Prevalence Of Alcoholism In The Public Sector: A Case Of National Health Insurance Fund In Nairobi County, Kenya

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ABSTRACT

Alcoholism and alcohol abuse is a common vice in the workplace which has debilitating effects on individuals, families, organizations and societies at large. This study assessed the prevalence of alcoholism among National Health Insurance Fund (NHIF) employees. The study was guided by Cognitive Behavioural Theory. Descriptive research design was used. The target population was 562 employees from NHIF headquarters and branches from which a sample size of 234 employees were selected using stratified random sampling technique. Additionally, the study interviewed 27 managers and supervisors. Before administration, the questionnaire was pilot tested on 24 respondents at NHIF Eldoret Branch and found to be valid and reliable. Quantitative data was analyzed using descriptive statistics, chi-square, and linear regression technique in SPSS while qualitative data was analyzed thematically. The findings revealed that the prevalence of alcohol abuse was 24.5%. Based on the findings, the study recommended that the government collaborates with private organizations and develop more effective intervention measures aimed at mitigating the problem and improving employee performance and dependability. Further research was proposed to determine whether differences exist in the vulnerability of employees to alcoholism in other public institutions.

Key words: *Prevalence, Alcoholism, Public sector*

I.   Background to the Study

Diagnostic and Statistical Manual (2017) describes alcoholism as a combination of patterns of alcohol abuse that leads to clinical impairment or distress to the user. It manifests through consumption of alcohol over a long period than previous practice, inability to control the intake and craving for the same, focusing more on opportunities that facilitate access to alcohol leading to neglect of responsibilities, persistent use despite dangers to one's health and development of withdrawal symptoms when unable to access alcohol (Saunders et al., 2019).

Globally, alcohol has serious negative effects in the workplace, such as reduced productivity, absenteeism, sickness, tardiness, accidents, difficulties finishing tasks, deaths and   ultimately poor organizational performance (Dordoye et al., 2021)). In America out of the 14.8% of the individuals who abuse drugs and alcohol, 70% of them are employed (SAMHSA Survey, 2020).

The United Nations acknowledges that alcohol use has increased at an unforeseen rate over the last two decades, hence affecting every part of the globe (UNODC, 2022).In Kenya, The United Nations Office of Drug and Crime in its World Drug Report (UNODC, 2018), says Nairobi is one of the top four African cities with significant drug and alcohol problems. Chemworsio (2019) says alcohol is the most abused substance in Kenya at a rate of 36.3%. The National Authority for the Campaign Against Alcohol and Drug Abuse (NACADA) established that majority of alcohol abusers are in employment and cost employers billions of shillings in lost productivity. The findings confirmed that at least 57.9% of public service employees had ever used alcohol at least once in their lifetime with 33.3% classified as current consumers (NACADA, 2018).

Alcohol abuse has become a serious national occupational, health and safety concern among employees due to its adverse consequences on the individuals, society and the affected organizations (NACADA, 2022). Research indicates that prevalence of current alcohol related problems in Kenya has grown with about 5.8% of individuals aged between 15 and 65 which is the most productive and employable age bracket (Gitatui et al., 2019). It is against this background that the current study sought to establish the prevalence of alcoholism at the NHIF in Nairobi County, Kenya.

Statement of the Problem

Alcohol abuse is rampant in workplaces posing serious challenges to the employees, their families and the respective organizations besides adding risks to pre-existing occupational hazards (Borrelli et al., 2022). Workplace alcoholism contributes to low productivity as it compromises service delivery affecting the overall economic development.

Studies have been done on other aspects of alcoholism in the workplace. Kaithuru and Stephen (2015) studied the impact of alcoholism on the work force at the Kenya Meteorological Station in Nairobi, Kenya. The researchers established that there exists limited data for effective implementation of policies on how to manage and deal with the growing problem of workplace alcoholism (NACADA, 2021). The study recommended for further studies on the prevalence of alcoholism in other public sectors. It is against this gap that this survey was undertaken, seeking to assess the prevalence of alcoholism within the public sector with specific focus on NHIF.

Objective of the Study
The Specific Study Objective and question was:
To assess the prevalence of alcoholism among NHIF employees in Nairobi Kenya.

Research Question
What is the prevalence of alcoholism among NHIF employees in Nairobi Kenya?

Justification of the Study

Alcohol consumption has a remarkable detrimental effect on people's physical, mental, and social health, as well as the welfare of their close family members and the surrounding communities (WHO, 2018). Parsley et al., (2022) says workplace is the most ideal, and should act as the initial point of prevention and intervention for persons with AUDs. Therefore, there is need for organizations such as NHIF to ascertain the prevalence of alcoholism among their employees.

Significance of the Study

Findings of this research will benefit policy makers, government and decision makers in organizations, especially in the public sector. The findings will also add to the existing body of knowledge on the subject.

II.   LITERATURE REVIEW

Introduction

This section presents a review of empirical studies on Prevalence and alcohol use at the work place. It also presents the theoretical and conceptual framework guiding the study.

Prevalence and Use of Alcohol

Alcoholism is deeply ingrained in most societies across the globe with about 2.3 billion said to be consumers of alcoholic drinks, posing serious harm to individual health and society (WHO, 2018). Of particular concern is the increasing consumption of alcohol among employees with studies indicating that 5-20% of workers within the European Union have serious alcohol-related problems (Borrelli et al., 2022).

Globally, a study conducted in Norway confirmed that alcohol remains the most consumed and abused substance among employees with 1-3 of 10 workers associated with risky drinking and in need of interventions (Thørrisen et al., 2019). The impact to those who drink, and their employers have far reaching consequences on productivity and efficiency(Sullivan, et al., 2018). This study is therefore timely in unfolding the menace of workplace alcoholism and offering recommendations.

Alcohol consumption and abuse among different populations continues to be on the rise resulting to various disorders among the users (Tran et al., 2019). In a related study, Cheng et al. (2018) assessed the alterations in the frequency of alcohol use related disorders and alcohol consumption in the United States. The study used thirteen independently collected, nationally representative probability samples from the year 2002 through 2014 on non-institutionalized US civilians. Logistic regressions were created using Join point, version 4.5, and statistical summaries were created using Stata's Metacum modules, version 14.1. The study indicated that between the years 2001–2002 and 2012–2013, the prevalence of alcohol use rose from 65.4 to 72.7% of the population examined. In the same period, there was a rise in the prevalence of alcohol use disorders, from 8.5 to 12.7% of the population assessed. This is a longitudinal study and was conducted in the American setting with a particular emphasis on the changes in alcohol consumption and use disorder prevalence. The present study is however a cross-sectional study focusing on effectiveness of the interventions against alcoholism among employees.

