

Original Article

# Consumers' Perceptions on *Buna Qalaa* and its Quality in West Guji Zone, Oromia, Ethiopia

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**Abstract** - Coffee plays a crucial role in the economy of Ethiopia. It is consumed in different forms. *Buna Qalaa*, a coffee meal consumption, is known among the Oromo community. This study aimed to assess the trend of *Buna Qalaa* consumption and its quality in West Guji Zone, Oromia Regional State, Ethiopia. Data were collected through face to face interviews, and the data were triangulated with group discussion. The data were analysed using SPSS, and descriptive statistics were used to assess the respondents' responses. Most of the respondents consume *Buna Qalaa* on a daily basis. The trend of *Buna Qalaa* consumption (60.2 %) and its quality (51.14 %) is decreasing. Its consumption as a stimulant was affected by season due to shortage of input, according to the respondents; low during the dry season. The majority of the respondents (67.7 %) preferred to consume *Buna Qalaa* to drink and were willing to buy (67.4 %) it is available for sale. As to their knowledge, respondents did not see *Buna Qalaa* on the market. *Buna Qalaa* has different social functions besides its stimulating property. About 58.8 % of respondents agreed that frequent consumption of *Buna Qalaa* may lead to health complications. From the survey, it can be inferred that *Buna Qalaa*, the cultural identity of Oromo, could be made available for sale and could create jobs for the community. It could be availed as ready-to-eat food during social events such as *Irreecha* (Oromo Thanksgiving Day). To prepare *Buna Qalaa* of good quality, the quality of ingredients and preparation techniques should be taken into consideration. Further studies on the physicochemical properties, health effects, and shelf life of *Buna Qalaa* need to be conducted.

**Keywords** - *Buna Qalaa*, Inputs, Oromo, Traditional Food, Trends.

## I. INTRODUCTION

Coffee is an essential commodity globally and plays a crucial role in the economy of Ethiopia. It is believed to be

used as medicine, stimulant and food among the Oromo community in Ethiopia, the birthplace of coffee [1, 2, 3]. Coffee is the main source of foreign exchange in Ethiopia, and it provides a livelihood income for about 16 % population. About 50 % of the coffee produced is consumed locally [4]. The trend of local coffee consumption is increasing for two reasons. The first exportable coffee is entering the informal local market for the sake of high local price, and the second is the increase of small roadside coffee stalls in the country [5].

Food plays a crucial role in social functions by establishing and maintaining interpersonal relationships and representing social status as a group characteristic and during the celebration of special events [6]. Traditional foods have socio-cultural values behind their food value. The values associated with traditional foods express the identity and culture of the society [7]. The use of traditional food/drink may be affected by the change in the lifestyle of the consumers. This may affect its use negatively or positively. It is noted that due to changes in lifestyle, some traditional foods are at risk of disappearing in Europe [8, 9]. In Canada, consumers prefer to buy local foods. The reasons for such practices are for supporting the local economy, freshness, lower environmental impact, taste, safety, and lower price, respectively [10].

*Buna Qalaa* is an integral part of daily life and practised by each family in Borana. It is a coffee meal that is prepared from dried coffee berries by cooking them with butter after washing appropriately and cutting the tip off each coffee bean on one's teeth [11]. It can be prepared from dried or green coffee berries [2, 3]. Its use and preparation techniques are handed from generation to generation. The traditional *Buna Qalaa* ceremony is presented during a public meeting [12]. *Buna Qalaa* is served during special occasions and holidays [13].



As far as the literature is concerned, there is no information on the consumption and quality trend of *Buna Qalaa* in the study area. Besides, there are no data regarding consumers' perception on willingness to buy *Buna Qalaa* if available for sale and preference for forms of coffee. This study aimed to assess consumers' perceptions on the trend of *Buna Qalaa* consumption and its quality in the study areas and generate baseline information on the product for further study.

