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THE SOCIO-ECONOMIC EFFECTS OF ILLICIT LOCAL BREWS ON HOUSEHOLD FOOD SECURITY IN BUMULA AND KANDUYI SUB COUNTIES BUNGOMA COUNTY KENYA

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ABSTRACT

Purpose: Alcohol use affects approximately 1.3 billion people and contributes to 3.5% of global health problems and disability. In Kenya, 60% of alcohol consumed is illicit brew, despite being declared illegal in 1978 through a presidential decree. The purpose of this study was to evaluate the socio- economic effects of illicit local brews on household food security in Bumula and Kanduyi Sub Counties Bungoma County Kenya specifically.

Methodology: The study was carried out in Bumula and Kanduyi sub counties of Bungoma County. Correlational survey research design was employed. The study targeted 410 respondents comprising of household heads, agricultural officers, NACADA representatives, NGO and CBO leaders as well as religious leaders from Bumula sub counties. Key informants included the provincial administration, education, health, police and probation officers. Stratified random sampling was used in selection of household heads and the key informants sampled purposively. Face to face interview, structured questionnaires and observation was employed as tools of data collection. Data was analyzed using Frequencies, percentages using SPSS statistical software. Data presentation was by use of tables, pie charts, bar charts.

Findings: The research findings showed that: Health effects of illicit local brews have no significant effect on household food security. The model was found to be significant and therefore the null hypothesis was rejected on the ground that Health effects of illicit local brews had significant and relatively weak and positive linear correlation with household food security. Based on the findings, it was concluded that consumption of illicit brew is a critical factor in the determining household food security.

Recommendations: The researcher recommends that government should facilitate sensitization workshops for community members on consumption of illicit brews and its negative influence on household food security. Government should also involve the community in fighting consumption of illicit brews. The government should map out hotspots for consumption of illicit brews empower he mapped households with alternative sources of income to encourage them abandon the unprofitable trade.

Keywords: *The Tanzanian Alcoholism and Drug Abuse Weekly (ADAW); Blood Alcohol Concentration (BAC); Community Based Organization (CBO); Central Nervous System (CNS); Disability Adjusted Life Years (DALYs); Degree of Freedom; disease cause; disease factor; disease risk and protective factors; burden of disease; health care costs; injury; social harm; drinking guidelines; prevention*

1.1. Background

Alcohol use causes 3.5% of all global death and disability in the world and can be attributed to 8.7% of global poverty levels and hunger (Murray & Lopez, 2016). Worldwide 5% of all deaths of people aged between 5 years and 29 years in 1990 were attributable to alcohol use (Murray and Lopez, 2016). However, according to WHO 4% of global health burden measured as Disability Adjusted Life Years (DALYs) and 3.2% of all death in the year 2010 were attributable to alcohol (WHO, 2016). Increase in alcohol consumption by a community or a nation tends to increase hunger, famine and poverty problems. Alcohol is related to more than 60 medical conditions. It is associated with diseases including stroke, myocardial, infarction, cirrhosis, depression and accidents such motor as vehicle accidents, drowning, poisoning, and self-inflicted injuries and suicide (Babor, 2016).

For many centuries, evidence has shown that alcoholic beverages have been known and used in human societies (Birech, 2016). Evidenced by numerous biblical examples and ancient myths on alcohol, Perry (2016) argued that, alcohol since antiquity has been part of human nature. Wine, beer, cedar, mead and other fermented beverages have been presented in nearly all human societies for thousands of years, basically consumed soon after brewing locally, and were rarely traded (WHO, 2012). Alcohol has for centuries played an important part in people's lives that include; celebrations, settling disputes, during wars by soldiers as refreshment and during rituals among other functions. Oakley (2016) observes that beverages existed in early Egyptian civilization and that there is evidence of an early alcoholic drink in China around 7000 B.C. In India, an alcoholic beverage called Sura, distilled from rice, was in use between 3000 and 2000 B.C.

The Babylonians worshiped a wine goddess as early as 2700 B.C. In Greece, one of the first alcoholic beverages that gained popularity was mead, a fermented drink made from honey and water. In America, several Native civilizations developed alcoholic beverages in pre- Columbian times such as Chicha, which was a fermented beverage from the Andes region of South America prepared from corn, grapes, or apples. In Britain, according to Lucia (2013) spirits were purposely used for medicinal purposes in the sixteenth century and that due to flooding of the spirits in the market. In early eighteenth century, the British Parliament passed a law discouraging the use of grain in their brewing. In the U.S.A., law was passed which prohibited the manufacture, sale, import, and export of intoxicating liquors in 1920. The prohibition encouraged illegal alcohol trade that flourished and by 1933, the prohibition was lifted (Oakley, 2013).