Regionally, Walls et al. (2020) reports that alcohol makers have focused their attention on developing regions, especially Africa and other middle-income regions as new sources of growth, profit and increased

consumption. In Tanzania, a study established that about 3 in every police officer in urban Tanzania consumes alcohol which is two times higher than that in the general population (17.2%), overall prevalence of alcoholism in the general population stands at 6.8% (Ndumwa et al., 2023). This calls for careful consideration of alcoholism in the workplace so to enhance effective interventions to mitigate the same, hence the timeliness of this study.

Paltzer et al. (2022) in a study in Zambia established that investors in the alcoholic industry are setting up major production and marketing operations in sub-Saharan Africa to capitalize on the growing demand. The study found out that prevalence of alcohol abuse among Zambians had hit 5.5 %. The World Health Organization African region (WHO, 2018) says Zambia's prevalence is larger in comparison with the rest of the continent's nations which stands at 3.7%. This calls for intensified efforts as more working class populations are likely to be lured which makes this study timely in offering possible solutions.

In their research, Smook et al. (2018) assessed the occurrence of substance abuse at the workplace as well as the extent to which employers and outpatient treatment centres collaborate to address the issue. The study established that South Africa is one of the top global destinations for alcohol abuse which has affected a high number of employees and the general population. Whereas the study adopted qualitative exploratory and descriptive designs, the current study is limited to the use of descriptive design. The socio-economic crisis poses a major challenge to employers hence the relevance for this study to provide recommendations and possible solutions aimed at enhancing interventions.

A study by NACADA (2022) found out that the prevalence of alcoholism is high among public sector workers in Kenya standing at 44.5%, with 34% of the staff having used alcohol in the last one year. Further, 23.8% of the employees are current consumers of alcohol. The researchers recommended for implementation of tailor-made interventions targeting public sector employees. These statistics are corroborated by empirical studies done in various parts of the country. For instance, a study by Christopher et al., (2020) on examining the treatment and rehabilitation programmes for staff at Kapsabet County Referral Hospital found out that alcohol prevalence stood at 30% mostly affecting men at 25%.

Nonetheless, other studies have shown contrasting results for instance Kinyanjui, (2022) in a study on alcoholism among employees in selected companies in Nairobi County, established that majority of employees had low levels of alcohol use at 80%, 18.8% had moderate while only 1% had high intake levels. Musyoka et al. (2020) focused on alcohol and substance prevalence use amongst University of Nairobi, Kenya, students within their first year of study, in which alcohol emerged as the most frequently consumed substance of abuse with a prevalence rate of 17%.These statistics on prevalence rates inform the need for assessment of the effectiveness of the existing interventions against alcoholism in public sector organizations with the aim of informing policy and practice, hence the relevance of the current study.

Theoretical Framework

The study was guided by cognitive behavioral theory by Aaron Beck which explains different factors that trigger the process of alcohol abuse. Cognitive behavioral theory defines alcohol dependence as a maladaptive means of coping with social problems or meeting certain needs. The theory explains that individuals take into alcohol due to positive and feel-good experiences it gives them which leads to expansive consumption. The theory, however, offers ways of reversing factors that precipitate and sustain the habit through treatment interventions that confront or avoid situations that may lead to excessive drinking (Kadzin, 2017). The theory further explains that alcoholism starts through imitating role models who say it gives them a good and positive feeling and helps them overcome anxiety, relieves pain and enhances sociability (Leahy, 2017). This means those who develop such expectations ultimately end up in addiction, which perpetuates abuse.

Therefore, this theory is relevant to the study since it helps explain that alcoholism is a sequence or outcome of learned behaviour acquired over time as a means of coping with social challenges such as anxiety or meeting certain expectations. But over time some of the users begin to rely on alcohol consumption as a coping mechanism. In addition, the notion of feel-good experiences accounting for expansive consumption of alcohol implied in cognitive behavior theory made it relevant for explaining prevalence of alcoholism among NHIF employees.

III.   RESEARCH METHODOLOGY
Introduction
The chapter provides a discussion of the research methodology and research design that was used.

Research Design
The current research adopted descriptive research design. This design, according to Rojon and Saunders (2012) entails gathering data that describes events, trends and relationships to depict the status of the

subject under study. Descriptive research design enabled the researcher to obtain in-depth statistics concerning the population being studied from the research respondents.

Population

According to Cooper and Schindler (2013), a population is the total collection of elements about which to make inferences. The target population was 562 employees of the National Health Insurance Fund headquarters and selected branches within Nairobi County (NHIF, 2023). The selected branches were: Upper Hill, Westlands and Industrial Area, Ruaraka and Buruburu. Nairobi County was targeted as the study site because it is leading in the prevalence of alcoholism, with a prevalence rate of 17.5% in comparison to the other seven regions of Kenya (NACADA, 2017).

Sample

To calculate the sample size of the respondents, Yamane's formula was employed as follows (Fraenkel et al., 2019):

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

Where n is the size of the sample, N is the size of the population and e is the precision level at (0.05).

n $=562/ 1 + 562 (0.05)2$

$=562/1 + 562 (0.0025)$

$=562/2.405$

$=234$

Table 3.1
The Distribution of Accessible Population and Sample

Population Category	Accessible Population	Sample Size	Percentage
NHIF Headquarters	379	158	67.4
Westlands	28	12	5.0
Upperhill	56	23	10.0
Buruburu	35	15	6.2
Industrial Area	34	14	6.0
Ruaraka	30	12	5.3
Total	562	234	100.0

Source: Researcher (2022)

The formula for calculating the sample size for stratified sampling is as follows:

n_h = (N_h / N) *x* n

Where:

n_h is the desired sample size for each branch.

N_h is the total number of employees in each branch.

N is the total number of employees.

n is the desired overall sample size.

Table 3.1 shows that the list consists of 234 employees from NHIF headquarters, 28 employees from Westlands, 56 employees Upperhill, 35 employees from Buruburu, 34 employees from Industrial Area and 30 employees from Ruaraka. The sample size was 234 employees which was 41.6% of the accessible population.

Sampling Method

The technique of stratified random sampling was applied in sample selection. According to Cooper and Schindler (2013) stratified random sampling reduces the fault or error of sampling amongst the population.The following formula was used to compute the sample size per stratum (Kish, 2018):

n_i = N_i * (n / N)

Where:

n_i = the sample size for stratum i

N_i = the population size for stratum i

n = the desired sample size for the entire population

N = the total population size

The respondents from every stratum were then selected using simple random sampling method. This is whereby a number was assigned to employees in each stratum, then random numbers were generated for each employee in the stratum sample using Microsoft Excel (Karacay&Basaran, 2018).

Data Collection Methods
　　　　The questionnaire was adapted from the Alcohol Abuse Disorders Identification Assessment guideline developed by the World Health Organisation (Hahn et al., 2016). The interview guide administered to management staff at the NHIF headquarters was developed by the researcher..

Instrument Pilot Testing
Piloting was done through administration of the questionnaire to 24 respondents from NHIF Eldoret branch.

Data Analysis
　　　　This study used both quantitative and qualitative methods to analyze the data. The quantitative method was used for analysis of questionnaires while the qualitative methods was used for the interview guide.

