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KNOWLEDGE, ATTITUDE, AND PRACTICE (KAP) OF MOTHERS ON THE RISK OF CARBONATED SOFT DRINK CONSUMPTION TO CHILD HEALTH AND ASSOCIATED FACTORS IN YEKA SUB-CITY, ADDIS ABABA, ETHIOPIA

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BAHIR DAR UNIVERSITY

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SCHOOL OF GRADUATE STUDIES

FACULTY OF CHEMICAL AND FOOD ENGINEERING

MSc THESIS

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July, 2021

Bahir Dar, Ethiopia

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APPLIED HUMAN NUTRITION

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Knowledge, Attitude, and Practice (KAP) of Mothers on the risk of carbonated soft drink consumption to child health in Yeka Sub-city, Addis Ababa,Ethiopia

A Thesis Submitted in the Partial Fulfillment of the Requirements for the Degree of Master of Science in Applied human nutrition

Advisor: D/r DerejeBirhanu (PhD)

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Bahir Dar, Ethiopia

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DECLARATION

I, the undersigned, declare that the thesis comprises my work. In compliance with internationally accepted practices, I have acknowledged and refereed all materials used in this work. I understand that non-adherence to the principles of academic honesty and integrity, misrepresentation/ fabrication of any idea/data/fact/source will constitute sufficient ground for disciplinary action by the University and can also evoke penal action from the sources which have not been properly cited or acknowledged.

MekdesDesiybelewAbebe July, 2021

Name of the candidate signature Date

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Approval of thesis for defense result

I hereby confirm that the changes required by the examiners have been carried out and incorporated in the final thesis. Name of Student: Mekdes Desiybelew Signatur

Date 2021,as members of the board of examiners, we examined this thesis entitled "Knowledge, Attitude, and Practice (KAP) of Mothers on the risk of carbonated soft drink consumption to child health in Yeka Sub-city, Addis Ababa, Ethiopia

We hereby certify that the thesis is accepted for fulfilling the requirements for the award of the degree of Masters of Science in "Applied Human Nutrition".

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ABSTRACT

Background: Researches showed that consumption of soft drinks is increasing dramatically over the last few years and this situation is the same for Ethiopia. Sugar–containing drinks could lead to unnecessary weight gain, dental caries, and other non-communicable diseases. A report from the Ethiopian ministry of health in 2018 also indicatedthat this unhealthy lifestyle as a serious concern. There is no study conducted in Ethiopia showing the knowledge, attitude, and practice of mothers on soft drink consumption in children, hence this study will provide an insight to practitioners, researchers, and policy makers.

Objective: To assessthe Knowledge, Attitude, and Practice (KAP) of mothers on the risk of carbonated soft drink consumption to child health and associated factors in Yekasub city of Addis Ababa.

Method: Cross-sectional studywas conducted from May1-July 1, 2020. Four health centers were randomly selected from the Yeka sub-city and 347 mothers who brought children for immunization and outpatientto the health center were randomly selected and interviewed. Interviewer administered questionnaire was used to collect the data. Data were collected by trained data collectors using structured questionnaires inthe facility setting.Data was entered and analyzed using SPSS v21.The data analysis applied both descriptive statistics and modeling. Descriptive results are presented by tables and charts. Logistic regression modeling was used for predictive statistics to determine factors affecting child mother's soft drink provision to the child consumption.

Result:From a total of 424 participants, 347 mothers were interviewed. The study result showed that78% and 82% of mothers had good knowledge and a positive attitude on the risk of carbonated soft drink consumption to child health, and 60%of the mothers had a good practice not to usesoft drink to their child. On multivariable logistic regression analyses after adjusting for other variables,mothers with a good attitude on soft drink provision were 98% less likely to practice provision of soft drink to their child than mothers with poor nutritional attitude (AOR= 0.02, 95% C.I.: 0.01-0.07). Children with easy access to soft drink were 2.7 times more likely to practice soft drink consumption (AOR=2.66, 95% C.I.: 1.21-5.82). Moreover, families who listen/watch to soft drink advertisements were 3.73 times more likely to practice child soft drink consumption (AOR= 3.73, 95% C.I.: 1.74-7.98).