In India a significant relationship exists between alcohol and risky sexual behavior leading to HIV/AIDS and other Sexually Transmitted Diseases (STDs), (WHO, 2015). Drinking of alcohol has a major impact on food security in areas where homemade alcohol is the only source of income, 50% percent of grain harvest of household is used to brew alcohol (Dorji, 2015). The International Labor Organization (ILO) estimated 20 to 25% of workplace accidents to involve intoxicated people which are a major impediment to productivity. Gururaj (2014) observed that with the growing consumption of alcohol, hospital admission rate due to acute effects of alcohol consumption were increasing. Studies indicate that nearly 20 to 30% of hospital admissions were directly and indirectly due to alcohol related problems (Gururaj, 2014). The major risk factor for alcohol associated problems is quantity and frequency of alcohol consumed. Patterns of drinking

are considered an important predictor of alcoholism particularly the frequency of drinking large amounts and experience of intoxication (Midanik, 2015).

African history shows an existence of alcohol, its negative impacts and attempts to control it. In countries like Ghana and Nigeria, documentations based on local oral history and archeology as explained by Perry and Birech (2016) have suggested that consumption is part of African culture, rituals, tradition, and customs since time immemorial. Though in these societies, abuse of alcohol was firmly controlled through strictly put-up social structures that defined who to take alcohol, when and why. In sub-Saharan Africa, there was a traditional pattern of drinking based around ceremonies and events (Andrew, 2015). There was a change in alcohol consumption when colonization took shape, and the effects of westernization and recent globalization began to take root. The impact was an undermining of the traditional African culture, hence the loss of the alcohol regulation mechanisms that was pegged on cultural norms and practices (Musungu & Kosgei, 2015).

This has been supported by the finding presented by the WHO (2018) that, the advent of governments by the colonial masters eroded local rules and regulations by providing legal frameworks. The legal frameworks introduced unrecorded alcohol (illicit brews) into limelight. According to WHO (2018), spirits were commonly used in the 16th century. With colonization, through the five hundred years, it spread to many parts of the world, hence, commercialization and taxation. The unrecorded, local alcoholic beverages were not regulated, monitored nor taxed, qualifying as illicit brews. Regardless of the times and place the implications were negative and evident. The colonial masters put up efforts to curb illicit since the available legal brews at the time were expensive for the masses that were poor and in some countries; it was a preserve of the colonial masters.

The effects of alcohol are more devastating in Uganda. This country is already faced with problems of malnutrition, infectious diseases and drought, consuming alcohol makes them even poorer (Murray & Lopez, 2016). Mwenge and changaa are popular local brew in Uganda manufactured through fermentation of bananas, yeast, millet and maize. The Ugandan government banned the brewing; drinking and selling of illicit alcohol through a presidential decree after considering the obvious consequences of illicit brew (Murray & Lopez, 2016).

Despite the ban, the illicit brew industry has flourished, sometimes with fatal results when some brewers lace the brew with chemicals such as methanol. There are beverages which either fall outside of the usual beer, wine and spirits categories or which are traditionally produced in villages and homes. These traditional forms of alcohol are usually poorly monitored for quality and strength, and pose health consequences related to harmful impurities and adulterants. Extreme cases might even result in death especially where the brews were laced with methanol and other dangerous additives such as car battery acid and formalin (Mureithi, 2012). As a remedy, there may be health benefits from replacing cottage-produced with industrially produced alcohol in terms of the purity of the product (Room, 2016).

In Kenya, every society has its own traditional beverages. These are chang'aa, busaa, muratina, mnazi and mitinidawa (Musungu & Kosgei, 2015). Alcohol abuse was first documented in 1902, when Alcoholism was experienced in former Fort Hall District, current day, Murang'a County,

Central Kenya (Mututho, 2014). Abuse of alcohol was mainly due to frustrations by the colonial government, change of African cultural drinking patterns due to urbanization, industrialization and westernization. The traditional societies had lost control of their local brew drinking patterns as societies had been dismantled and changed.

WHO (2018) indicates that, alcohol use in the colonial countries was cut off to ensure the availability of manpower to the colonial masters. The colonial government came up with legislations to control the manufacture and consumption of illicit brews, and appointed local administrators, specifically chiefs to execute the passed alcohol legislations. Kenyans were also prohibited from accessing the legal bottled beer taken by their colonial masters. The devolution of liquor licensing control (GoK, 2010), is a good effort towards encouraging citizen participation in the policy issues, and encouraging decentralization. The many rules and regulations as argued by Kelly (2015) legal standards are too high for chang'aa brewers to meet. Kenya Revenue Authority, health, zoning approval and a cost of about Ksh. 40 000 to legalize their brewing is almost impossible for a local brewer.