Ethical Considerations
　　　　A permit was obtained from National Commission for Science, Technology & Innovation (NACOSTI) after approval from the Institutional Scientific Ethics Review Committee (ISERC) at PAC University.The researcher then sought approval from NHIF management to facilitate the administration of questionnaires and conducting interviews with NHIF employees.

IV.　　RESULTS AND DISCUSSION

Introduction
This chapter involves data presentation, analysis, interpretation, and discussions of the results on prevalence of alcoholism among NHIF employees.

Response Rate and Demographic Analysis
　　　　This sub-section comprises the response analysis, which includes the distribution of the responses by factors such as age, gender, and years of work.

Response Rate
　　　　Table 4.1 shows the response rate for the respondents who were reached with the questionnaires and were able to consent and participate in the study.

Table 4.1:
Response Rate

Number of Respondents	Responses	Percentage
234	149	63.7

　　　　Table 4.1 shows that 149 respondents successfully filled in the questionnaires, and returned after filling them. This was 63.7% response rate. This is a low response rate which could be associated with the stigma of alcoholism and alcohol abuse (Kulesza et al., 2017).

Gender of the Respondents
　　　　The study analyzed the gender of the respondents. Table 4.2 shows the distribution of the respondents by gender and the corresponding percentages of the number of respondents corresponding to gender.

Table 4.2: *Gender of Respondents*

Gender	Frequency	Percent
Male	56	37.6
Female	93	62.4
Total	149	100.0

　　　　Table 4.2 shows that most of the respondents in the study were females and constituted 62.4% of the respondents. Males constituted 37.6% of the respondents in this study. The results show that both genders were represented in the study.

Age of the Respondents
　　　　The study performed analysis of the age of the respondents. Table 4.3 shows the age distribution of the respondents and their corresponding percentages.

Table 4.3:
Age Brackets of Respondents

Age Bracket	Frequency	Percent
Below 25 years	1	.7
25-34 years	34	22.8
35-44 years	50	33.6
45 years or more	64	43.0
Total	149	100.0

Table 4.3 shows that most of the respondents who participated in the study were 45 years or more and they constituted 43.0% of all the respondents who participated in the study. This group was followed by those who are 35 to 44 years who made up 33.6% of the respondents. The number of respondents who are 25 to 34 years constituted 22.8% of the respondents in the study and the respondents who were under 25 years constituted 0.7% of the respondents in the study. The analysis suggests that most of the respondents were 45 years and above.

Respondents' Level of Education
Table 4.4 shows the level of education of the respondents. It reveals whether the respondents have attained primary, secondary, college level, bachelor's degree level, or postgraduate level of education.

Table 4.4:
Respondents' Level of Education

Strata	Frequency	Percent
Secondary level	9	6.0
College level	29	19.5
Bachelor's degree level	68	45.6
Post-graduate level	43	28.9
Total	149	100.0

Table 4.4 shows that 45.6% of the respondents had a bachelor's degree level of education, 28.9% had a post-graduate level of education, 19.5% had a college level of education and 6.0% had a secondary level of education. The analysis shows that most of the employees who work at NHIF have at least a college level education.

The Prevalence of Alcoholism among NHIF Employees
The objective of the study was to assess the prevalence of alcoholism among the respondents. This section contains descriptive analysis and presents the findings in figures, charts, and tables to show the extent to which alcoholism is prevalent among the employees at NHIF.

Experience Taking Alcoholic Drinks
The study sought to investigate whether the respondents had ever taken any alcoholic drinks. Figure 2 shows a pie chart that investigates the experience of the respondents with any form of alcoholic drink.

Figure 4.1:
Respondents' Experience with Alcoholic Drinks
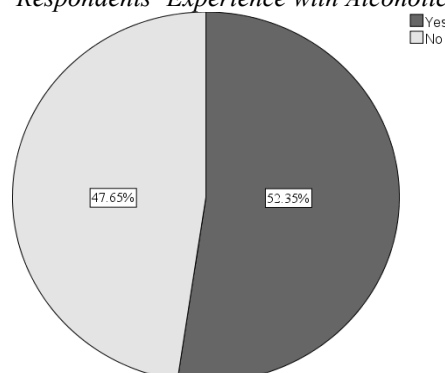
Age of Respondents when they took their First Alcoholic Drink

Figure 4.1 shows that a larger majority; 52.35% of the employees at NHIF have ever taken alcoholic drinks; whether bottled beer, spirit, traditional brew, or illicit liquor. 47.65% of the respondents reported that they had never taken any alcoholic drinks. The findings are coherent with the holdings of the study by Musyoka et al. (2020) which revealed that the prevalence of alcoholism among the residents of Nairobi, Kenya, is estimated to be over 50%. The finding is also consistent with findings of the study by Christopher et al., (2020), who showed that the prevalence of alcoholism and alcohol abuse was at least 30%, especially among the men. Nonetheless, alcoholism is a complex matter which could be highly prevalent among the respondents for so many reasons, and thus it is not accurate to hold that they form part of the larger population in Nairobi, Kenya, who have been found to engage more in taking of alcoholic drinks.

The study sought to unearth the age of the respondents when they first took alcoholic drinks. Figure 2 is a bar chart which shows the age of the respondents when they first took an alcoholic drink.

Figure 4.2:
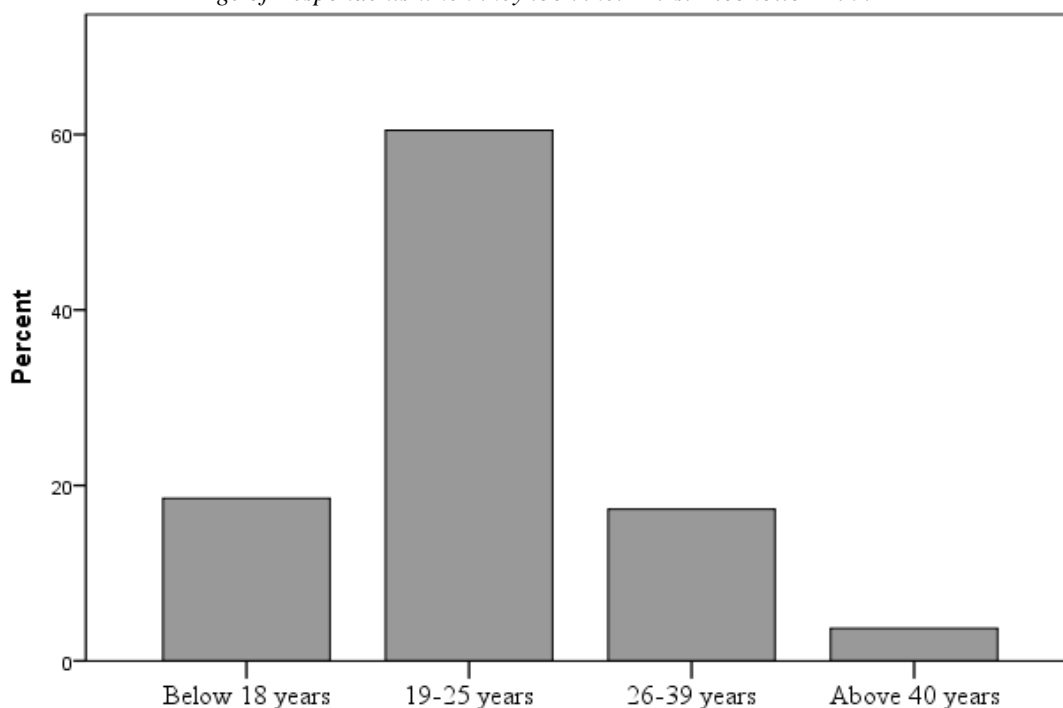*Age of Respondents when they took their First Alcoholic Drink*