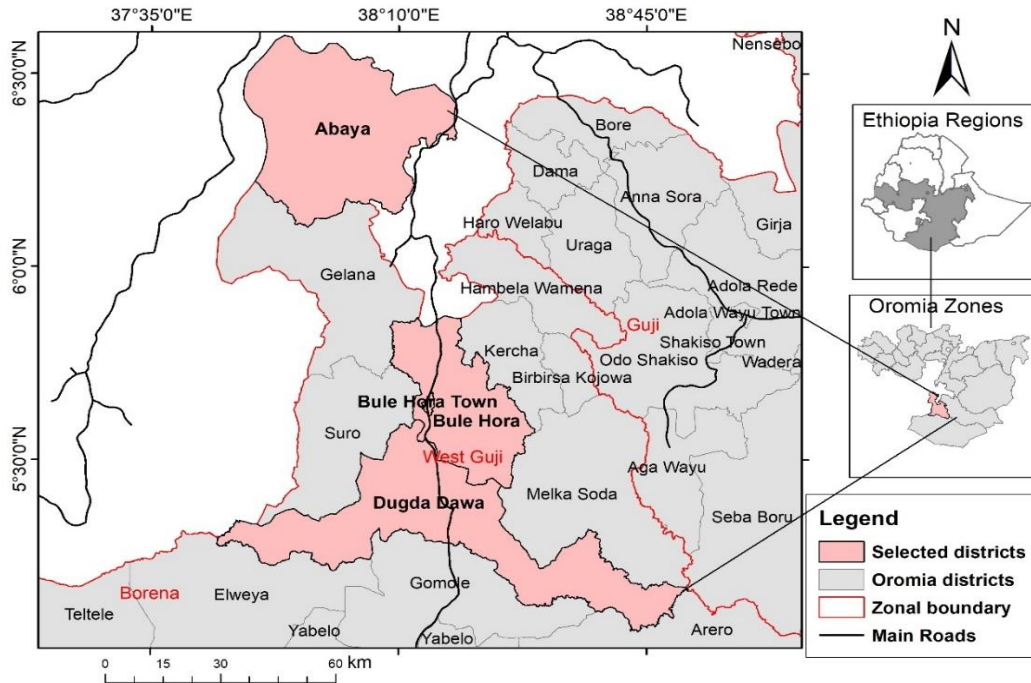


Figure 1. Map of study location

II. METHODOLOGY

The study was conducted in the West Guji Zone of Oromia Regional State. Three districts were selected purposefully with experts from West Guji Zone (Abaya, BuleHora and DugdaDawa districts) for *Buna Qalaa* consumption practice (Figure 1). From each district, three Peasant Associations (PAs) were selected purposefully, taking into consideration the availability of *Buna Qalaa* consumption practices. Data were collected using questionnaires - individual interviews and triangulated with group discussions. One hundred thirty-three respondents were interviewed. Data were analysed using Statistical Packages for Social Science (SPSS version 20.0). Descriptive statistics were used to analyse consumers' perceptions.

III. RESULTS AND DISCUSSION

A. Demography

The participants of the study comprised 60 % male and 40 % female (Table 1.). Different age groups participated in the study. Of all age groups, the age category of > 56 years is higher. About 48.1 % of the respondents were not educated. Most of the participants of the study had agro-pastoral livelihoods (Table 1.).

Table 1. Demographic characteristics of the respondents

Demographic Characteristics		%
Gender	Male	60
	Female	40
Age of Respondents	20-35	22.2
	36-45	23.0
	46-55	17.8
	>56	37.0
Educational Status	None	48.1
	Primary	36.1
	Secondary	8.3
	College/University	5.3
Respondents' Livelihoods	Adult Education	2.2
	Pure pastoral	10.5
	Agro-pastoral & trading	11.3
	Crop production	14.3
	Agro-pastoral	52.6
	Others	11.3

B. Consumption frequency of *Buna Qalaa*

The consumption frequency of *Buna Qalaa* varied from once a day to once a week. Of all respondents, 36.1 % of them consume *Buna Qalaa* daily (Table 2.). The consumption frequency of *Buna Qalaa* is lower when

compared with normal coffee, which people consume three times per day during non-fasting days [2,14]. The variation in the consumption frequency of *Buna Qalaa* by the respondents could be attributed to the preference for drinking coffee and the absence of inputs such as butter and milk. The frequent consumption of *Buna Qalaa* in DugdaDawa district could be attributed to the livelihood practice of the community, which is more agro-pastoral.