Conclusion and Recommendation: The study showed that the interviewedmothers had good knowledge ofsoft drink consumption on the health risk of children. Most of the interviewed mothers had a good attitude not to use these products for their children and they had less practice of feeding soft drinks to their children.There should be strong supervision ofsoft drink advertisements and child consumption. Moreover, it is important to improve the awareness of mothers on the health risk of carbonated soft drink provision to children.

Key: Soft drinks, Knowledge, Altitude, Practices

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LIST OF ABBREVIATIONS

ANC	Antenatal Care
BMC	BioMed Centre
BMI	Body Mass Index
CI	Confidence Interval
KAP	Knowledge Altitude and Practices
IYCF	Infant and Young Children Feeding
JD-HDSS	Jhaukhel-Duwakot Health Demographic Surveillance Site
NCDs	Non-Communicable Diseases
OR	Odds Ratio
PNC	Postnatal Care
SRS	Simple Random Sampling
SSB	Sweetened Sugary Beverages
WHO	World Health Organization

1. INTRODUCTION

1.1 Background

Soft drinks are a non-alcoholic beverage that typically contains water, flavoring agent, sweetener, and acid. These beverages can be categorized as water drinks, carbonates, dilatable, still and juice drinks, and functional drinks (WHO, 2014).

An unhealthy diet and lack of knowledge among parents and caregivers along with lack of physical activity become a major risk factor for health problems like overweight and obesity. Especially in under-five children, unhealthy diet habits influence to increase the consumption of soft drinks more and more. These affect the health of the children negatively. Children are becoming highly affected by NCDs due to these empty-calorie drinks (Shakti de Silva, 2014).

Non-communicable diseases like cardiovascular diseases, cancer, diabetes, and obesity are now public health problems for all developed and underdeveloped countries. One of the critical reasons for the shift of diets is the increased intake of soft drinks and sugary fruit drinks (Popkin and Nielsen, 2003). The consumption and popularity of soft drinks increased highly due to increased preference forthe palatable sweetest test, and low price for these products (Sartor etal, 2011).

According to the WHO assembly in London in 2014, sugars are found in many foods including fruits and milk. The additional sugar to food products adds to the total energy content of the product. Sugar-sweetened beverages contain added sugar such as sucrose or high fructose corn syrup, and a 330ml portion of sugar-sweetened carbonated soft drinks typically contain some 35g (almost nine teaspoons) of sugar and provide approximately 140 calories of energy with little other nutritional value. Furthermore, children and teenagers are not competent enough to make healthy diet choices such as water, milk, fresh fruit, and vegetables. Health surveys in various countries showed that beverages represent the majority of the calorie consumption by children and teenagers (WHO, 2014).

Parental influence on child beverage intake may relate to knowledge about diet and health. Several studies have shown that the education level of parents influenced the initiation of behaviors to establish a healthy lifestylefor their children (Van de Gaaret al., 2017). Other

studies also suggested high educational level contributed to gain essential nutritional information, knowledge, skills, and psychological control to choose a healthy lifestyle (Gyeduaah, C., et al, 2018).

Economic development and globalization in Ethiopia are bringing dietary change in urban areas from traditional food and drinks to other westernized foods like burgers, pizza, sweet biscuits, and soft drinks. These have been seen in children both preschool and school-age children (Ministry of Health, 2018). Nowadays some mothers feed high sugar and sweetened soft drinks for their children due to a lack of knowledge about the side of these products. This happens when their children refused to eat other homemade foods, and due to other related reasons. These unhealthy diets led children to poor nutrition. A report from the Ethiopian ministry of health in 2018 also showed this unhealthy lifestyle as a serious concern to its citizens. Moreover, this lifestyle is dramatically increasing in urban areas and is highly contributing to the major non-communicable diseases (Ministry of Health, 2018).

1.2 Statement of the problem

Over the past 20 years, the consumption of soft drinks has increased globally. According to the 2008 global soft drinks report, the net annual consumption of soft drinks over nearly 200 nations is estimated to 552 billion liters, which amounts to 82.5 liters per person. By 2012, soft drink consumption was projected to be 95 liters per person annually (Gyeduaah et al., 2018).