Figure 4.2 show that 60.5% of the respondents took their first alcoholic drinks between the age of 19 and 25. The table also indicates that 18.5% of the respondents began taking alcoholic drinks before the legal age of 18 years. 17.3% of the respondents took their alcoholic drink at between the age of 26 and 39 years and lastly, 3.7% of the respondents took their first alcoholic drinks when they had reached 40 years above. The analysis is consistent with the results of the study by Kendagor et al. (2018) which showed that concerning heavy episodic drinking, Kenyan youth between 19 to 29 years scored very high.

Prevalence of Drinking in the Past Year

The study sought to find the prevalence of alcoholism and alcohol abuse in the previous year. Figure 4.3 is a pie chart showing whether or not the respondents had taken any alcoholic drinks in the past one year.

Figure 4.3:
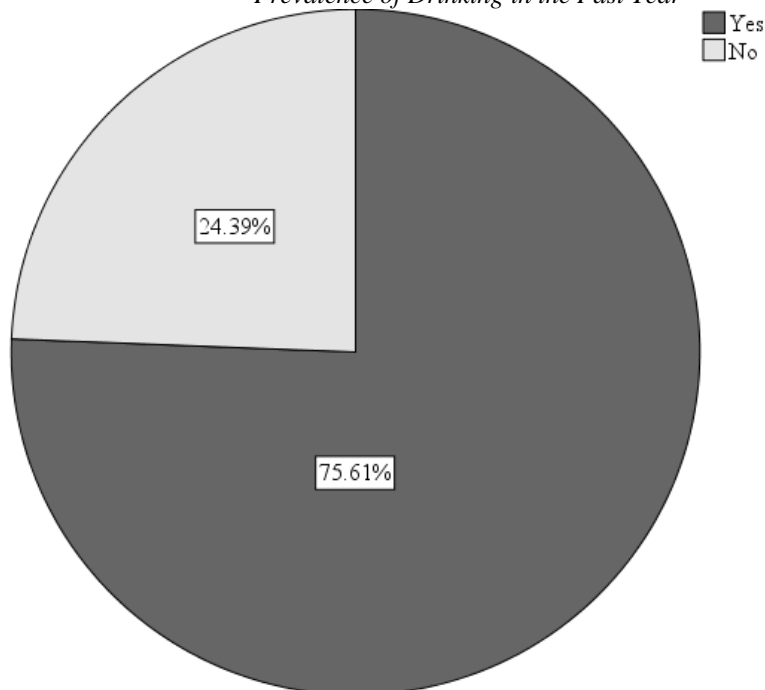*Prevalence of Drinking in the Past Year*

Figure 4.3 shows that in the past year, 75.61% of the 52.35% of 149 respondents who had accepted that they have ever taken alcoholic drinks at one point in their lives are continuing to take alcohol and have been doing so in the previous year. Respondents had taken alcoholic drinks while 24.39% of the respondents who had ever taken alcoholic drinks had not taken any in the past year. The results show that there are high levels of prevalence of alcoholism among NHIF employees because of the 75.61% of the respondents who indicated having taken alcohol in the past year. The finding is consistent with results of the study by Cheng et al. (2018) who showed that the prevalence of alcoholism was one of the most prevalent disorders all over the world.

Respondents' Frequency of Taking Alcoholic Drinks
The study investigates the frequency of alcohol intake among the respondents. Figure 5 shows a bar chart showing the frequency at which the respondents take alcoholic drinks.

Figure 4.4:
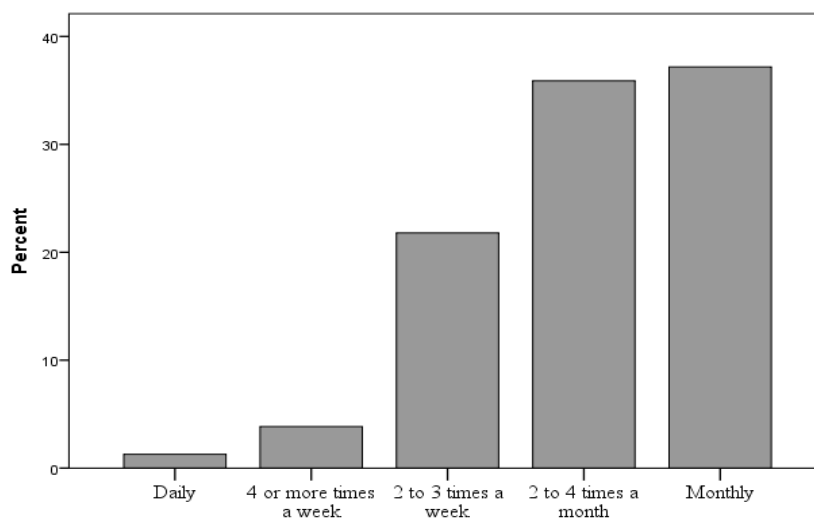*Frequency of Taking Alcoholic Drinks*

Figure 4.4 shows that 37.2% of the respondents took alcoholic drinks monthly. 35.9% of the respondents reported that they took alcoholic drinks at least 2 to 4 times, 21.8% of the respondents took alcoholic drinks at least 2 to 3 times a week, 3.8% of them took alcoholic drinks 4 or more times a week and lastly, 1.3% of the respondents took alcoholic drinks daily.

Number of Alcoholic Drinks that Respondents Take on a Typical Drinking Day

The study examined the number of alcoholic drinks taken by the respondents on a typical drinking day. Figure 4.5 is a bar chart showing the number of alcoholic drinks which the respondents take on their typical drinking days.