**Table 2. Consumption frequency of *Buna Qalaa***

		Respondents' Consumption Frequency				
		Daily (%)	Three times in a week (%)	Twice in a week (%)	Once in a week (%)	Others (%)
Study Districts	Abaya	27.3	4.5	20.5	22.7	25.0
	BuleHora	20.0	4.4	48.9	15.6	11.1
	DugdaDawa	61.4	2.3	24.9	9.1	2.3
Total		36.1	3.8	31.5	15.8	12.8

**C. The trend of *Buna Qalaa* Consumption**

The trend of *Buna Qalaa* consumption in the study area has been decreasing according to the respondents (Table 3.). Few respondents (19.5 %) agreed that there were increases in *Buna Qalaa* consumption which could be attributed to awareness on culture and people used to consume it compared to the past times. Respondents gave different reasons for the decrease of the trend of *Buna Qalaa* consumption. Preference to drink coffee, use of vegetable oil instead of butter (less interested in consuming), decrease in the availability of butter and milk due to recurrent drought in the study area, preference to drink tea, absence of knowledgeable people to prepare the product, weakening of culture and restriction by religion were the factors that contributed to the decrease in the trend of *Buna Qalaa* consumption. Religious people consider *Buna Qalaa* as sacred and the sayings/blessings to be related to religion, therefore, reducing its consumption among Christian and Islamic communities.

Of all, the preference to drink coffee and decrease in the availability of butter and milk had a lion share for the decrease of *Buna Qalaa* consumption. Due to the increase in roadside coffee stalls [14], people may prefer to drink coffee to chew *Buna Qalaa*. The study also showed that consumers might be reluctant in the preparation of traditional food due to the unavailability of ingredients [15]. The decrease in the consumption of *Buna Qalaa* could also be attributed to the change in people's lifestyles which changes their food consumption patterns [16, 17], and the new generation has less interest in traditional food [18]. A study in Ghana showed low consumption of traditional foods [19]. Other

reasons could be the use of other stimulants such as *khat* and alcoholic beverages.

**Table 3. The trend of *Buna Qalaa* Consumption**

		The trend of <i>Buna Qalaa</i> consumptions		
		Increase (%)	Decrease (%)	No change (%)
Study Districts	Abaya	6.8	81.8	11.4
	BuleHora	24.4	48.9	26.7
	DugdaDawa	27.3	50.0	22.7
Total		19.5	60.2	20.3

The trend of *Buna Qalaa* consumption showed more decrease in town when compared to countryside according to the respondents (Table 4.). The decrease in consumption of *Buna Qalaa* in the town is attributed to the preference of the community to drink coffee, availability of inputs (not available), ignorance of culture, preference to drink tea, Khat consumption practices, restriction by religion and time taken for its preparation. Of all factors, the preference to drink coffee is the major factor for the decrease in *Buna Qalaa* consumption in urban areas. As the rural areas develop into urban, they adopt a culture of coffee drinking. The decrease could be, of course, attributed to a change in lifestyle.

**Table 4. The trend of *Buna Qalaa* Consumption in Town**

		The trend of <i>Buna Qalaa</i> Consumption in Town			
		Increase	Decrease	No Change	Do not know
Study Districts	Abaya	-	97.7%	2.3%	-
	BuleHora	8.9%	73.3%	17.8%	-
	DugdaDawa	-	88.6%	9.1%	2.3%
Total		3.0%	86.4%	9.8%	0.8%

**D. Season of Consumption of *Buna Qalaa***

Although the consumption of *Buna Qalaa* for different ceremonial practices is common among the community, its consumption as a stimulant varies along the seasons. In all studied districts, there was more frequent consumption of *Buna Qalaa* (56.05 %) during *Gannaseason* (long rainy season March to May) (Figure 2). Factors that affect the seasonal fluctuation of consumption of *Buna Qalaa* were the availability of inputs such as butter and milk. Other factor includes the cold season. During this time, to cope with the cold season, the community consumes it frequently.

