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RESEARCH ARTICLE

KHAT CHEWING PRACTICE ITS PERCEIVED HEALTH EFFECT AND ASSOCIATED PROBLEMS WITH KHAT CHEWING AMONG COMMUNITIES OF CHIRO TOWN.

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Abstract

Khat is found in the evergreen tree or large shrub consists of whole rash leaves and buds of a plant known as *Catha edulis*. It is an indigenous tree to Ethiopia, Kenya, and more than 20 different compounds are found in khat. Khat chewing practice renders certain influence on physical and psychological well being of the community and it can cause more serious adverse psychiatric, cardiovascular, dental and gastrointestinal effect. The recent sharp increase khat consumption may not only affect the health of individuals but could also have serious socio – economic consequences. This study was conducted to assess prevalence of khat chewing practice; its perceived health effect among chiro town. Community based cross- section study was determined by using single population proportion formula and 20 households were selected by systematic sampling method and in the selected by lottery among members of household aged 15 years old and above. Data were collected by means of questionnaire analysis was carried out using SPSS version 20. For the qualitative part 264 individuals were purposely selected and sample size for this method was determined through participant.

Results: The khat chewing is most commonly practiced among male gender (72%) compared to female (28%). Muslim were more likely to chew khat (38%) compared to orthodox Christians and other. Respondent who had family member without a chewer. Among the entire respondent 94.7% agree on khat chewing practice had perceived health effect and 5.3% of the respondent Dis agree.

Conclusions: The prevalence of khat chewing practice was 62% with high proportion of the khat chew found in the urban setting. Sex, religion, residence, family chewing habit and perceived health effect were significantly associated factors with khat chewing practice. In this study 94.7% of the respondents perceived that khat chewing practice had harmful effect on health and the perceived health effect reported were slapping disorder, hallucination, hypertension, loss of appetite, depression and gastrointestinal adverse effect like gastritis.

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Introduction:-

Khat is one of a stimulant drugs got from a tree called *Catha edulis* people have consumed khat for its stimulating effect (Cox and Ramped 2003,456) it has slightly narcotic properties and its leaves are usually chewed. The main psychiatric ingredients are cathine and cothinone (The dependent producing constituent of khat leaves) chemical that are similar to amphetamine (NIDA.2010) khat leaves are chewed for their euphoric effect to guard off tiredness and with the assumption that chewing chat facilitates learning. World health organization (1980) classified it as a drug of abuse that can produce mild to moderate psychological effect (less than tobacco or alcohol).

According to the world health organization substance abuse is defined as the use of other substance for non medical purposes with the aim of producing a mind altering effect in the use (WHO).According to this organization it involves the use of substance such as cannabis (Marijuana) khat misuse of legal drug or use of a drug for purposes other than that for which they are intended (WHO, 2006; Rehm and Eschmann, 2002).

According to united nation office of drug and crime (UNODC) (2008) 205 Million people are involved in substance abuse World wide of these 25 Million people aged 15-64 are estimated to be problem of drug users Many of Who are unable to stop without treatment the regional of Africa in the report is between 25.7 Million and 80.8 Million among the same aged group (world Drug Report ,2011) Report of world Health organization(2006) showed that while 17 to 42% of south's sub Sahara Africa are involving in chronic excessive drinking of alcohol those involved in abusing drug such as cannabis and others like khat are 7 to 38%.chronic khat use associated with adverse health effect such as hypertension heart rhythm disorder,insomnia liver toxicity,oral cancer hypertension spermatorrhoea and hemorrhoid ,loss of appetite and gastrointestinal effect medical problem associated with khat in toxication including psychophysical function and schizophreniform psychoses some other khat chewers also experience anxiety, tension restlessness, hypogonadic,hallucination hypomania and aggressive behavior or psychosis.

Khat chewing is neither a habit confined to any specific socio economic group nor gender specific .It is common habit among all segment of the Ethiopian. Population studies show that khat consumption is widely experienced by both the young in school and out of school and the old though the young are the most affected group (Ehen and Stanley, 2004) It is widely understood that the consumption of khat creates remarkable problem for today youth which is no limited to individual user. Rather its adverse negatively consequence is believed to be challenging to a family, the community as a whole ,economy and political area of a given nation (Ihezue,1999).many countries including Ethiopian reorganization that substance abuse by young is a serious health economic and social problems. In addition khat chewers spend consideration time on this habit time wasting effect the student's time of student.