Figure 4.5:
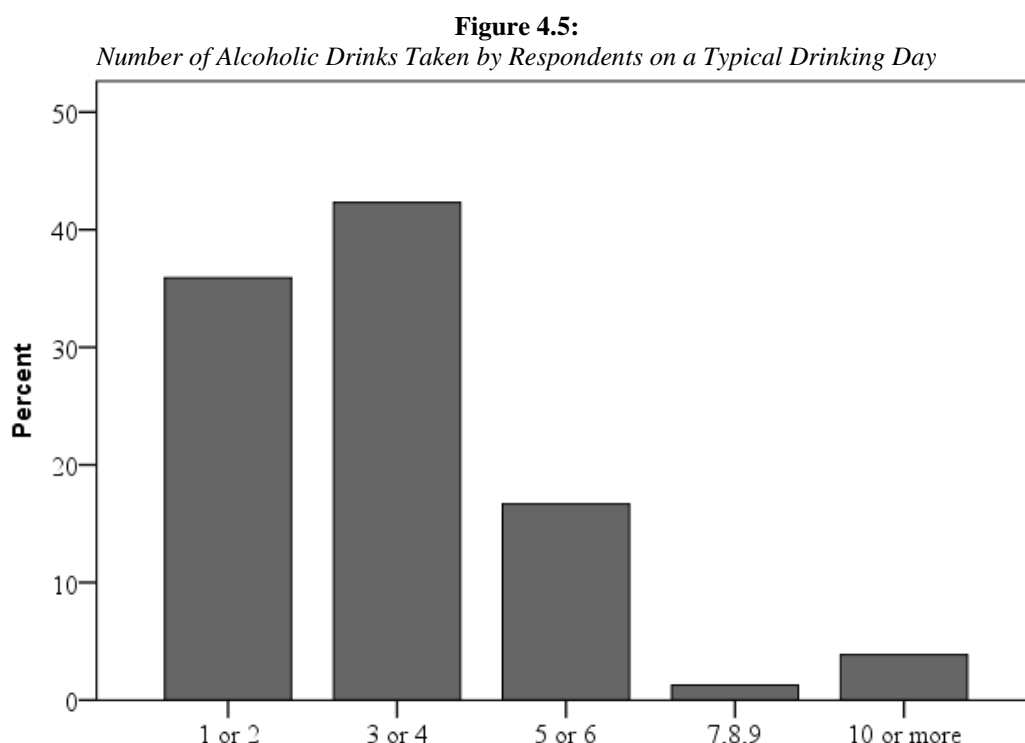*Number of Alcoholic Drinks Taken by Respondents on a Typical Drinking Day*

Figure 4.5 shows that on a typical drinking day, 42.3% of the respondents took 3 or 4 drinks containing alcohol, 35.9% of the respondents took 1 or 2 alcoholic drinks, 16.7% of the respondents took 5 or 6 alcoholic drinks, 3.8% of them took 10 or more alcoholic drinks and lastly 1.3% took 7 or 8 or 9 drinks on their typical drinking day.

Descriptive Statistics for Prevalence of Alcoholism and Alcohol Use

Table 4.10 shows the descriptive statistics for the prevalence of alcoholism and alcohol use among the employees of NHIF, Nairobi, Kenya. It shows the means, standard deviations and maximum and minimum values.

Table 4.5:
Descriptive Statistics for Prevalence of Alcoholism and Alcohol Use

	N	Min	Max	Mean	Std. Deviation
How often do you have six or more drinks in one occasion?	149	1	4	1.87	.978
How often during the last year have you found that you were not able to stop drinking once you had started?	149	1	4	1.26	.717
How often during the last year have you failed to do what was normally expected from you because of drinking?	149	1	3	1.30	.661
How often during the last year have you needed a first drink in the morning to get yourself going after heavy drinking?	149	1	4	1.24	.677
How often during the last one year have you had a feeling of guilt or remorse after drinking?	149	1	5	1.52	.984

How often during the last one year have you been unable to remember what happened the night before because you had been drinking?	149	1	4	1.35	.776

Table 4.10 shows the descriptive statistics for the prevalence of alcoholism and alcohol use among the employees of NHIF. The table shows that regarding the statement, "How often do you have six or more drinks in one occasion?" on average most of the respondent conferred that they have six or more drinks almost monthly ($\overline{x}$=1.87, σx = .978, N=149). The results are inconsistent with the findings of the study by Ajayi et al. (2019) which revealed that the rate of alcoholism and alcohol use decreased from 43.5% to 31.1% and the number of drinks that the drinkers took also decreased when the people took part in religious activities or lived with their parents. Nonetheless, the authors investigated the prevalence of alcoholism among university students but the current study is among adults who are working and are presumably wholly responsible for their lives thus the autonomy would predispose the respondents working at NHIF, Nairobi, Kenya to the wrong decisions which let them take alcohol almost every less than a month.

Regarding the question, "How often during the last year have you found that you were not able to stop drinking once you had started?" most of the respondents on average held that they have never been unable to stop drinking once they began during the last year ($\overline{x}$=1.26, σx = .717, N=149). The analysis shows that even though most of the respondents take alcoholic drinks, they seem to take it within their control and they do not lose their ability to stop or halt whenever they feel like doing that. These results corroborate the findings by Musyoka et al. (2020) who after studying the drinking trends of students from the University of Nairobi revealed that while most students begin the drinking habit in their tertiary learning institutions as a fun activity, they go ahead and perfect the habit when they are employed.

Regarding the question, "How often during the last year have you failed to do what was normally expected from you because of drinking?" on average, most of the respondents reported that their drinking had never in the last year been the reason why they failed something which was normally expected from them ($\overline{x}$=1.30, σx = .661, N=149). The analysis supposes that most of the respondents have not been hooked to the depths of alcoholism because the results by Konchellah (2016) suggested employees who have been deeply rooted in alcoholism often fail to meet the expected responsibilities which the company has put on them to achieve. This means that employees who are using alcohol are doing so in moderation, and this may be due to their high level of awareness of the health risks associated with alcoholism. This deduction is anchored on the premise that increased awareness can lead to more informed decisions about alcohol use and may lead some individuals to reduce their alcohol consumption.

Furthermore, regarding the question, "How often during the last year have you needed a first drink in the morning to get yourself going after heavy drinking?" on average most of the respondents commented that they have never in the past year needed alcohol to get going in the rest of the day after heavy drinking ($\overline{x}$=1.24, σx = .677, N=149). The analysis shows that on average most of the respondents are not dependent on alcoholic drinks because they have not gotten to the level used by Gireli (2019) when describing addiction which holds that it requires one to be unable to operate without having taken an alcoholic drink. The respondents at NHIF therefore might have known ways through which they manage their drinking so that they do not have to take alcoholic drinks to be effective at work.

Regarding the question, "How often during the last year have you had a feeling of guilt or remorse after drinking?" most of the respondents on average reported that they had not felt guilt and remorse after drinking for less than a month which they had been taking alcoholic drinks ($\overline{x}$=1.52, σx = .984, N=149). The results show that feelings of remorse or guilt after taking alcoholic drinks are not common among the respondents after they have taken alcoholic drinks. The absence of feeling or remorse is inconsistent with findings by Cheng et al. (2018) which indicated that the prevalence of alcoholism among users indicates that they have surpassed the cultural effects which push back the drinking habits and culture. A possible reason for this finding is that alcohol consumption in Kenya is legal, and thus, they did not see anything wrong with drinking alcohol. It is possible that when a substance is legalized, it becomes more socially acceptable and may be viewed as less stigmatized. In any case, it does not necessarily mean that everyone who uses alcohol will develop a problem with it.