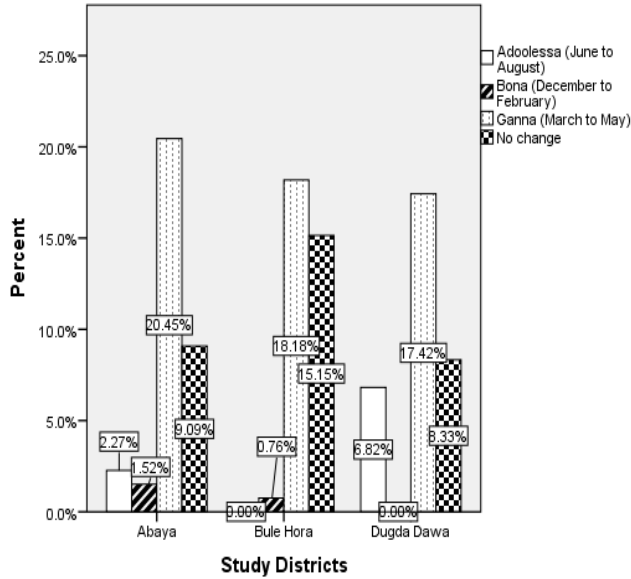


Figure 2. Season of maximum consumption of *Buna Qalaa*

**E. Trend of Buna Qalaa Quality**

The trend of *Buna Qalaa* quality has been deteriorating from time to time (51.14 %), according to the respondents in the study area (Figure 3.). All age categories agreed on the trend of *Buna Qalaa* quality to decrease (Figure 4.) except old aged respondents. Although there could be a change in the quality of *Buna Qalaa*, old aged groups may resist accepting that the quality is decreasing. Both male and female respondents agreed that the quality of *Buna Qalaa* is decreasing (Figure 5.)