Objective:-

The aim of this study was to determine the prevalence and health effect of khat chewing and identify the health consequence of abusing khat among communities of chiro town.

Materials and Methods:-**Description of the Study Area**

This research was conducted in west Hararghe zone chiro town. It is geographically located between 34° 18' 43'' to 43° 0' 4'' E latitude and 10° 09' 24'' to 30° 18' 43'' longitudes N. It has altitude and longitude on altitude of 1826m above sea level it is the administrative center of west harerghae zone (Source west harerghae zone district agricultural office, 2010).

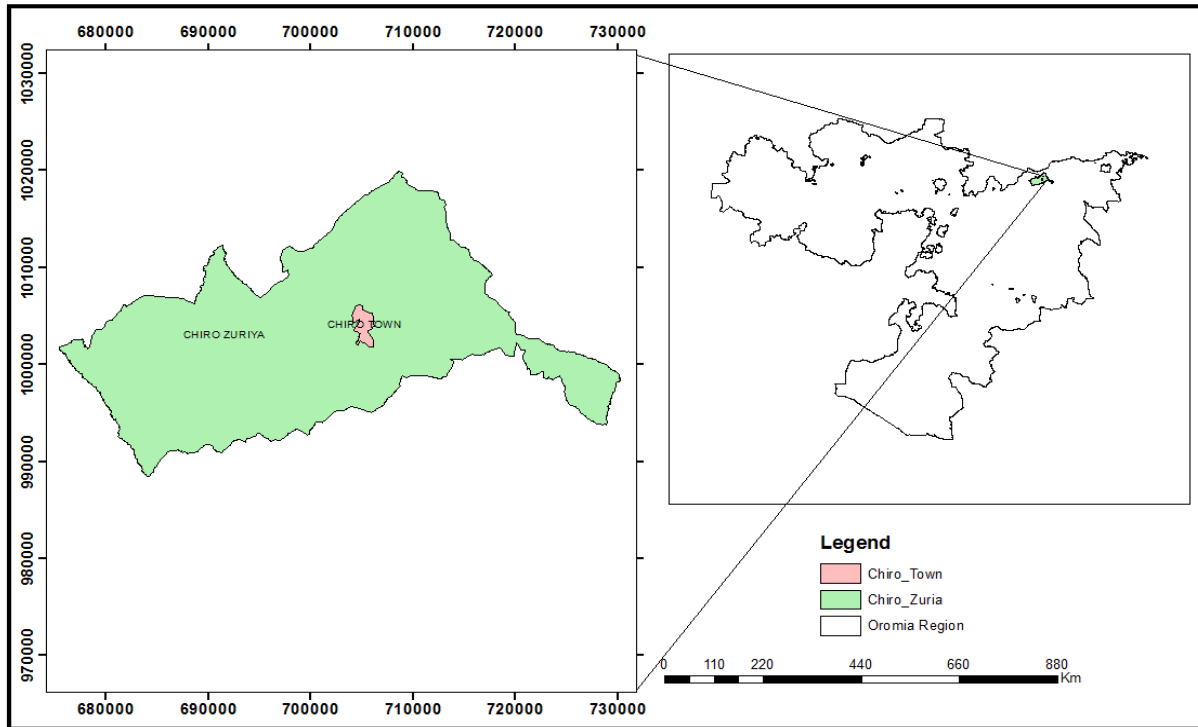


Figure 1:-Map of study area

Research Design

A quantitative research method was used in the study. Quantitative research focuses on gathering numerical data and generalizing it across groups of people or to explain a particular phenomenon (Creswell, 2003). As suggested by this author, quantitative method is the preferred one if the goal of the study is to establish the relationship between one thing (dependent variable) and another thing (independent variable) in a population. Thus this was preferred to determine the relationship between dependent variable (in this khat chewing) and independent variables which include demographic (such as age, gender, place of origin, academic status , level of education) and socio-economic variable (such as peer influence, accessibility , family influence and personal factors) among chiro town.

The study design was cross-sectional and the data was collected in April, July, 2018. The reason why this study is cross –sectional is that is major objective is identifying the current determining factors and the risks associated with khat chewing behavior among students rather than its change over the period of time.