In the year 2017 in Bungoma County, illicit alcohol fortified with methanol killed 88 people, 495 were hospitalized and 20 blinded (Were, 2015). The incidence led to the restriction of illicit alcohol distillation and the unlicensed sale of alcohol. More recently in July 2015 in Mandizini in Bungoma town slum 29 people died, 9 blinded and several hospitalized after consuming illicit brew (Were,2015). There has been mushrooming of informal brews that are not taxed and regulated in several parts in Bumula and Kanduyi sub counties. The most affected are the highly populated and low-income areas where open and disguised unemployment such as prostitution is widespread (Were, 2015).

Ultimatums and the arbitrary arrest of the consumers and producers have failed to control the hazardous practice of drinking illicit brew. The practice has however continued as the people blame the government for not providing employment and legalizing the brew (Were, 2015). This habit has resulted into reduced farming and the little proceeds from farming are used for brewing illicit brew hence severely affecting the household food security. This current study evaluated the health influence of illicit local brews on household food security in Bumula and Kanduyi Sub Counties, Bungoma County, Kenya

1.2. Statement of the problem

About 60% of alcohol consumed in Kenya is illicit brew according to NACADA (2016) despite being declared illegal in 1978 through a presidential decree. Mass incidences of blindness, death, and low household food security, poverty and deteriorating health conditions directly affect the consumers and society at large. Documentary evidence reveals that the former western province, where Bumula and Kanduyi Sub Counties are found is the leading region with cases of domestic violence in the country with 73% of the women having experienced domestic violence, compared to the national average of 49 % (GoK, 2018).

Hunger and poverty levels are also noted to be high. Records at Bumula and Kanduyi police station shows an average of 1,400 and 2,700 people respectively are arrested and charged in court yearly of illicit brew drinking and brewing (GoK, 2018). The number of households involved in sugarcane farming as a primary economic activity dropped from 40% to 27% in 4 years between 2012 and

2016 due to inadequate labor force because of alcohol (Owour, 2017). Most families are living under abject poverty in the sub county simply because breadwinners spent the entire time and meager family resources on consuming illicit brew.

The little harvest derived from farming is translated into cash and sometimes traded on barter trade in exchange for buying illicit brew (Ritsun, 2016). Alcohol use can also result in harmful mental health consequences for individuals, families and societies which significantly hinder effective farming and reduces household food security as a result. These consequences include alcohol dependence, dementia, cognitive dysfunction, hallucination, paranoid state, anxiety, depression and phobia associated with heavy and chronic or dependent drinking (Ritsun, 2016). This study endeavored to evaluate the health influence of illicit local brews on household food security.

1.3. Research Objectives

The general objective of this study was to evaluate the socio-economic impact of illicit local brews on household food Security.

1.4. Research Hypothesis

H_{O1}: There are no statistically significant Social-economic effects of illicit local brews on household food security

2.0. Empirical Literature Review based on study variables

2.1. Social-economic effects of Alcohol Consumption on Household Food Security.

A study in the United States by Frieze (2018) on influence of excessive alcohol consumption on household food security using descriptive research design with structured questionnaires. It was analyzed using descriptive and correlation analysis which revealed that abusive men with severe alcohol problems were violent and inflicted serious injuries on their partners thus destabilizing farming activities in the family (Frieze, 2018). In the same study 10-14% of married women were reported to have been sexually harassed. Alcohol causes sexual dysfunction in both men and women leading to low libido in women and impotence in men resulting in frustration, promiscuity, marital problems and divorce (Frieze, 2018). Sexual dissatisfaction associated with alcoholism in the family can cause family separation leading to single parenthood and STI/HIV AIDS as couples seek sexual fulfillment out of marriage. All these factors hinder peace and cohesion in the family making it difficult for communal efforts toward farming hence endangering house hold food security.

Leonard (2015) conducted a study on alcoholic consumption and domestic violence in South Africa. The study used quantitative and qualitative techniques using a sample of 678 respondents. Data was collected using focused group discussion guides and questionnaires and analyzed both inferentially and descriptive statistics. The findings showed that Alcohol related assaults are associated with consumption of large amounts in a particular session. In South Africa cases of domestic violence are high among heavy drinkers than moderate drinkers. Domestic violence is determined by the number of times a family member has been assaulted or emotionally hurt. Men's consumption increases risk of assault to their female counterparts, (Leonard, 2015). The study findings also showed an association between harmful consumption of alcohol and social

consequences including death from road accidents, domestic violence, HIV infection and disorders which require medical attention. Drinking impairs performance as a parent or a contributor to the household. Time spent on drinking competes with the time needed to carry on family life.