Lastly, regarding the question, "How often during the last year have you been unable to remember what happened the night before because you had been drinking?" on average most of the respondents reported that they had never failed to recall the occurrences of the previous night because they were drinking ($\overline{x}$=1.35, σx = .776, N=149). The results postulate that the respondents do not often participate in heavy episodic drinking (HED) which is often associated with the loss of memory and blackout. The finding are contradictory to the findings of the study by Kendagor et al. (2018) which held that HED is common among adults who are working, married or cohabiting. Nonetheless, the respondents were all professionals who are required to be working at given times for the number of times in the whole month or weeks. Therefore, their jobs might be a restraining factor, making them not be involved too much in HED.

Descriptive Statistics for Prevalence of Alcoholism Composite Score

Table 4.11 shows the descriptive statistics for the prevalence of alcoholism composite score. It shows the mean, standard deviation, upper and lower limits and the maximum and minimum values. The average prevalence of alcoholism was converted to percentage by dividing the mean composite by total possible score of 5, and multiplying by 100 percent.

Table 4.6:
Descriptive Statistics for Prevalence of Alcohol Composite Score

			Statistic	Std. Error
Prevalence of Alcoholism Composite Score	Mean		1.4248	.07214
	95% Confidence Interval for Mean	Lower Bound	1.2813	
		Upper Bound	1.5683	
	5% Trimmed Mean		1.3383	
	Median		1.1667	
	Variance		.427	
	Std. Deviation		.65324	
	Minimum		1.00	
	Maximum		3.83	
	Range		2.83	
	Interquartile Range		.54	
	Skewness		1.947	.266
	Kurtosis		3.362	.526

Table 4.11 show the descriptive statistics for the prevalence of alcoholism composite score. It shows that on average the prevalence of alcoholism and alcohol abuse was low among employees of NHIF, Nairobi, Kenya ($\bar{x}$=1.42488, σx =. 65324). This translated to 24.5% prevalence rate. The results are contradictory to the findings of the study by Musyoka et al. (2020) which showed that alcoholism is a pervasive habit among adults in Kenya, suspecting that 60% of them drink. However, the employees at NHIF might be having knowledge about how to manage their drinking in a manner that it does not become a bondage for them. The respondents showed low prevalence of alcoholism perhaps due to the steps which the institution might have taken to intervene in dealing with alcoholism and alcohol abuse.

Normality Test for Prevalence of Alcoholism Composite Score

Figure 4.6 shows a histogram for the prevalence of alcoholism composite score. It was used to test for the normality of the prevalence of alcoholism composite score.

Figure 4.6:
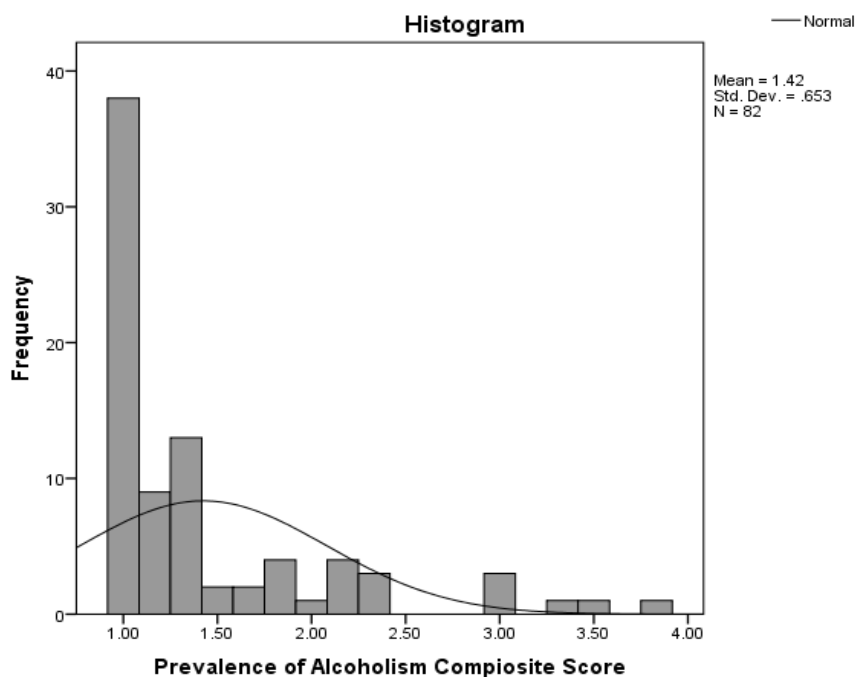*Histogram for Prevalence of Alcoholism*

Figure 4.6 shows a histogram that was used to test for the normality of the prevalence of alcoholism data. The figure shows that there was the presence of abnormality in the data, which violated the assumption of no abnormality and was treated using log transformation.

Outlier Test for Prevalence of Alcoholism

Figure 4.7 shows a box plot for the prevalence of alcoholism and alcohol use among NHIF employees. It was used to test for the presence of outliers in the data for the prevalence of alcoholism among the NHIF employees.

Figure 4.7:
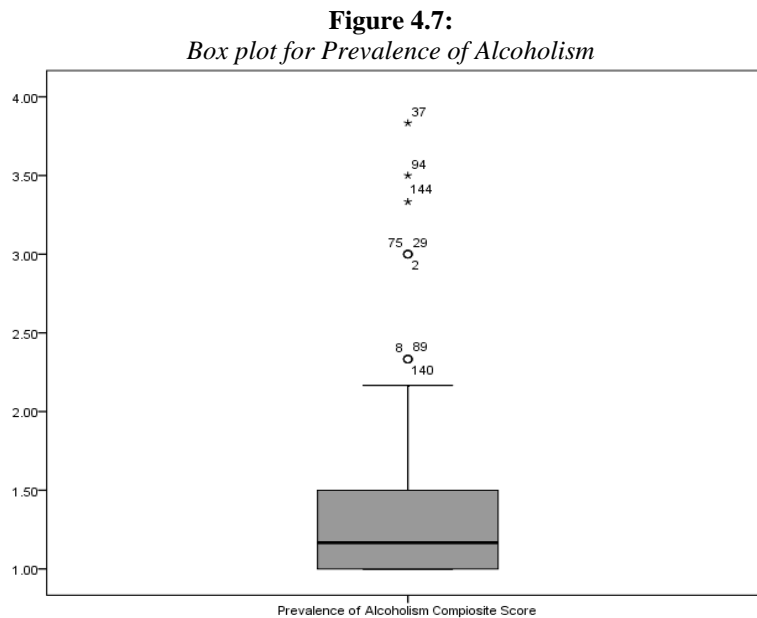*Box plot for Prevalence of Alcoholism*

Figure 4.7 shows a box plot that was used to test for the outliers in the prevalence of alcoholism among the employees of NHIF. The figure shows that there were outliers in the data which violated the assumption of no outliers in the data and thus the data was treated for the outliers using log-linear transformation.