Because of the potential effects of sugar-containing drinks on unnecessary weight gain, dental caries, and other non-communicable diseases, the American Academy of Pediatrics has recommended that young children refrain from intake of soft drinks. Although some analyses of children aged 2-5 years have reported an association of soft drinks with higher weight gains. The sweeteners found in soft drinks and other packed foods contain high calories than ordinary sugar and induce physiological and hormonal responses that lead to weight gain(Vartaniain et al, 2017). A meta-analysis of 88 studies showed that increased Sweetened Sugary Beverages (SSB) was associated with increased energy intake and body weight (Vartaniain et al, 2017)

Consumption of sugary sweetened beverage (SSB) leads to decrease energy expenditure, decrease hunger satisfaction leading to increased food intake and thus contributes to

obesity(Vartaniain et al, 2017). Overweight and obesity in children are particularly alarming because of predisposing to morbidity and mortality. Some of the medical complications associated with overweight and obesity during childhood are elevated serum lipids, blood pressure, and serum insulin, type 2 diabetes, increased linear growth and advanced bone age, hepatic steatosis, cholelithiasis, and sleep apnea (Teresa C. and Marcela R,2018).

Oral bacteria especially streptococcus mutants ferment sugar in sweetened beverages into an acid-producing environment with PH less than 5.5. This starts a demineralization process that is capable of destroying tooth enamel. Since sugar from SSB has strong adhesive properties, its clearance from the mouth by saliva is slow and difficult. This can easily contribute to dental decay. A child who consumes three or more sugared sodas a day had a 17.62 % higher rate of dental cavities (Peterson, 2017). WHO also recommended a sugar intake of less than 10% of total energy intake for prevention of caries, in Ethiopia consumption in urban areas has exceeded the WHO recommendation (WHO, 2014).Yeka sub city is the first sub city in Addis Ababa with the largest number of under five children and it is expected that large number of children are exposed to the effects of soft drink consumption. Unfortunately, there is no study conducted in the sub city in this or similar topic.

1.3 The rationale of the study

Rates of soft drink consumption are dramatically increasing becoming a silent health hazard and putting children's lives at risk with indirect adverse effectsat an early age. As per recommendations of IYCF, all children have the right to adequate nutrition and access to safe and nutritious food, so children have to get safe and nutritionally healthy foods for their physical and cognitive development (WHO, 2012).

Unlike developed countries, studies on soft drink consumption and their associated health effects have not been extensively documented in Ethiopia. Therefore,the further investigation is critically needed to understand the extent of the problem in the country.

High-calorie sugary drinks contribute little more than excess sugar to children's diet without the essential nutrient they need to grow,these drinks crowd out nutrient-rich

beverages,particularlymilk, which is a good source of protein and rich in the calcium and vitamin d needed for crucial bone development(Ludwigetal., 2011).

According to some studies, the dramatically increasing soft drink consumption in children is more related to the knowledge and practices of their parents. Research has done in Ankara turkey by the 5th world conference on educational sciences indicated many mothers with high nutritional knowledge have children with normal body weight, these mothers better nutritional knowledge feeds their children more with vegetables, fruits, legumes, and less sugary drinks such as cola juice and fast foods than mothers who have a lower level of nutritional knowledge. Also, mothers with higher nutritional knowledge avoid giving foods that contain more sugar to their children, so mothers' nutritional knowledge affects children eating behavior. Especially mothers are the role models for their children on healthy nutritional habits. The eating behaviors of mothers can be affected by different factors like socioeconomic factors, educational level, age, working position, and knowledge of nutrition (McLeod, Campbell and Hesketh, 2011).

The sixty-third world health organization assembly in May 2010 adopted resolution in WHA63.14, which support a set of recommendation to limit children's exposure to the marketing of soft drinks along with other food products high in saturated fat and sugar (WHO, 2011).Thought the larger,multinational beverage companies have voluntarily acted to reduce their marketing directly at children,these measures have not significantly reduced children's exposure to marketing,especially their media channels,including family time television programs and social media such as Facebook.Stronger government-led measures may be needed to ensure that dietary advice do not undermined by commercial interest,otherwise this affect the knowledge and experience of parents and children on choice of meals.

Pediatricians and parents should discourage soft drink consumptions to help avoid potentially unhealthy weight gain in young children and also from a public health standpoint, strong consideration should be made toward policy changes leading to a decrease in soft drink consumption among children. Creating awareness in the community on reducing sugar, especially in the form of soft drinks may help maintain healthy body weight and to prevent non-communicable diseases.

With the evidence described above, the knowledge and practice of mothers about the health risk of soft drink on their children werenot known in the study area, the objective of this study was therefore to assess the level of knowledge, attitude, and their practice on soft drink feeding.

