A witness must sign here if the volunteer is unable to read and write

I was present whilst the benefits, risks and procedures of the research were explained to the volunteer. All questions asked by the volunteer were answered to His/her satisfaction and he/she has agreed to take part in the study.

.....

Date

.....

Signature of witness

I certify that the nature and purpose, potential benefits and possible risks of the study have been properly explained to the above individual.

.....

Date

.....

Signature of person who obtained consent

APPENDIX B QUESTIONNAIRE FOR THE STUDY

TITLE: QUESTIONNAIRE ON ALCOHOL USE

Dear Respondent,

This is a research carried out on the factors influencing alcohol consumption and the costs and effects in Tema Community One in the Greater Accra Region. I will therefore like you to take a little time with you to answer these questions. You are assured that the answers you give will be strictly confidential and would not be held against you.

	Questions	Response
	Respondents ID	
	Demographic Information	
1.	Sex 1.Male 2.Female	
2.	Age in years(above 18 years)	
3.	What is your current level of education? 1.No education 2.Primary 3.Middle/JSS 4.Secondary/Vocational 5.Tertiary	
4.	What is your marital status? 1.Married 2.Not married	
5.	Employment status 1.Unemployed (Skip to Q8) 2.Employed	
6.	What is your current Occupation? 1. Trader 2. Artisan 3. Professional	

	4. Other 11. Not Applicable	
7.	What is your average income in a month?(salary plus other monies from other sources) 11. Not Applicable	GHC -----
8.	Have you ever taken any alcoholic beverage before 1.Yes 2.No(Skip to Q10)	☐
9.	If yes to Q.7 how old were you? 11. Not Applicable	
10.	Do you currently drink alcoholic beverages? 1.Yes 2.No	☐
11.	Have you ever used tobacco in any form? 1.Yes 2.No(Skip to Q.14)	☐
12.	If yes in Q.11 do you currently smoke tobacco? 1.Yes 2.No(Skip to Q.14) 11. Not Applicable	☐
13.	If yes in Q.12 what type of tobacco product do you currently smoke? 1.Cigarrete 2.Pipe 3.Rapped tobacco 4.Cigar 5.Hookah 6.Smokeless tobacco 7.E-cigarrete 8.Other(Specify) 11. Not Applicable	
	Consumption Frequency	
	Indirect Cost (For those Persons who drink)	

14.	In the past year how often have you had an alcoholic beverage? 1. Monthly 2. 2-4 times a month 3. 2-3 times per week 4. 4+times per week	
15.	Which of the alcoholic beverages do you drink? a. Beer b. Wine c. Spirits d. Other specify e. All	
16.	How much on average do you pay on particular beverage choices per sitting?	Beer GHC ----- Wine GHC ----- Spirits GHC ----- Others GHC ----- All GHC -----
17.	Currently, many alcoholic drinks do you have on a typical day? 1. 1-2 2. 3-5 3. 5 or more	
18.	How many times did you take alcohol in the past week 1. Not at all 2. Once 3. Thrice 4. More than 3 times	
	Factors influencing alcohol consumption	
19.	Generally why do you/people drink? 1. Peer influence 2. Advertisement 3. Availability /accessibility to beverages 4. Social networking 5. Parental influence	

20.	What mainly informs you/their choice of alcoholic beverage? 1. Advertisement 2. Easily available/accessible 3. Parental influence 4. Friends/peers 5. Social networking 6. Other(specify)	
	Reasons for alcohol consumption	
21.	Do you/people have any main reason for drinking alcohol? 1. Yes 2. No (skip to Q.23) 3. Don't know(skip to Q.23)	
22.	If yes to Q.21, what is the main reason? 1. To have fun 2. To cope with stress 3. To relax 4. Appetizer 5. To satisfy partner 6. Unemployment 7. Adult way of Life 8. Not applicable	
23.	Have you ever had to absent yourself from work or any other business due to drinking? 1. Yes 2. No (skip to 25) 3. Don't remember (skip to 2)	
24.	a) If yes to Q.23, How many days was it? b) If yes to Q.23, how much income did you lose? (Field worker to estimate from Q6 ie $\text{income}/28 \times \text{number of days in Q.23}$).	Days GH¢ -----

	11. Not Applicable	
	Intangible costs (for persons who drink)	
25.	Have you gone through any pain and suffering, due to drinking? 1. Yes 2. No (Skip to Q.28) 3 .Don't remember(Skip to Q.28)	
26.	If yes in Q.25 were you treated? 1. Yes 2. No (skip to Q.29) 11. Not Applicable	
27.	If yes in Q.26 how much did it roughly cost you for treatment and recovery ?	GHC ----- 11. Not Applicable
28.	Have you ever been involved in any accident due to drinking that resulted to loss of life? 1. Yes 2. No (Skip to Q.31) 3. Don't remember (Skip to Q. 31)	
29.	If yes, how many people died? 11. Not Applicable	Died_____
30.	How many people were injured? 11. Not Applicable	Injured_____
	Direct Effects of alcohol(for both drinkers and non-drinkers)	
	<i>Now I want you to indicate whether you agree, disagree, or don't know to all of the following statements about <u>morbidity</u></i>	
31.	Alcohol can lead to depression 1. Agree 2. Don't know	

	3. Disagree	
32.	Alcoholism can lead to cancer 1. Agree 2. Don't know 3. Disagree	
33.	Alcoholism can lead to heart disease 1. Agree 2. Don't know 3. Disagree	
	<i>Now I want you to indicate whether you agree, disagree, or don't know to the following statements about socio-economic problems</i>	
34.	Alcohol can lead to spousal problems at home 1. Agree 2. Don't know 3. Disagree	
35.	Alcohol can let you fall into debt 1. Agree 2. Don't know 3. Disagree	
36.	Alcohol can lead to spend your savings or sell your valuable assets 1. Agree 2. Don't know 3. Disagree	
37.	Alcoholism can lead you to commit a crime such as stealing 1. Agree 2. Don't know 3. Disagree	
38.	Alcoholism can make you lose your friends 1. Agree 2. Don't know 3. Disagree	
	Indirect effects of alcohol(for both drinkers and non-drinkers)	
39.	Alcohol wards off stress and makes you a relaxed person 1. Agree 2. Don't know 3. Disagree	
40.	Alcohol makes you enjoy sex 1. Agree 2. Don't know	

	3. Disagree	
41.	Alcohol as an appetizer makes you enjoy your meals 1. Agree 2. Don't know 3. Disagree	
42.	Alcohol removes shyness and allows you to "speak your mind" 1. Agree 2. Don't know 3. Disagree	
43.	Alcohol makes you acceptable among your peers 1. Agree 2. Don't know 3. Disagree	