Concerns about Drinking

Figure 4.8 is a pie chart used to examine the level of concern and the source of such concern which the respondents have received based on their drinking habits.

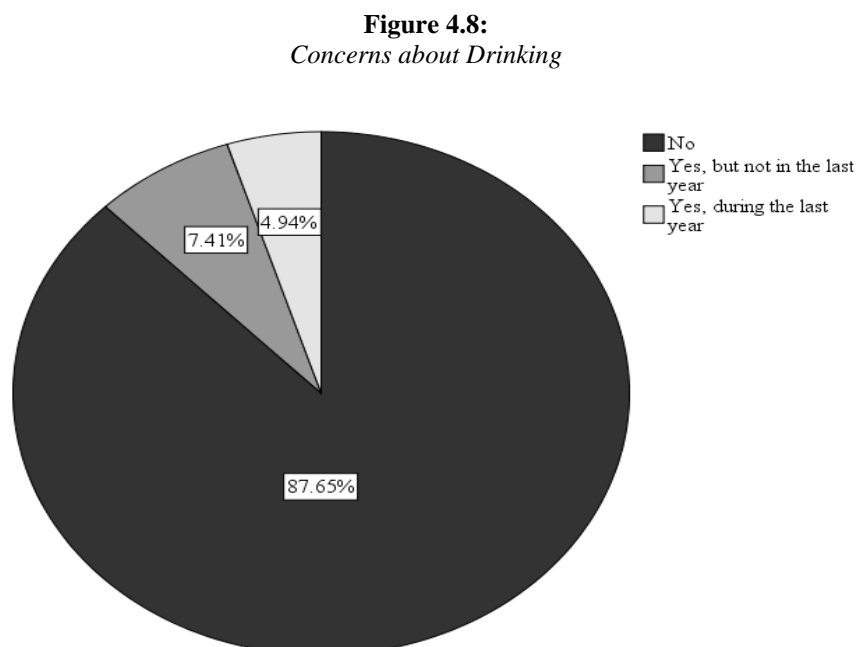**Figure 4.8:**
Concerns about Drinking

Figure 4.8 shows that 87.65% of the respondents who took alcoholic drinks had never received any concern from a relative, friend, or doctor about their drinking. 7.41% of the respondents who took alcoholic drinks had received concerns from a relative, friend, or doctor about their drinking habit in the previous year. Lastly, 4.94% of the respondents who took alcoholic drinks had received concerns from a relative or friend, or doctor about their drinking but not in the previous year.

Prevalence of Alcoholism by Respondents' Gender

Table 4.12 is a cross-tabulation output showing the prevalence of alcoholism and alcohol use among the respondents by gender.

Table 4.7:
Prevalence of Alcoholism and Alcohol Abuse by Gender

			Gender		
			Male	Female	Total
Have you ever taken any alcoholic drink i.e., bottled beer, spirit, traditional brew or illicit liquor?	Yes	Count	43	35	78
		% within Gender	76.8%	37.6%	52.3%
	No	Count	13	58	71
		% within Gender	23.2%	62.4%	47.7%
Total		Count	56	93	149
		% within Gender	100.0%	100.0%	100.0%

Table 4.12 shows a cross tabulation analysis of the prevalence of alcoholism and alcohol use among the respondents by their gender. The analysis revealed that 52.3% of the employees had ever taken alcohol while 47.7% had never taken alcohol. The analysis revealed that 76.8% of the males responded in the affirmative meaning that they have ever taken alcoholic drinks, while only 37.6% had taken any alcoholic drinks. The results show that most of the respondents who were involved in drinking of alcohol and alcoholic drinks were males. The analysis is consistent with the results of the study by Vellios and Van Walbeek (2018) which showed that more males than females are involved in drinking alcohol and alcoholic drinks making them more predisposed to injuries caused by drinking alcohol. It can be argued that may be cultural norms and expectations encourage men to drink more than women. Men are often expected to engage in drinking behaviors as a way of proving their masculinity or as a means of social bonding with other men. Men may also be more likely to use alcohol as a coping mechanism to deal with stress or emotional issues. This can lead to higher levels of consumption and increased risk of alcohol use disorder.

Chi-Square Tests for Prevalence of Alcoholism by Gender of Employees

Table 4.13 shows Chi-square test for the prevalence of alcoholism and alcohol abuse among the employees by their gender factors.

Table 4.8:
Chi square tests for Prevalence of Alcoholism by Gender of employees

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2sided)	Exact Sig. (1sided)
Pearson Chi-Square	21.478a	1	.000		
Continuity Correctionb	19.937	1	.000		
Likelihood Ratio	22.364	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	21.334	1	.000		
N of Valid Cases	149				
a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 26.68.					
b. Computed only for a 2x2 table					

Table 4.13 shows that there was a statistically significant association between prevalence of employee alcoholism and the gender of the employees, $\chi2(1) =21.478$, $p<.05$. This implies that the prevalence of alcoholism varied with the gender of the respondents, which shows that gender is a significant predictor of prevalence of alcoholism among employees.

Prevalence of Alcoholism by Age of Respondents

Table 4.14 shows the results of cross tabulation analysis of the prevalence alcoholism by the age of the employees at NHIF.

Table 4.9:

Cross tabulation Analysis Prevalence of Alcoholism by Age of Respondents

			Age				
			Below 25 years	25-34 years	35-44 years	45 years or more	Total
Have you ever taken any alcoholic drink i.e., bottled beer, spirit, traditional brew or illicit liquor?	Yes	Count	0	17	36	25	78
		% within Age	0.0%	50.0%	72.0%	39.1%	52.3%
	No	Count	1	17	14	39	71
		% within Age	100.0%	50.0%	28.0%	60.9%	47.7%
Total		Count	1	34	50	64	149
		% within Age	100.0%	100.0%	100.0%	100.0%	100.0%

The table shows the prevalence of alcoholism and alcohol abuse among NHIF employees depending on their ages. For the employees who were below 25 years, none of them was involved in alcoholism. 100% of them had never taken alcohol. For individuals between 25 to 34 years, 50% had taken alcoholic drinks and 50% had never taken any alcoholic drinks. The table also revealed that 72.0% of the employees between 35 to 44 years were involved in taking alcoholic drinks while 28.0% was not involved in taking alcoholic drinks. Lastly, 39.1% of the respondents of 45 year and above had taken alcoholic drinks while the remaining 60.9% were not involved in taking alcoholic drinks. The results suggest that employees between 35 to 44 years are the most vulnerable to alcoholism and alcohol abuse at NHIF and the interventions should target them.

Chi-Square Tests for Prevalence of Alcoholism by Age of Employees

Table 4.15 shows the chi-square tests for the prevalence of alcoholism among the NHIF employees by their age factor.