2. OBJECTIVE

2.1 General Objective:

The general objective of this study wasto assess the Knowledge, Attitude, and Practice of mothers on the health risk of carbonated soft drinks consumption to children aged 6 to 59 months and to identify associating factors in Yeka Sub-city, Addis Ababa.

2.2 Specific objectives:

- To determine the knowledge,attitudes, and practice of mothers on the health risk offeeding carbonated soft drinks to children aged 6 to 59 months
- To identify factors associated with practices of mothers on the feeding of carbonated soft drinks for children aged 6 to 59 months

3. LITERATURE REVIEW

3.1 Maternal knowledge attitude and practice on soft drinks consumption to children

Poor dietary habit contributes to increased consumption of soft drinks and the development of non-communicable diseases. Some research showed that most chronic diseases develop during adulthood directly related to dietary practices of childhood. Nutritional knowledge and a positive attitude are known to influence dietary practices (KigaruM.D., et al, 2015).

Children whose parents use soft drinks regularly are more influenced than children whose parents don't use them regularly. Parental influence on child intake of beverage depends on the knowledge they have. A study done on Norwegian mother's nutritional knowledge shows that parental nutritional knowledge (including knowledge about sweetened sugary beverages) was a significant predictor of Norwegian children's and adolescents' nutritional knowledge. Moreover, children from 2 to 17 years (80% women, 54%whites) perceived that sugary drinks especially sports drinks, fruit drinks, and flavored waters were healthy options for their children. (Arwa et.al, 2012)

According to the world obesity federation, London UK, September 2014, Global patterns of consumption of soft drinks can exhibit variability concerning socioeconomic status, as highly-income countries, the greatest intake is often observed in population with lower socioeconomic status, while the greatest intake in low and middle-income countries are frequently observed in population with higher socio-economic status. These differences may have implications for the formulation and implementation of nutrition intervention designed to reduce the consumption of sugar-sweetened beverages by children (WHO, 2014). These areSchool-based health promotion at school, Rules about consuming soft drinks at schools, Public health education through social marketing, reducing sugar content of sugar-sweetened beverages through mandatory reformulation by the food industry, and Restriction the promotion and advertising of soft drinks on television and other media.

Factors associated with maternal knowledge and practices as presented in the BMC Public Health Journal by (Van de Gaaret al., 2017) stated below factors associated with consumption of soft drinks and sugary products.

3.2 Factors associated with maternal knowledge attitude and practice

3.2.1 Personal factors

Age, ethnicity: Research done by the department of epidemiology and Emory prevention research center of Atlanta indicated that the beverage consumption of children varied by Race, sex, socio-economic status, age, and ethnicity of mothers or parents(Van de Gaaret al., 2017).

The income of household: some findings from researchers in Belgium showed that children from higher-income families drank less than half (42 %) of soft drinks like soda, flavor yogurt, juices than lower-income families. But the majority of the difference between the income groups could be explained by three parenting practices: not offering soft drinks at mealtimes, not letting kids' soft drinks as they want, and not keeping at home (Van de Gaaret al., 2017).

The educational level of the mother: studies have suggested that a higher educational level has contributed to having essential health information, knowledge, skills values, and psychological control in healthy nutritional behaviors. In the USA, infants of mothers who have a low level of education (non-Hispanic Africa American) versus non-Hispanic Caucasian have a higher intake of sugar, with an increase BMI score from age 6-12 months (Van de Gaaret al., 2017).

3.2.2 Socio-environmental factors:

Easy availability of soft drinks at home: Mothers' social environment like relatives, the community may affect her interest to purchase soft drinks and increase the availability at home. Easy availability of soft drinks and sugary products mean no or less restriction and increase child consumption. The study shows that child SSB consumption 8 ounces or 1.48 times higher for each additional level of available SSB in the home (Zahid et.al. 2012).

Social/ influence of others: five studies reported that social and cultural pressures influence a mother's knowledge and practices on child feeding. Social norms and cultural challenges such as influences of friends and social occasions, social support from grandparents and neighbors, and SSB consumption at home being a norm in some cultures adversely affected dietary intakes of children. Research in UK shows that children where whose parents drank soft drinks like squashed 1.4 times more likely to drank than other children (Zahid et.al, 2012).