Hoffman (2017) in a study on monitoring adolescents in Rwanda and Uganda using questionnaires. They were analyzed using multiple regression observes that families of the unemployed youth and the community find challenges in monitoring their young who are mostly idle and come to know later when they have already started drinking alcohol. There is also a problem of sustaining the unemployed youth considering the economic hardships parents face. Majority of the youth end up being absorbed into drinking alcohol and eventually become addicts without the community and their families understanding how they started. Eventually, there emerges an alcoholic subculture where the youth waste away and become unproductive members of their families and communities.

A survey by WHO (2014) on economic impacts of excessive consumption of alcohol on household economies of slams in West Africa including Ghana and Nigeria using explanatory research design with a relative sample of 789 respondents with focused group discussions and structured questionnaires. It was found that economic loss to the society resulting from harmful alcohol consumption includes cost to health care, social welfare and criminal justice systems, lost productivity and reduced economic development leading to reduced household food security. People who are addicted to drinking spend most of their income on the drink; sell personal items, household goods and even family land to satisfy their addiction. Poverty is high among illicit brew drinkers; they spend most of their time in drinking dens causing economic losses to their households by bribing the police and payment of court fine (Babiker, 2015). There is reduced economic productivity and workforce size as a consequence of death and premature retirement, absenteeism due to sickness, injuries and accidents.

Community Anti-Drug Coalitions of America CADCA (2019) carried out a study on correlation between rapid rise in unemployment and alcohol abuse in Bangalore India. The study used descriptive survey design with structured questionnaires analyzed using SPSS version 22. The study findings found that a rise of 3 per cent in unemployment is associated with a 28 per cent alcohol abuse in the younger population. Findings also showed that 9.5% of the drinkers sent their children under 15 years to work to supplement family income (WHO, 2015), and food security was affected by diversion of food grain to the brewing of alcohol facilitating hunger and poverty.

A study conducted by Baklien (2018) in 11 districts of Sri Lanka examining the link between alcohol and poverty using correlation survey design with structured questionnaires with a sample of 673 respondents found that 7% of the men said that alcohol expenditure was greater than their income. Death of breadwinners from alcohol related accidents and diseases affect the family finances in terms of loss of income and cost of funeral expenses (Kimalu, 2016). Substance abuse, crime, corruption, unprotected sex and rapid spread of HIV/AIDS are associated with illicit alcohol consumption especially in slums. The woman's role changes when the husband is the illicit brew drinker, because she must feed the family by looking for employment outside the home such as prostitution, farm labor, brewing and selling of illicit brews. However, there is lack of data on economic impact of illicit brew consumption on households in Kenya (Wanyoike, 2016).

A Nigerian government survey by Bagado (2016), "Exposure to Alcoholism in the Family", using correlation design with questionnaires and interview schedules shows that 30% of young women who didn't complete high school had grown up in families with alcoholic parents. Some children have such behavioral problems as lying, stealing, fighting, and truancy. These children live in extremely unstable home environments. They never know what to expect from an alcoholic parent. Because they are unable to predict their parent's mood, they don't know how to behave themselves.

Mustonen and Kinyanjui (2016) conducted a study on prevalence of illicit brews in Kenya. The study used a relatively small sample of 231 respondents and data were collected using structured questionnaires with interview schedules. The study data were analyzed using SPSS version 22. The findings note that producers of brews are a heterogeneous group such as widows or divorced older women who resort to selling the brews as a means of sustaining their livelihoods. These families are famous for household food insecurity.

Simiyu (2018) conducted a survey on the prevalence of alcohol consumption in Kenyan counties. The survey conducted focused group discussions with structured questionnaires before analyzing the data for interpretation. The study findings indicated that in Bungoma County, the rising cases of youth alcoholics threatens to alienate them from their families and communities, raising fears of existence of generational conflict and family instability. It further observed that the alcoholics are unlikely to ensure protection of the hard-earned heritage of resources and uphold the traditional values for a moral society. More importantly, they are unlikely to look for opportunities to improve their lives; instead, they waste away and become a burden to their families and the larger society. The Kenyan government is committed to provision of free primary and secondary education. However, drinking of illicit brew and related practices like prostitution, child labor and domestic violent affects the education of children in the household. Alcohol contributes to unruly behavior among the youth in institutions of learning causing strikes, theft, violence and destruction of property (Mckean, 2015).

It's agreeable to note that children of alcohol drinkers more often have problems in school. The stressful environment at home prevents them from studying. Their school performance may also be affected by inability to express themselves. Often these children have difficulty in establishing relationships with teachers and classmates. They tend more often to repeat the academic year or drop out of school. The studies reviewed here have been done in countries afar and may not necessarily give a true picture of the situation in Bumula and Kanduyi sub counties in Bungoma County Kenya. The current study will endeavor to fill the gap of effect on household food security in particular in a western Kenya environment.