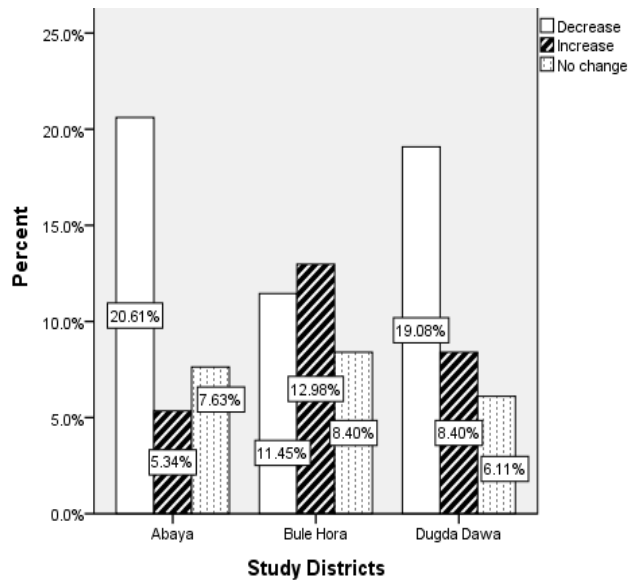


Figure 3. The trend of *Buna Qalaa* quality in the study area

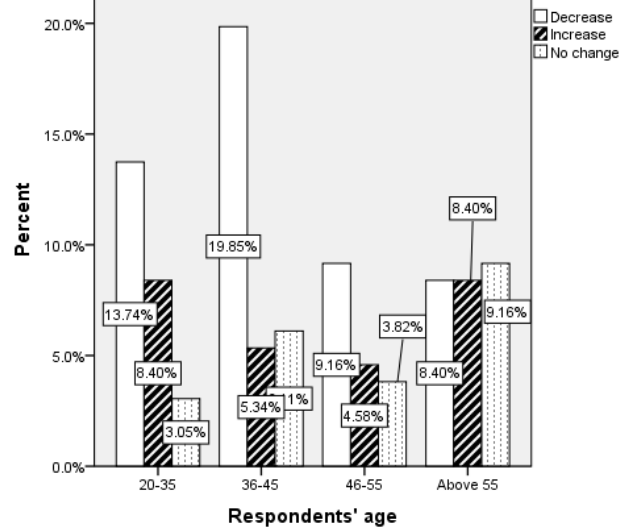


Figure 4. Respondents' age response to the trend of *Buna Qalaa* quality

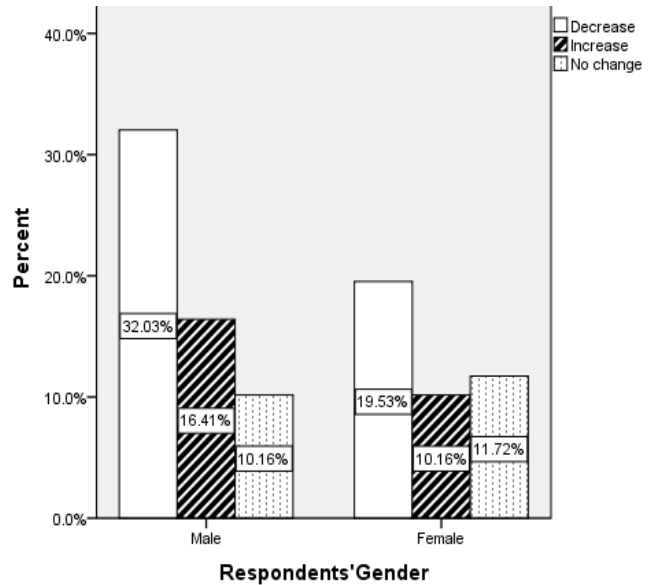


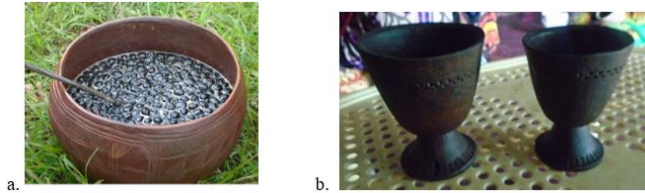
Figure 5. Respondents' gender on the trend of *Buna Qalaa* quality

**F. Factors that affect the quality of Buna Qalaa**

There are different factors that affect the quality of *Buna Qalaa*, according to the respondents. These factors included the quality of ingredients, hygiene, and preparation techniques. The coffee berry quality, butter quality, and milk quality were important ingredients whose quality should be controlled. *Buna Qalaa* prepared using vegetable oil is of low quality. The use of vegetable oil instead of butter was one of the factors that led to the decrease of *Buna Qalaa* consumption trend. Studies showed that due to a decrease in the supply of butter, oil had been used as a replacement for butter [11].

**G. Serving portion/size of Buna Qalaa**

The serving portion of *Buna Qalaa* among the community varies based on the form of *Buna Qalaa* to be consumed. Most of the time, two soup spoons of *Buna Qalaa* will be given to an individual, and sometimes it could be served with a coffee cup or a traditional wooden cup known as *Budunuu*(Figure 6 b) when prepared with milk.



**Figure 6. (a) *Buna Qalaa* ready to be consumed, (b) *Budunuu*, Local container for serving *Buna Qalaa***

**H. Forms of coffee preferred by the consumers**

Coffee can be served in different forms in the community. It can be drunk or chewed as *Buna Qalaa*. Most of the respondents in the study area preferred to consume *Buna Qalaa* as a stimulant than drinking coffee. Within the gender, male respondents preferred to consume it, whereas, within age groups, the preference to consume *Buna Qalaa* increased as age increased (Table 5.). Consumption of *Buna Qalaa* was affected by the livelihood of the respondents as pastoral communities preferred to consume it (Table 6.).