The influence of advertising: The influence of advertising: greater television viewing of mothers means greater viewership of these products, soft drinks, and biscuits advertisements. Therefore, parents and children easily attracted and influenced to buy. AnIDEFICS study examining that theeffect of advertising directly affects children's and mothers' food knowledge and preferences as well as dietary choices and weight status (Teresa and Marcela, 2018).

3.2.3 Child-related factors

Preference: the taste of beverages and sugary products are a predictor for preference by children, so this affected the maternal nutritional attitudes and practices. One investigation has done in two Australian cities of 371 parents of 2-5 years old children indicates a taste of food or drinks is a key motivator for mothers. The more parents food choice for their children was driven by what their children preferred, the fewer children liked vegetables, fruit or sweets, and cereals anda higher number of untried foods like packed foods and SSB. The reverse was found for parents focus on natural/ethical motives (vegetables; fruit; cereals)(Zahid et.al, 2012).

Frequent snacking of children: snacking can be healthy like (oats, fruits), but unhealthy for (biscuits, cookies, chocolates, chips, soft drinks). Many investigations show that children who perceived soft drink to be usually available in their home, convenient to buy, and good value for money was more likely to be high soft drink consumers. This mainly focuses on the motivation and cooking skills of the mother in providing healthy foods. So they rule out easy options, like buying soft drinks and biscuits for snack time (Alexandria Hoara, Monica virgo-milton, qualitative study of the factors that influence mothers when choosing drinks for their young children, 2017).

Using foods as a reward: ten studies reported that parents used obesogenic foods as a reward for good behavior or work for their children. These practices make mothers influences by the children to buying for them that kind of foods like SSB at other times (KigaruM.D., 2015).