Sampling Technique

Sample size Determination

Sampling size for the study was determined based on the formula size determination suggested by Kothari (2004). The level of significance is taken as 95 % (Z=1.96), margin of error 5 % (e=0.05).The sample size was calculated using the following standardized formula.

$$n = \frac{Z^2}{4e^2 + Z^2/N}$$

Where n=required sample size, N=population size-critical value 95% confidence level assumption (1.96) and e-margin of error between the sample and population or the precision (0.05).

Thus the sample size is calculated as $n = 1.96^2 / (4 * 0.05^2) + 1.96^2 / 54,307 = 3.84 / 0.010070709 = 264$

Therefore, according to this formula the determined sample size is 264 of the chiro town.

Sampling Procedures

Chiro town was chosen for study on the basis that khat plant is highly cultivated and easily accessible to the consumers. This also has the implication on both cost and time. Since khat is highly supplied and easily accessible to the users in the town the user are able to get it with low cost and whenever needed. This again leads to the increment of the prevalence of khat chewing in the study area.

The data collection instrument and Procedures

The proposed study was employed survey research design, it used questionnaires was developed by reviewing the relative literature and previously used instrument which was adopted and modified from WHO- students drug use survey questionnaire (WHO,2002). The question was dividing into three sections socio-demographic back grounds; khat chewing habit and associated problems with khat chewing. The questionnaires were distributed and collected by class student's leaders under supervision of research assistant hence the primary data was collected through this structures self- administered questionnaire from 264 respondents out of the total population of 54.307.

Data Analysis

After the collection of data the researcher checked the completed questionnaires; responses were coded, cleaned and entered to computer using IBM statistics SPSS version 20 statistical program for analysis. Data collectors through questionnaire were analyzed using the logistic regression model. According to IBM Manual, logistic regression is used to predict the presence or absence of a characteristic or outcome based on values of a set of predictor variable. Thus it is said to be well suited for assessing and two or more independent or predictor variable son a dichotomous repose variable, current khat chewing status which is categorized in to the population participating in the study.

Reliability and validity

Data collection tools were prepared in English which is the medium of instruction in Ethiopian higher Education institutions. During the data collection process, supervision was conducted strictly and frequently. After the collection of data completeness of the required type of data was checked for accuracy and consistency before the entry of data to the SPSS.

Population of the study area

The current (2017) total population is 54,307 from these 28,971 men and 25,336 women. The dominant ethnic group are Oromo people but the total population are a mixture of the different ethnic group (Source Ethiopian national census 2017) and Harerghae zone disteininct statically office (2017) the majority of the population in habitants said they are Muslim's.

Result and Discussion:-

In this study, a total of 264 peoples were participated and all of the participants completed the questionnaires making the respondent rate 100%.

Socio- demographic characteristics of Respondents

The socio demographic variable used in the study was family structure of the respondent. Respondents are asked about their parent existence, hence concerning parental presence of respondent were headed by single family. Both families headed and the remaining grows up with other relatives.

Among the study participant, the majority 190 (72%) were male, all of the respondent were aged 18-26 years and the mean age of the respondents were 21.87 years (SD+1.875 years). Regarding place of origin most of the people 164 (62%) were from urban areas and the remaining 100 (38%) were from rural areas. The result was shown in table of socio- demographic characteristics of the respondent.

Table 1:-Description of socio- demographic characteristics of chiro town (n=264)

Age	Number	Percent
18-20	68	25.7
30-40	145	55
41-60	51	19
Total	264	100
Gender		

Male	190	72
Female	74	28
Total	264	100
Place of Origin		
Urban	164	62
Rural	100	38
Total	264	100
Family Structure		
Both Parent	99	37.7
Single headed	128	48.5
Other relative	37	14
Total	264	100
Religion		
Muslim	100	38
Orthodox	74	28
Other	90	34
Total	264	100