**Table 5. Forms of coffee are preferred by consumers as a stimulant within districts, gender, and age groups.**

Forms of coffee preferred by consumers as stimulant % within study districts				
		Prefer to drink coffee	Prefer to consume <i>Buna Qalaa</i>	Non-significant
Study District	Abaya	29.5%	70.5%	
	BuleHorsa	33.3%	62.2%	4.5%
	DugdaDawa	29.5%	70.5%	
Total		30.8%	67.7%	1.5%

Forms of coffee preferred by consumers as a stimulant % within Gender				
		Prefer to drink coffee	Prefer to consume <i>Buna Qalaa</i>	Non-significant
Gender	Male	26.3%	72.4%	1.3%
	Female	37.0%	63.0%	
Total		30.8%	68.5%	0.8%

Forms of coffee preferred by consumers as stimulant % within Respondents' age

		Prefer to drink coffee	Prefer to consume <i>Buna Qalaa</i>	Non-significant
Respondents' age	20-35	44.1%	55.9%	
	36-45	35.7%	59.5%	4.8%
	46-55	26.1%	73.9%	
	Above 55	14.7%	85.3%	
Total		30.8%	67.7%	1.5%

**Table 6. Forms of coffee preferred by consumers as a stimulant % within Respondents' Livelihood**

		Forms of coffee preferred by consumers as a stimulant		
		Prefer to drink coffee	Prefer to consume <i>Buna Qalaa</i>	Non-significant
Respondents' livelihood	Pure Pastoral	21.4%	78.6%	
	Agro-pastoral and Trading	33.3%	66.7%	
	Crop production	36.8%	63.2%	
	Agro pastoral	27.1%	70.0%	2.9%
	Others	46.7%	53.3%	
Total		30.8%	67.7%	1.5%

**I. Social functions of Buna Qalaa**

*Buna Qalaa* has social and food value besides its stimulation, i.e., sensory stimulation. Respondents used to prepare *Buna Qalaa* or take it with themselves at weddings, funerals, traditional festivals, visiting patients, visiting prisoners, and visiting the woman who gave birth (Table 7.). In all these social functions, women play a key role in preparing *Buna Qalaa* or taking with themselves to these places. In all social functions, respondents felt less comfort in taking *Buna Qalaa* with themselves to funeral places. *Buna Qalaa* is also prepared for guests as a sign of respect, which is in line with the study conducted by other scholars [11]. There is a practice in other countries that traditional food, *laphet*- Myanmar fermented tea, is used as an expression of hospitality offering to house guests [20]; LamangTapai, a traditional food of Minangkabau people, is used as a gift when visiting other peoples' homes [21].

**Table 7. Social Functions of *Buna Qalaa***

		During Wedding Ceremony (Prepared)	
		Yes (%)	No (%)
Study Districts	Abaya	83.7	16.3
	BuleHora	97.8	2.2
	DugdaDawa	88.6	11.4
Total		90.2	9.8
		During Traditional Festivals (Prepared)	
		Yes (%)	No (%)
Study Districts	Abaya	81.4	18.6
	BuleHora	93.3	6.7
	DugdaDawa	95.5	4.5
Total		90.2	9.8
		During visiting patients (as a gift)	
		Yes (%)	No (%)
Study Districts	Abaya	65.1	34.9
	BuleHora	46.7	53.3
	DugdaDawa	56.8	43.2
Total		56.1	43.9
		During visiting prisoners (as a gift)	
		Yes (%)	No (%)
Study Districts	Abaya	65.1	34.9
	BuleHora	82.2	17.8
	DugdaDawa	86.4	13.6
Total		78.0	22.0
		Visiting woman who gave birth (as a gift)	
		Yes (%)	No (%)
Study District	Abaya	55.8	44.2
	BuleHora	62.2	37.8
	DugdaDawa	72.7	27.3
Total		63.6	36.4
		Take with them to Funeral houses	
		Yes (%)	No (%)
Study District	Abaya	2.3	97.7
	BuleHora	20.0	80.0
	DugdaDawa	20.5	79.5
Total		14.4	85.6

**J. Willingness to buy *Buna Qalaa* if available for sale**

The majority of the respondents (67.4 %) agreed that they are willing to buy *Buna Qalaa* if available for sale (Table 8.). From a gender point of male respondents were more interested in buying it if available for sale. As far as people are willing to buy *Buna Qalaa* if available for sale, it could be commercialized and create job opportunities for people.