Conceptual framework

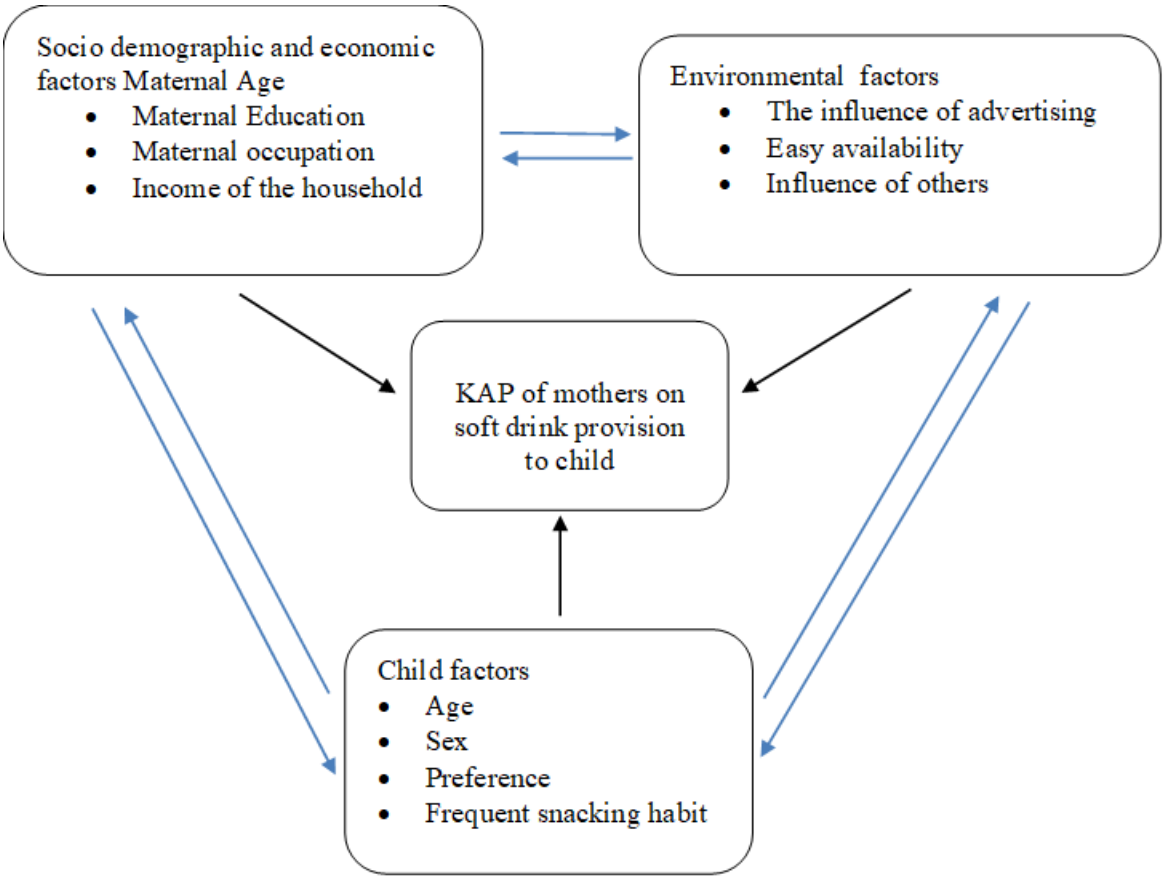

Figure 1: Conceptual framework of factors affecting the mother'spractice of soft drink provision to the child.
Source:After reviewing different literatures (particularly Kigaru et al., 2015; Natalia and Abhinav, 2016)

4. METHODS

4.1 Study area and setting

The study area wasYeka sub-city in Addis Ababa, Ethiopia. Yeka sub-city is located in the North East of Addis Ababa. The total area of the sub-city was85.98 km square, and 4,284.9 people live in a one-kilometer square. Moreover, the sub city's total population was 368,418 (www.addisababa.go.et, accessed on 20th Dec 2019). There are 10 health centers in the Yeka sub-city providing different types of services for the community. Such as adult and under-five treatments, antenatal care (ANC) follow up,delivery, post-natal care(PNC),family planning immunization for under-five children, and also other emergency services.

Figure 2: Yeka sub-city map, Addis Ababa, Ethiopia

4.2 Study design and period

The study design applied wasan institution based cross-sectional study. The study period was from May1-July 1, 2020.

4.3 Sample size determination

A single population proportion formula was used to estimate the sample size of the study population. According to a cross-sectional study which was done in south central China on knowledge, attitude, and practice of mothers on child soft drink consumption, 21.2 % of

mothershad “good” knowledge, 20.0 % had “moderate” attitude, and 19.2 % had “good” practice (Qiong, et al., 2020). The above study prevalence and CI 95 % and 5% marginal error and 10 % on respondent rate used to calculate the sample size.

For knowledge

$$n = \frac{(Z\alpha/2)^2 * p\,(1-p)}{d^2}$$

$$n = \frac{(1.96)^2 * 0.212\,(1-0.212)}{(0.05)^2} = 257$$

When 10% of none response rate added = 25.7
Final sample size =283

For altitude

$$N == \frac{(Z\alpha/2)^2 * p\,(1-p)}{d^2}$$

$$n = \frac{(1.96)^2 * 0.20\,(1-0.20)}{(0.05)^2} = 246$$

When 10% of none response rate added = 24.6
Final sample size = 270

For practices

$$n = \frac{(Z\alpha/2)^2 * p\,(1-p)}{d^2}$$

$$n = \frac{(1.96)^2 * 0.192\,(1-0.192)}{(0.05)^2} = 238$$

When 10% of none response rate added = 23.8,
Final sample size = 262

Therefore the largest number 283 was taken and by using a multistage design effect of 1.5 the final sample size became 424. The sample that was planned to take was 424, but due to Covid-19, it was difficult to get the targeted number of mothers in the health centers. As a result,347 mothers were interviewed from randomly selected 4 health centers.

4.4 Sampling procedure

Four health centers were randomly selected fromthe Yeka sub-city in order to increase the level of data precision. In total 424 mothers were planned to interview but 347 mothers were interviewed randomly from all four health centers.