2.2. Theories Relevant to the Current Study

In this study, Social learning theories was used to explain illicit brew consumption and household wellbeing. **2.2.1 Social learning theory**

According to Bandura and Walters (2018), who developed this theory, change in behavior could be observed to occur without being connected to a specific trend of positive or negative influence. The social learning process therefore can be defined as one where a person acquires new information and forms of behavior or attitudes from other persons. The theory perceives imitation

as a mental process in an attempt to resolve the crisis of autonomy versus the shame and doubt. This theory can further be explained through classical, social learning, instrumental conditioning and social comparison. In classical conditioning, a form of learning, a stimulus initially neutral, acquires the capacity to evoke reactions through repeated pairing with another stimulus (Baron, 2015). The role of classical conditioning to the youth drinking alcohol could be attributed to their being conditioned to engage in drinking as a result of observing repeated actions of drinking by members of the community or the family to the extent of their mind being conditioned that drinking is not bad.

The strengths of this theory are in the fact that behaviors are acquired through peer pressure and that people influence others. The weaknesses of this theory are that influence is not the only motivation for drinking among people. This theory is applied to mean to explain the social effects of illicit consumption on household food security. Social learning can also be through observation, where a person acquires a new form of behavior or thought through observing others (Bandura, 2017). Through this process, a youth may drink alcohol the way his/her parents do and not as they say. This process of learning is also imparted to the youth through the influence of the print and electronic media, films, peer groups and the community. Instrumental conditioning is a process through which children are appreciated by parents due to positive outcomes (Baron, 2015). For instance, a child being encouraged to use busaa drink for breakfast with potatoes will grow up knowing that busaa drinking is good as it was approved by parents. In this case therefore a youth will grow up drinking alcohol as it is viewed as a positive action.

The social comparison means social learning is the process through which people compare themselves to others in order to determine whether their view of social reality is or is not correct (Festinger, 2014). In this case the youth tend to compare their views with those of their contemporaries that make them change their attitudes about alcohol. This is where peer pressure plays out by influencing the youth to start drinking with others who are like-minded. This study was examining if the problem of consumption of illicit brew is influenced by peers among the residents in Bumula and Kanduyi constituencies in Bungoma County Kenya.

3.0. RESEARCH METHODOLOGY

The study was carried out in Bumula and Kanduyi sub counties of Bungoma County. Correlational survey research design was employed. The study targeted 410, respondents comprising of household heads, agricultural officers, NACADA representatives, NGO and CBO leaders as well as religious leaders from Bumula sub counties. Key informants included the provincial administration, education, health, police and probation officers. Stratified random sampling was used in selection of household heads and the key informants sampled purposively. Face to face interview, structured questionnaires and observation was employed as tools of data collection. Data was expressed as Frequencies, percentages using SPSS statistical software. Data presentation was by use of tables, pie charts, bar charts.

4.0. Summary of Findings.

4.1. Descriptive Statistics Results For -economic effects of illicit local brews on household food security.

The first objective of this study was to examine the social-economic effects of illicit local brews on household food security. To achieve this household head were asked to give their opinions on how they agree or disagree with the statements in Likert scale of 1-5, where 1= Strongly Disagree, 2= Disagree, 3= not sure, 4= Agree, 5= Strongly Agree.

Household heads were asked to state their observation on whether they fight with their spouses when they are drunk as tabulated in Table 1. They observed as follows: 4.7% (18) strongly disagreed, 21.9% (78) disagreed, 28.1% (102) were undecided, 25.0% (90) agreed and 20.3% (75) strongly agreed. Therefore, majority 45.3% (165) of the household heads generally agreed that they fight with their spouses when we are drunk. However, 26.6% (99) generally disagreed.

The study also sought to investigate whether alcohol consumption in their area has increased cases of crime and insecurity even involving theft of food. It was realized, as seen 5.1., that 0.0% (0) strongly disagreed, 0.0% (0) disagreed, 4.7% (18) were undecided, 39.1% (141) agreed and 56.3% (204) strongly agreed. As indicated by the high percentage 95.4% (345), Majority of the household heads agreed that Alcohol consumption in their area has increased cases of crime and insecurity even involving theft of food. However, none 0.0% (0) disagreed.

The third item under this theme was to establish whether Alcohol consumption in their area has increased cases of sexual abuse and defilement. It was established, as seen 5.1, that 0.0% (0) strongly disagreed, 0.0% (0) disagreed, 1.6% (6) were undecided, 26.6% (96) agreed and 71.9% (261) strongly agreed. As indicated by the high percentage 98.5% (357), majority of household heads agreed that Alcohol consumption in their area has increased cases of sexual abuse and defilement. However, 0.0% (0) disagreed.