Table 4.10:

Chi Square Tests for Prevalence of Alcoholism by Age

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	13.443a	3	.004
Likelihood Ratio	14.164	3	.003
Linear-by-Linear Association	1.825	1	.177
N of Valid Cases	149		
a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is .48.			

The table shows that there was significant association between prevalence of alcoholism and the age of the individuals, $\chi2(3) =13.443$, $p<.05$. This means that prevalence of employee alcoholism varied with the age of the respondents, which shows that age is valid predictor of alcoholism and thus the intervention programs should target specific age groups. It is noteworthy that the prevalence of alcohol consumption peaked in midlife and decreased with old age. A possible explanation for the foregoing finding is that individuals in mature adulthood may have more disposable income and free time, which can lead to increased social opportunities that involve drinking. Qualitative analysis of the responses given by the key informants yielded that there is poor financial management among some of the employees of NHIF, Nairobi, Kenya.

Prevalence of Alcoholism by Employees' Level of Education

Table 4.16 shows the results of cross tabulation analysis of the prevalence alcoholism by the level of education of the employees at NHIF. Table 4.16 shows that there 44.4% of secondary level educated employees were involved in alcoholism and alcohol abuse and 55.6% were not. Furthermore, 48.3% of college level educated employees were involved in alcoholism and alcohol abuse and 51.7% were not involved in taking alcoholic drinks. For bachelor's degree graduates, 50.0% of them were involved in alcoholism while the other 50% was not involved in taking alcoholic drinks. Lastly, for the postgraduate level educated employees a majority, 60.5% of them were involved in taking alcohol and alcoholic drinks while 39.5% were not involved in alcoholism and alcohol abuse. The results suggest that the increase in education level is directly linked to the possibility of involving in alcoholism and alcohol abuse. The results are consistent with the findings of the study

by Musyoka et al. (2020) which showed that students pick up heavy drinking habits in their tertiary levels of education and continue with the habits into their future professional lives.

Table 4.11:
Cross tabulation Analysis of Prevalence of Alcoholism by Employees' Level of Education

			Level of Education				
			Secondary level	College level	Bachelor's degree level	Post-graduate level	Total
Have you ever taken any alcoholic drink i.e., bottled beer, spirit, traditional brew or illicit liquor?	Yes	Count	4	14	34	26	78
		% within Level of Education	44.4%	48.3%	50.0%	60.5%	52.3%
	No	Count	5	15	34	17	71
		% within Level of Education	55.6%	51.7%	50.0%	39.5%	47.7%
Total		Count	9	29	68	43	149
		% within Level of Education	100.0%	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests for Prevalence of Alcoholism by Employees' Level of Education
Table 4.17 shows the chi square analysis of the prevalence of alcoholism among NHIF employees by their level of education.

Table 4.12:
Prevalence of Alcoholism by Employees' Level of Education

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.704a	3	.636
Likelihood Ratio	1.715	3	.634
Linear-by-Linear Association	1.371	1	.242
N of Valid Cases	149		
a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is 4.29.			

Table 4.17 shows that there was no statistically significant association between prevalence of alcoholism and employee level of education, $\chi2(3) =1.704$, $p>.05$. This means that the level of education is not a significant predictor of the prevalence of employee alcoholism and it should not be considered a factor when creating interventions for employees at NHIF, Nairobi, Kenya. This may be due to the fact that the relationship between education level and alcohol consumption is complex and as such, level of education, per se, does not adequately explain alcoholism as there may be other related factors that come into the equation of alcoholism among employees.

V. SUMMARY, RECOMMENDATIONSAND CONCLUSION

Introduction
This chapter brings the study to a conclusion by giving a summary of the findings of the study, discussing the implications of the findings for theory and practice before making recommendations of the study, and giving conclusions based on the findings of the study

Summary of Key Findings
The Prevalence of Alcoholism among NHIF Employees
The objective of the study was to assess the prevalence of alcoholism among NHIF employees. Descriptive statistics revealed that 52.35% of the employees at NHIF had ever taken alcoholic drinks and 60.5% of the respondents took their first alcoholic drinks from the age of 19 to 25. Furthermore, 76.8% of the respondents who were involved in taking alcoholic drinks were males. Further examination of alcohol abuse composite score revealed that on average the prevalence of alcoholism and alcohol abuse was low among employees of NHIF, Nairobi, Kenya ($\overline{x}=1.42488$, $\sigma x =. 65324$).

VI. Discussion
Descriptive analysis of the demographic information of the respondents revealed that males were more into alcoholism and alcohol abuse than their female counterparts. The results corroborated findings that had been undertaken by many previous researchers including Sudhinaraset et al. (2016) who opined that men are more involved in alcohol drinking than women. The study reveals that male employees are more susceptible to

alcoholism and alcohol abuse than women. Therefore, employees, organizations, and governments should target men more with intervention programs for alcoholism and alcohol abuse because, in the end, it is them who are the most vulnerable. Targeting them will help identify their drinking early and improve their lives and productivity at their respective workplaces.

Cross-tabulation analysis revealed that there was a trend of prevalence of alcoholism with increase in the level of education among the respondents. Therefore, as the institutions such as NHIF continue to formulate and implement interventions to deal with alcohol and drug abuse among the employees, they should target those with advanced education because the results of this study portended that they seem more engaged in alcoholism and alcohol abuse. Targeting them will have a positive influence on the rest of the employees who might be swayed to delve into alcoholism because their more learned colleagues are doing it.

Chi-square tests revealed that there was significant association between prevalence of alcoholism and the age of the individuals, $\chi 2(3) =13.443$, $p<.05$. Therefore, even as the different bodies and institutions such as NHIF and other stakeholders concerned with drug abuse in Kenya such as NACADA make policies and interventions to curb the prevalence of alcoholism and alcohol abuse among the employees in Kenya's public sector, they should consider age because it is a significant factor in the predictor of the prevalence of alcoholism among the respondents.

Lastly, qualitative analysis revealed that apart from other risk factors such as peer pressure and stress, poor financial management was a major risk factor of alcohol abuse among the respondents

VII. Recommendations

The following recommendations for practice and further studies were proposed:

Therapists in collaboration with NHIF, NACADA and all other government institutions and NGOs should perform an in-depth study to determine the underlying issues which make men more predisposed to alcohol abuse than women to help create interventions which target men before they succumb to the detrimental effects of alcoholism and alcohol abuse. Furthermore, there was a mixed stand on the issue of whether or not the prevalence of alcoholism is affected by the level of education of the individuals. Therapists, government and other institutions should collaborate to perform an in-depth study to unearth the correlation or lack of it between alcoholism and level of education to help target the predisposed individuals with intervention programs so as to offer early, timely and effective treatments.

VIII. Conclusion

The main conclusion which can be drawn from this study is that even though a larger percentage (53.5%) of the employees of NHIF are involved in alcoholism and alcohol abuse and most of them are males, the overall prevalence of alcoholism among the respondents was low.

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