Chat Chewing Frequency/prevalence and Starting Time of Chat Chewing

The frequency/prevalence of chat chewing among the study population was shown in table 2. Out of the total respondents, 232 (87.9%) of the respondents replied that they were chewing chat every day and 18 (6.8%) of them also replied that they were chewing chat from 3-4 days per week. Few respondents said that they were chewing chat from 1-2 days per week because of financial problem. The majority of the respondents were started chewing chat at elementary school (64.8%); at University (14%) and at Secondary School (13.3%). Few respondents were also replied that, they were started chewing chat at preparatory school level. The common reason for chewing chat at elementary school level was due to family chewing habit, academic purpose and peer pressure. The prevalence of khat chewing has been higher in Ethiopia. In the same manner this study found that out of the targeted sample (n=264), the current prevalence of khat chewing were higher counting 87.7% among chiro town. This prevalence was higher than that of a study conducted in northern part of Ethiopia, among Axum university which was 28.7% prevalence for life time and for current chewers (Measho et al.,2012), and at Mekelle university which was 14.8% (kidan A.,2011) . As the finding of the study indicates, some of the factors are availability, affordability and large numbers of khat chewing canter are some to mention.

Table 2:-Chat Chewing Frequency and Starting Time

	Chewing Period/prevalence	Frequency	Percentage
How often do you chew chat per week	1 -2day	14	5.3%
	3-4 day	18	6.8%
	Every day	232	87.9%
	Total	264	100%
When did you start chat chewing?	Starting at		
	Elementary School	171	64.8%
	Secondary School	35	13.3%
	Preparatory School	21	7.9%
	University	37	14%
	Total	264	100%

Perceived health effect

Out of the total respondents, 250 (94.7%) of the respondents said that chewing chat has its own significance negative effect on the health of chat chewers and its families, the economy of the region and the country in general and few of the respondent 14 (5.3) didn't know the negative impact of chewing chat. From this study the majority of the respondents perceived that khat chewing practice had significant harmful effect on health of chat chewers and the perceived health effect reported were slapping disorder, hallucination ,hypertension, loss of appetite, depression and gastrointestinal adverse effect like gastritis.

One of the objectives of this study, as it is clearly indicated in the objective section, is to identify health consequence of abusing khat. Accordingly about 94.7% of current khat chewers reported that they were aware of the health effect of khat while only 5.3% of the respondent were not. Hence, knowledge of health consequence associated to khat chewing is not necessarily a protective factor against use of khat. Lack of sleep, losing appetite, physical weakness and depression were identified as the major health challenges associated to the respondent's khat intake. The impact of khat chewing on appetite was revealed by heymann et al (1995) which was similar to the finding of this study.

Table 3:-Perceived health effect

Perceived health effect	Frequency	Percentage
Yes	250	94.7%
No	14	5.3%
Total	264	100%

Initiators and reason to chewing khat

Majority of the khat chewers initiated by Peer pressure (22.7%) followed by Ceremony of khat (20.45%), academic purpose (18.93%) and family chewing habit (15.2%). Few of the study participants continued khat chewing practice since then for religion purpose (12.5%) and others like pleasure and recreation (10.22%) as shown in table 4. From the data collected from the respondent, the majority of them were replied that the reasons for chewing chat were alertness (38.06%), concentration (23.20%); energy (21.22%) and enjoyment (17.52%) as shown in Figure 2.

The major reason claimed for initiation and continuation of khat chewing were peer pressure, academic purpose and stress reduction. This is an important indication to direct interventions towards decreasing the prevalence of this behavior since the major reasons were identified it is a problem half way solved. Different studies proved that gender and closely linked to lifestyle and the use of khat (Ihunwo et al 2004; WHO, 2010). Gender wise, researchers have found that men are more likely to suffer from adverse health effect of khat chewing than women. Consistent to this study the current study revealed that there are statistically significant association between being males in their childhood and their later lives.

Table 4:-Initiators to chewing khat

	Reason	Frequency	Percentage
Initiators to chewing khat	Peer pressure	60	22.7%
	Academic purpose	50	18.93%
	Ceremony ok khat	54	20.45%
	Religion purpose	33	12.5%
	Family chewing habit	40	15.2%
	other	27	10.22%
	Total	264	100%