The fourth item under this theme was to establish whether Alcohol consumption in their area has increased cases of divorce and single parenthood members having recurrent positions as directors in other companies. It was found that, as seen 5.1. 0.0% (0) strongly disagreed, 0.0% (0) disagreed, 0.0% (0) were undecided, 23.4% (84) agreed and 76.6% (279) strongly agreed. General, it was evident that 100.0% (363) of household heads agreed that alcohol consumption in their area has increased cases of divorce and single parenthood.

The study sought to establish whether Alcohol consumption in their area has increased poverty and brokenness among families and led to food insecurity. As illustrated in Table 1 he employees' responses were as follows: 0.0 (0) strongly disagreed, 0.0% (0) disagreed, 0.0% (0) were undecided, 54.5% (165) agreed and 45.2% (198) strongly agreed. Therefore, all household heads 100% (363) generally agreed that Alcohol consumption in their area has increased poverty and brokenness among families and led to food insecurity.

In establishing whether Alcohol consumption in their area has increased cases of sale of family land thus led to food insecurity, it was realized, as seen in table 1, hat 0.0% (0) strongly disagreed, 0.0% (0) disagreed, 1.6% (6) were undecided, 45.3% (165) agreed and 53.1% (192) strongly agreed. Majority of household heads agreed, as seen from the high percentage 98.4% (357) that Alcohol consumption in their area has increased cases of sale of family land thus led to food insecurity.

The seventh item under this theme was to determine whether Alcohol consumption in the area has increased cases of sale of household items including food items. It was established that 0.0% (0) strongly disagreed, 1.6% (6) disagreed, 1.6% (6) were undecided, 21.9% (78) agreed and 75.0% (273) strongly agreed. As indicated by the high percentage 96.9% (225), majority of household heads agreed that Alcohol consumption in our area has increased cases of sale of household items including food items. The findings were presented in table 1. **Table 1: The Influence of Socio-economic effects on the household food security**

SN.	Description	SD	D	U	A	SA	Total
1.	My spouse and I fight when we are drunk	4.7% (18)	21.9% (78)	28.1% (102)	25.0% (90)	20.3% (75)	100.0% (363)
2.	Alcohol consumption in our area has increased cases of crime and insecurity even involving theft of food	0.0% (0)	0.0% (0)	4.7% (18)	39.1% (141)	56.3% (204)	100.0% (363)
3.	Alcohol consumption in our area has increased cases of sexual abuse and defilement	0.0% (0)	0.0% (0)	1.6% (6)	26.6% (96)	71.9% (261)	100.0% (363)
4.	Alcohol consumption in our area has increased cases of divorce and single parenthood	0.0% (0)	0.0% (0)	0.0% (0)	23.4% (84)	76.6% (279)	100.0% (363)
5.	Alcohol consumption in our area has increased poverty and brokenness among families and led to food insecurity	0.0% (0)	0.0% (0)	0.0% (0)	54.5% (198)	45.2% (165)	100.0% (363)
6.	Alcohol consumption in our area has increased cases of sale of family land thus led to food insecurity	0.0% (0)	0.0% (0)	1.6% (6)	45.3% (165)	53.1% (192)	100.0% (363)
7.	Alcohol consumption in our area has increased cases of sale of household items including food items.	0.0% (0)	1.6% (6)	1.6% (6)	21.9% (78)	75.0% (273)	100.0% (363)

(Source: Researcher, 2020)

4.2. Inferential statistics

The means of Social-economic effects of illicit local brews on household food security were regressed. The purpose of this analysis was to find the causal relationship between Socialeconomic effects of illicit local brews on household food security. This aided in testing the first hypothesis

of the study that posits, H_01: Socio economic effects has no significant effect on household food security. This was tested using significance of R square and Regression coefficient at 95.0% confidence level.

There is evidence that the relationship between Social-economic effects of illicit local brews on household food security which was linear; the correlation coefficient (R) of 0.510 indicates moderately strong positive linear relationship. This implied that Socio economic effects have a significant and moderate strong relationship with the household food security. The coefficient of determination, R-square of 0.260 implied that 26.0% of the variance in household food security is explained by Socio economic effects. The significance value is 0.000 which is less than 0.05 thus the model is statistically significant in predicting the effect of Socio-economic effects on Household food security.

The unstandardized regression coefficient (β) value of Socio-economic effects was 0.541, correlation coefficient (β) of 0.510 and with a t-test of 10.89 and significance level of p = 0.000, which further confirmed existence of a significant and moderate strong positive linear correlation between Socio economic effects and Household food security. At 5% level of significance and 95% level of confidence, Socio economic effects are significant in predicating the degree of household food security. The regression equation to estimate the relationship between Socialeconomic effects of illicit local brews on household food security is stated as:

HFS = 1.914 + 0.541SEE +e

An F-significance value of p = 0.000 indicated that there was a probability of 0.00% from the regression model to accept the null hypothesis. The first research hypothesis posited H_01: Socio economic effects have no significant effect on household food security. Thus, the model was significant and therefore the null hypothesis was rejected on the ground that Socio economic effects had a significant strong positive linear correlation with household food security.