**Table 8. Respondents' willingness to buy *Buna Qalaa* (if available for sale) within study districts, gender, age groups, and livelihood**

		Willingness to buy <i>Buna Qalaa</i> if available for sale	
		Yes (%)	No (%)
Study Districts	Abaya	60.5	39.5
	BuleHora	75.6	24.4
	DugdaDawa	65.9	34.1
Total		67.4	32.6
		Willingness to buy <i>Buna Qalaa</i> if available for sale	
		Yes (%)	No (%)
Gender	Male	72.4	27.6
	Female	58.5	41.5
Total		66.7	33.3
		Willingness to buy <i>Buna Qalaa</i> if available for sale	
		Yes (%)	No (%)
Respondent's age	20-35	63.6	36.4
	36-45	61.9	38.1
	46-55	73.9	26.1
	Above 55	73.5	26.5
	Total	67.4	32.6
		Willingness to buy <i>Buna Qalaa</i> if available for sale	
		Yes (%)	No (%)
Respondent's livelihood	Pure Pastoral	64.3	35.7
	Agro-pastoral and Trading	60.0	40.0
	Crop production	66.7	33.3
	Agro pastoral	72.9	27.1
	Others	53.3	46.7
Total		67.4	32.6

Those respondents who were not willing to buy *Buna Qalaa* gave different reasons. The reasons included noncultural practices, quality issues, non-addiction, and preference to drink coffee.

**K. Health complications due to frequent consumption of Buna Qalaa**

Most respondents (58.8 %) agreed that frequent consumption of *Buna Qalaa* could lead to health complications (Table 9). These health complications include heart burns, hypertension, and addiction. According to the respondents, the problem associated with heartburn is due to the use of vegetable oil instead of butter in the preparation of *Buna Qalaa*. The heartburn due to consumption of *Buna Qalaa* could be due to either direct irritating effect on the oesophageal mucosa or by promoting oesophageal reflux [22]. Surveys conducted on the perception of Italian consumers of coffee showed that coffee consumption could have health effects [23]. Other studies showed that coffee consumption does not increase the risk of chronic diseases [24], and moderate consumption of coffee could be safe and beneficial [25, 26].

**Table 9. Health complication of *Buna Qalaa* due to regular consumption**

		Does frequent consumption of <i>Buna Qalaa</i> lead to health complications?		
		Yes (%)	No (%)	Do not know (%)
Study District	Abaya	48.8%	48.8%	2.4%
	BuleHora	57.8%	42.2%	-
	DugdaDawa	69.8%	30.2%	-
Total		58.8%	40.4%	0.8%

**IV. CONCLUSIONS**

*Buna Qalaa*, the cultural identity of Oromo, is a traditional nonalcoholic beverage prepared from coffee berries and consumed among the Oromo community. It is a comfort coffee form consumed most of the time on a daily basis in the West Guji Zone of Oromia. The trend of consumption of *Buna Qalaa* is decreasing from time to time in the study area. Although its consumption is affected by different factors, consumers’ preference to drink coffee and availability inputs were the major reason for its decrease. *Buna Qalaa* quality is decreasing in the study area. The quality of *Buna Qalaa* is affected by the ingredients used in its preparation. These include the quality of coffee, berries, butter, and milk. Consumers prefer to chew *Buna Qalaa* to drink coffee, according to the study. There are perceptions by the community that if *Buna Qalaa* is frequently consumed, it could lead to health complications such as heartburns, hypertension, and addiction.

Although its consumption is decreasing from time to time due to different factors, commercialization of good quality *Buna Qalaa* can offer a wealth of opportunities for youths since there is willingness from the consumers to buy if

available for sale. It could be prepared in small-size formats and be availed in the supermarket and at different gatherings such as *Irreecha* as ready-to-eat food. This should take into account the quality of the ingredients and preparation techniques for good quality *Buna Qalaa*. The physicochemical quality and health issues of *Buna Qalaa* need further study.

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