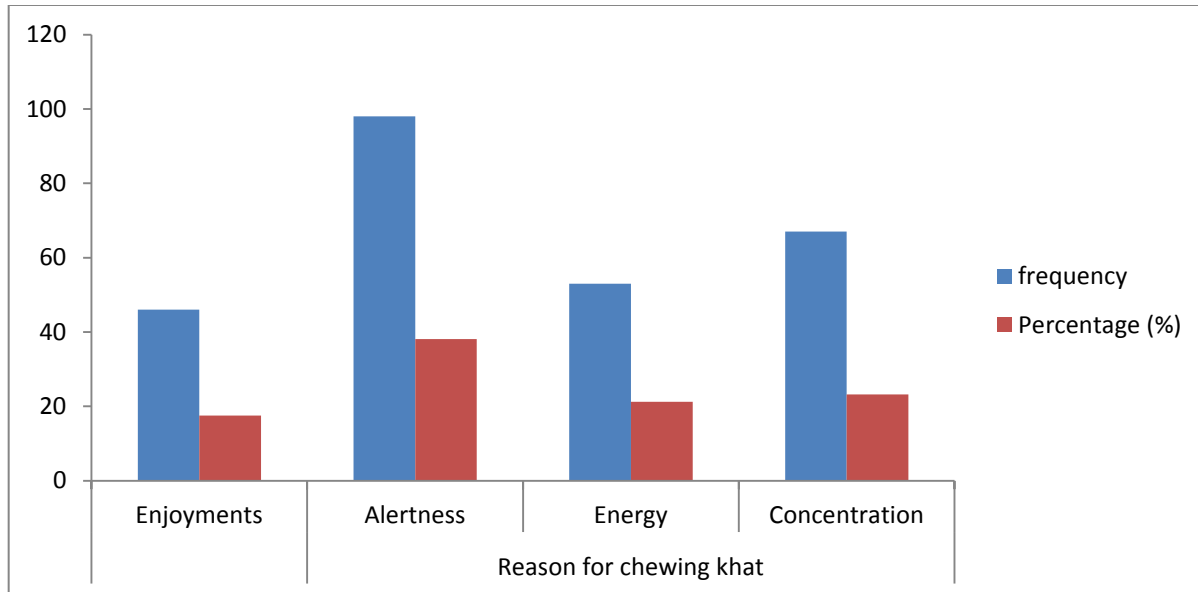


Figure 2:-Reason for chewing khat

Khat Chewing and health related Problems

Health effect of substance use was one of highly emphasized risks by many provirus studies. This research also considered the negative effect of khat abuse on health although it appears difficult to exactly measure and evaluated the effect of khat chewing on health effort has made through listing out of incidence of health related problem as a result of khat chewing. Broader health problems have been classified in to two categories physical and mental illnesses of for ease of managing the data. Accordingly the finding shows 89 (33.7%) respondent had reported problem of Sleepiness, while 64 (24.1%) of respondents had the same for mental illness from simple to severe headache of the same period, 50 (18.9%) Losses of Appetite and 35 (13.3%) replied that lack of Concentration is due to chat chewing practice. Fourteen (5.5%) of the respondents said that physical weakness as a result of khat chewing at least once in the last 12 month. On the other hand the researcher tried to find about 12 (4.5%) of the respondent affianced in other activities like sexual practices which might be unsafe as shown in figure 3.