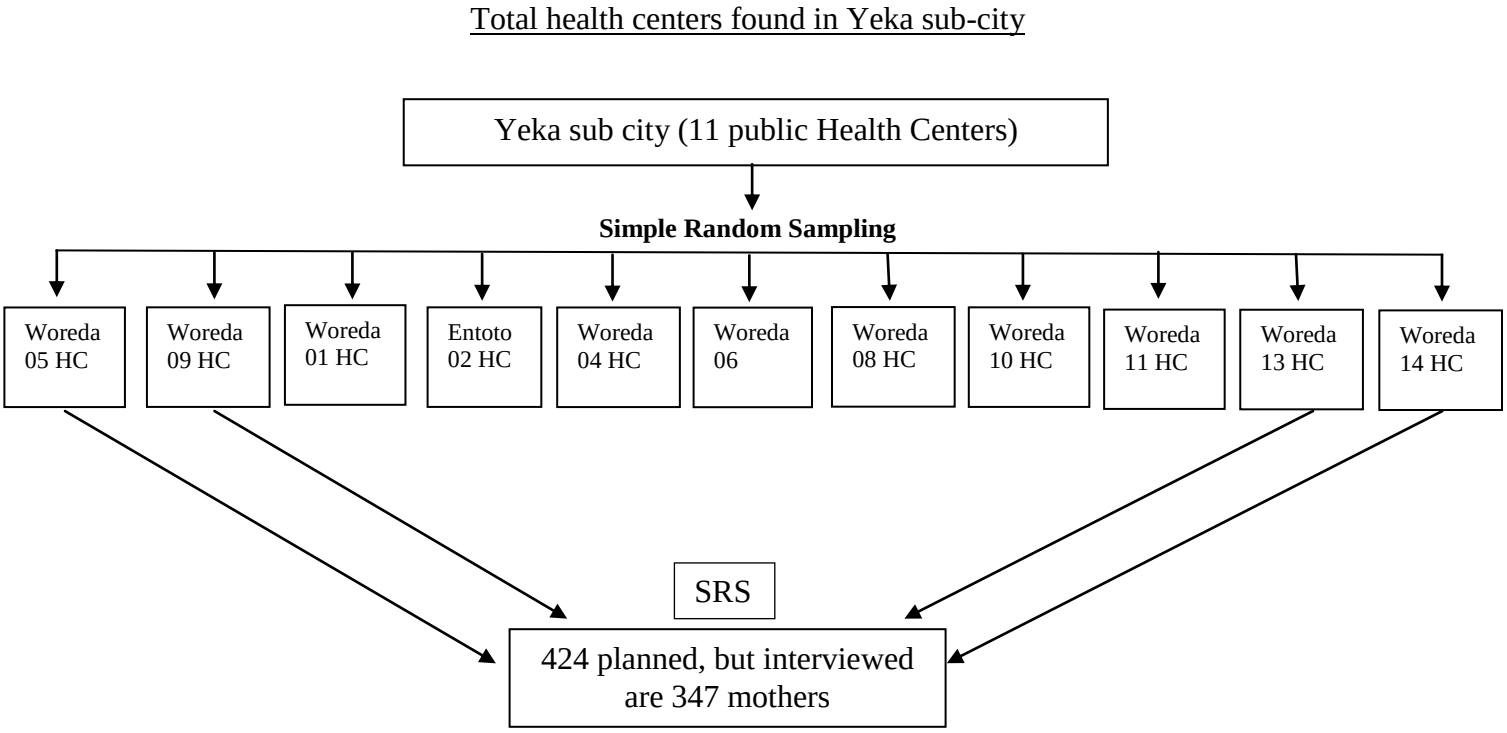

Figure 3: Health centers sampling structure

4.5 Source and study population

The source population was all mothers who had children age 6-59 months in Yeka sub-city, Addis Ababa. The study population was mothers who visited the randomly selected health centers in Yeka sub-city during the data collection period.

4.6 Inclusion and exclusion criteria

Inclusion criteria: mothers who had children aged 6 to 59 months and visited the health center.

Exclusion criteria: mothers who had a severely ill child (because it isinappropriate to interview mothers with a severely ill child).

4.7 Variables of the study

Dependent variable

- Softdrink provision practice (good vs. poor)

Independent variables

Maternal factors

- Age,
- Education,
- Occupation,
- Knowledge towards soft drink,
- Attitude towards soft drink,

Child factors

- Age,
- Sex,
- Food Preference,
- Frequency of meal/ snacking,

Socio-demographic factors

- household income,
- Media advertising
- Easy availability
- Influence of others/friends

Operational definitions

- Carbonated soft drink: a soft drink was considered as carbonated soft drinks if the soft drink used carbon dioxide gas as preservative.
- Knowledge – refers to a familiarity, awareness, or understanding of soft drink consumption Good knowledge - If the respondent scores the mean or above from the nineknowledge questions, otherwise poor knowledge
- Attitudes – refers to predisposition or a tendency to respond positively or negatively
  Good Attitude - If the respondent scores the mean or above from the six attitude questions,otherwise poor attitude.
- Soft drink provision practice – refers to the practice of giving a child carbonated soft drink

Good practice - If the respondent answers three or more out of the four practice questionit is considered good practice, otherwise considered poor practice.