Table 2: Regression Results of Socio-economic effects and Household food security

Model Summary [c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change statistics			
					R Square change	F change	df1	Sig. F change
1	0.510[a]	0.260	0.258	0.76894	0.260	118.737	1	0.000

a. Predictors: (Constant), Socio economic effects

c. Dependent Variable: Household food security

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	70.206	1 362	70.206	118.737	0.000[b]
	Residual	199.850		0.591		
	Total	270.056	363			

a. Dependent Variable: Household food security

b. Predictors: (Constant), Socio economic effects

Coefficients [a]

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Correlations		
	B	S.E.	Beta			Zero order	Partial	Part
1 (Constant)	1.914	0.167		11.445	0.000			
Socio economic effects	0.541	0.050	0.510	10.89	0.000	0.510	0.510	0.510

a. Dependent Variable: Dependent Variable: Household food security

b. Predictors: (Constant), Socio economic effects

(Source: Researcher, 2020)

From the key informants' findings and focused group discussions, illicit brew consumption is viewed as an ancient tradition which makes their rituals and rites complete. It's believed to have been inherited from their ancestors and should be defended at all costs. The respondents believed that majority of the respondents were consumers of the illicit brew. The few that do not drink it were purely influenced by religious believes and were either Christians or Muslims. From the observation findings, the commonly drunk illicit brews were chang'aa and busaa. It was also observed that the raw material used for brewing illicit brews was majorly maize, sorghum and millet which are the major staple foods for the residents. The findings from key informants and focused group discussions also revealed that excessive consumption of illicit brew was a major contributor toward misuse of household resources including money and food, accidents as well as domestic violence.

These findings are confirmed by previous studies by Alves (2018) who examined the relationship between socio economic effects in Portugal and Household food security using a sample of 349

for the period between 2002 and 2007. They found that, the coefficient of socio-economic effects variable was positive and significant. The study's result suggested that Socio economic effects influenced the household food security.

Household food security in Bumula and Kanduyi Sub Counties Bungoma Kenya,

The dependent variable of this study was household food security. To achieve this household head were asked to give their opinions on how they agree or disagree with the statements in Likert scale of 1-5, where 1= Strongly Disagree, 2= Disagree, 3= not sure, 4= Agree, 5= Strongly Agree.

The study sought to investigate whether Children from families that consume illicit brew suffer from hunger and starvation in their area. It was realized that 0.0% (0) strongly disagreed, 1.6% (6) disagreed, 0.0% (0) were undecided, 18.8% (69) agreed and 79.7% (288) strongly agreed. A higher percentage of 98.5% (357) shows that Children from families that consume illicit brew suffer from hunger and starvation in their area. However, 1.6% (2) disagreed.

The second item under this theme was to establish whether Families that consume illicit brew rarely have a more than one meal in a day. It was established that 0.0% (0) strongly disagreed, 0.0% (0) disagreed, 0.0% (0) were undecided, 15.6% (57) agreed and 84.4% (306) strongly agreed. As indicated all, 100.0% (363), of household heads agreed that Families that consume illicit brew rarely have a more than one meal in a day.

The third item under this theme was to establish whether Families that consume illicit brew rarely observe balanced diet in their feeding. It was found that 0.0% (0) strongly disagreed, 0.0% (0) disagreed, 0.0% (0) was undecided, 12.5% (45) agreed and 87.5% (318) strongly agreed. General, it was evident that 100.0% (363) of household heads agreed that Families that consume illicit brew rarely observe balanced diet in their feeding.

The study sought to establish whether Families that consume illicit brew do not have food stores and reserves. The employees' responses were as follows: 0.0 (0) strongly disagreed, 1.6% (2) disagreed, 0.0% (0) were undecided, 12.5% (45) agreed and 85.9% (312) strongly agreed.

Therefore, a majority of household heads 98.4% (119) generally agreed that Families that consume illicit brew do not have food stores and reserves.

The study sought to investigate whether Families that consume illicit brew rarely participate in profitable farming. It was realized that 0.0% (0) strongly disagreed, 1.6% (6) disagreed, 0.0% (0) were undecided, 18.8% (69) agreed and 79.7% (288) strongly agreed. A higher percentage of 98.5% (357) shows that Families that consume illicit brew rarely participate in profitable farming. However, 1.6% (6) disagreed.