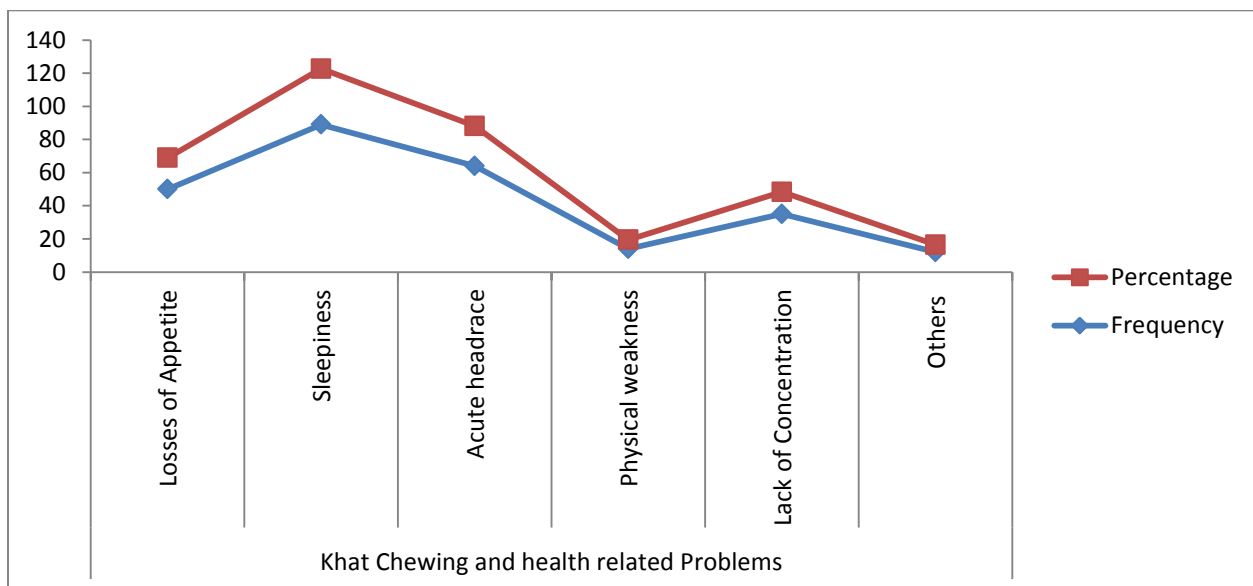


Figure 3:-Khat chewing and the prominent related problems among chiro community

Khat chewing and Associated Risks among Community

In order to assess problems associated to khat chewing, as can be seen from table 5 below about 68 (25.8%) engaged in other drug(e.g tobacco and alcohol); 54 (20.5%) reported sleeplessness and night mare;47 (17.8%) were reported headache to simple depression after khat chewing ;42 (15.9%) reported loss of appetite ; 34 (12.9%) replied physical weakness or deterioration and 19 (7.1%) engaged in sexual intercourse that regrets themselves in the next day. The chained effect of khat didn't end even here rather it goes to the extent of affecting the sexual life of respondent as it initiates the intake of other substances such as alcohol and tobacco which most of the time is followed by Sleeplessness and night mare, Headache to simple depression after chewing, Losses of appetite, Physical weakness and deterioration and engaging in risky sexual practices. Consistently the study by Dawit et al..(2005), highlighted that khat chewer to abuse tranquilizers and to indulge in alcohol as a means of overcoming the side effects and leads to tension on family relations trough increased sexual arousal and most likely multiple sexual intercourse.

Table 5:-Khat chewing and Associated Risks among Community

		Frequency	Percentage
Associated Risks among Community	Engaged in other drug	68	25.8%
	Sleeplessness and night mare	54	20.5%
	Headache to simple depression after chewing	47	17.8%
	Losses of appetite	42	15.9%
	Physical weakness and deterioration	34	12.9%
	Engaged in sexual intercourse	19	7.1%
	Total	264	100%

Khat Chewing and Psychological Problems

Accordingly out of the 264 respondents as shown in table 6 below, the majority of the respondents (26.52%) replied that chat chewing practices causes sleeplessness and lack constant concentration or mood disturbance; 22.7% Reduce appetite; 19.7% depression and 14.4% of the respondents experienced gastrointestinal adverse effect. Few of the respondents; 12.12% said that hallucination and 4.54% of the respondents experienced hypertension psychological problems on chat chewers.

Table 6:-Perceived effect of khat chewing

	Perceived effect of khat chewing	Frequency	Percentage
In detail negative health effect	Sleeplessness and lack constant concentration or mood disturbance	70	26.52%
	Reduced appetite	60	22.72%
	Depression	52	19.7%
	Gastrointestinal adverse effect	38	14.4%
	Hallucination	32	12.12%
	Hypertension	12	4.54%
	Total	264	100%

Conclusion:-

The prevalence of chewing practice was 62% with high proportion of the khat chewers found in the urban setting, sex, religion, residence, family chewing habit and perceived health effect were significantly associated factors with khat chewing practice and peer pressure was found to be the major reason that initiated individuals to begin khat chewing practice. In this study 94.7% of the respondent perceived that khat chewing practice had harmful effects on health effects on health and the perceived health effects reported were sleeping disorder, hallucination, loss of appetite, depression, gastritis and hypertension.

Recommendation:-

To sum up using this as a preliminary study, further investigation should be continued to explain exhaustively the effect of chronic khat chewing on the mental health and detailed experimental work on the cardiovascular effect of khat. Khat chewing is also suspected to be the risk factor of peptic ulcer disease. This again needs careful observation. Health education about the adverse effect of khat chewing should be delivered to the community and

health institutions. Based on this recommendation, policy makers should design strategies to control the production, usage distribution of Khat in Ethiopia particularly in West Hararge Zone, Oromia Regional State.

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