The last item under this theme was to establish whether Alcohol consumption in their area has increased food insecurity. It was established that 0.0% (0) strongly disagreed, 0.0% (0) disagreed, 0.0% (0) were undecided, 15.6% (57) agreed and 84.4% (306) strongly agreed. As indicated all, 100.0% (363), of household heads agreed that Alcohol consumption in their area has increased food insecurity. The findings for this objective were tabulated in table 8.1.

Table 3: Household food security

NO.	Description	SD	D	U	A	SA	Total
1	Children from families that consume illicit brew suffer from hunger and starvation in our area	0.0% (0)	1.6% (6)	0.0% (0)	18.8% (69)	79.7% (288)	100.0% (363)
2	Families that consume illicit brew rarely have a more than one meal in a day	0.0% (0)	0.0% (0)	0.0% (0)	15.6% (57)	84.4% (306)	100.0% (363)
3	Families that consume illicit brew rarely observe balanced diet in their feeding	0.0% (0)	0.0% (0)	0.0% (0)	12.5% (45)	87.5% (318)	100.0% (363)
4	Families that consume illicit brew do not have food stores and reserves	0.0% (0)	1.6% (6)	0.0% (0)	12.5% (45)	85.9% (312)	100.0% (363)
5	Families that consume illicit brew rarely participate in profitable farming	0.0% (0)	1.6% (6)	0.0% (0)	18.8% (69)	79.7% (288)	100.0% (363)
6	Alcohol consumption in our area has increased food insecurity		0.0% (0)	0.0% (0)	0.0% (0)	15.6% (57)	84.4% (306)

(Source: Researcher, 2020)

5.0. Conclusions and recommendations

The relationship between illicit local brews and household food security was analyzed. One of the illicit local brews that had a higher effect on Household food security was Socio economic effects ($B = 0.541$, $\beta = 0.510$; $p < 0.05$) while the one with the least effect on Household food security was Strategies of reducing consumption of illicit brews ($B = 0.285$, $\beta = 0.383$; $p < 0.05$). Based on our findings, we can conclude that consumption of illicit brew is a critical factor in the household food security. It has come out clearly in this research work that household food security is determined and influenced by several factors which are dependent on the nature of effect of illicit local brews consumed. Therefore, there is a significant relationship between illicit local brews and household food security.

i. The specific objective here was to establish the influence of Socio-economic effects on household food security. There is evidence that the relationship between Social-economic effects of illicit local brews on household food security which was linear; the correlation

coefficient (R) of 0.510 indicates moderately strong positive linear relationship. This implied that Socio economic effects have a significant and moderate strong relationship with the household food security. The first research hypothesis posited $H_0$1: Socio economic effects have no significant effect on household food security. Thus, the model was significant and therefore the null hypothesis was rejected on the ground that Socio economic effects had a significant and moderate strong positive linear correlation with household food security.

ii. The second objective of this study was to determine the influence of Health effects of illicit local brews on household food security. The findings indicated that a unit change in Health effects of illicit local brews would result to change in household food security by 0.384 in the same direction. The hypothesis, $H_0$2, stated that: Health effects of illicit local brews have no significant effect on household food security. Thus, the model was found significant and therefore the null hypothesis was rejected on the ground that Health effects of illicit local brews had significant and relatively weak and positive linear correlation with household food security. The second research hypothesis was tested using the significance level of both the R^2 and regression coefficients at 0.05.

iii. The third objective of this study was to assess the influence of Strategies of reducing consumption of illicit brews on household food security. The study was interested in assessing whether most of the shares in their organization are held by non-Kenyans. Findings reveals that the relationship of Strategies of reducing consumption of illicit brews on Household food security variables is linear, positive, relatively weak, and significant; the correlation coefficient (R) of 0.285. This indicated that a unit change in Strategies of reducing consumption of illicit brews would result to change in household food security by 0.285 in the same direction. $H_0$3: Strategies of reducing consumption of illicit brews have no significant effect on household food security. Hence, the model is significant and the study rejected the third null hypothesis of the study as there is significant relationship between Strategies of reducing consumption of illicit brews.

5.1. Recommendations

In light of the objectives and findings, the following recommendations suffice:

i. Create awareness

Political, religious and other civic leaders to embark nationwide awareness campaign on the dangers of drinking illicit brews. This awareness should include all learning institutions as part of the syllabus.

ii. Involve the media in the campaign against illicit brews

The media should be included in the strategy against alcohol and drug abuse in the country. This would mean training reporters to accurately state facts and make articles news worthy. Editors should also be trained so as to make them understand the importance of distinguishing between licit and illicit brews.

iii. Provide alternative sources of income

The government should create training institutions where the society develops their skills which can enable them to become entrepreneurs and eventually improve on their quality of life. A better quality of life means that the spending power has increased enabling consumers to afford better alcohol quality.

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