4.8 Data collection procedures and quality assurance

This research used primary data. Primary data collected by directly interviewing mothers of children (6 month-5years) who visited the health centers. A questionnaire was used to collect the primary data. The English versionquestionnaire was developed by reviewing different kinds of literature on soft drink consumption. The questioners were then translated into Amharic then put in the kobo toolbox (kobo is an information management system that is used to collect data by smartphone or tablet). There were two data collectors hired; both of them were university graduates. They were tried on how to collect data by using kobo and on the overall context of the questionnaire. Each data collector was assigned to different health centers and the data collection one month.The time that took to interview one mother was 20-30 minutes.The total data collected were 347 from the four selected health centers and supervision was conducted every day. Before the actual data collection started a pretest was made at the four randomly selected health centers (HC 05, 07, 13, 14) by interviewing 16 mothers in total and it allowed revising the final questioner.

4.9 Data management and data analysis

Collected data first entered into Excel spreadsheet for ease of data cleaning and validation followed by data exporting and analysis by using the SPPS statistical package. The data analysis applied both descriptive statistics and modeling. Descriptive results are presented by tables and charts. Logistic regressionmodeling was used for predictive statistics to determine factors affecting child mother's soft drink provision to the child consumption.Firstly the association of each variablewith the outcome (practice (poor and good) was checked in the SPSS using binary logistic regression model) and then those variables with a P value of less than 0.2 as candidate variables to be entered into the final model (multivariate binary logistic regression).Secondly, in the final model, those variables with a P value less than 0.05 werethe variables associated with the soft drink consumption practice of the mothers.

4.10Ethical considerations

Ethical clearance was obtained from Addis Ababa Public Health Research and Emergency Management Directorate. Then an official lettersubmitted to the Yeka sub-city health office followed by each of the four health centers. The health center's disease prevention and controlaccepted the research work. The purpose and importance of the study wereexplained to the study participants and verbal informed consentwas obtained from all participants before starting the interviews and also informed about the possibility to refuse participation at any time of data collection. All interviewed mothers were oriented to be aware of the side effects of soft drink consumption.

Confidentiality of the data assured and kept anonymously; code number assigned to the study participants without mentioning the name, the information collected by the study kept in a file and locked with a key.

5. RESULTS

5.1 Socio-demographic characteristics

The age distribution of the study population (mothers) was between 18-50 years with 17 % being from 18-24years, 68% being from 25-34 years, and 15% above 35 years.With regards to education status,62% of the study participants'educational status was a college diploma and above. Looking at the occupation status of the study population,59% of them werehousewives.Most of the mothers' marital status was married (90%). Household income distribution showedthat 30% of the household's monthly income was less than 5000 Birr, and 40% of them were not knows well. The proportion of sex of the index child was 52% female and 48% male children. 30% of the index children's age was between 13-24 months.

Table 1: Sociodemographic characteristics of mothersand children aged 6-59 months, Yeka sub-city, Addis Ababa Ethiopia, 2019

Characteristics	Response	Frequency	Percent
Age of mother	18-24	58	17%
	25-34	237	68%
	Above 35	52	15%
Education status	Cannot read and write	28	8%
	Primary education	27	8%
	Secondary education	77	22%
	College and Above	215	62%
Occupation	Government employed	45	10%
	Housewife	185	59%
	Own business	53	11%
	Private employed	64	20%
Marital status	Divorced	21	5%
	Married	309	90%
	Single	8	2%
	Widowed	9	3%
Household income (birr)	<=5000	105	30%
	5001-10000	94	27%
	10001-15000	8	2%
	Not known	140	40%
Sex of the index child	Female	182	52%
	Male	165	48%
Age of the index child (months)	6-12	100	29%
	13-24	104	30%

25-36	63	18%
37-48	43	12%
49-59	37	11%

5.2 Knowledge, Attitude, and Practiceof mothers on child soft drink consumption

5.2.1 Overall Knowledge, Attitude and Practice of mothers

Target group motherswho have goodknowledge of the health risk ofcarbonated soft drink provision to childrenwere 78%, and ofthose motherswho hada good attitude towards not givingcarbonated soft drink to children were 82% and also 60% ofmothers had good practice in not providing soft drinks to their children(Figure 4).

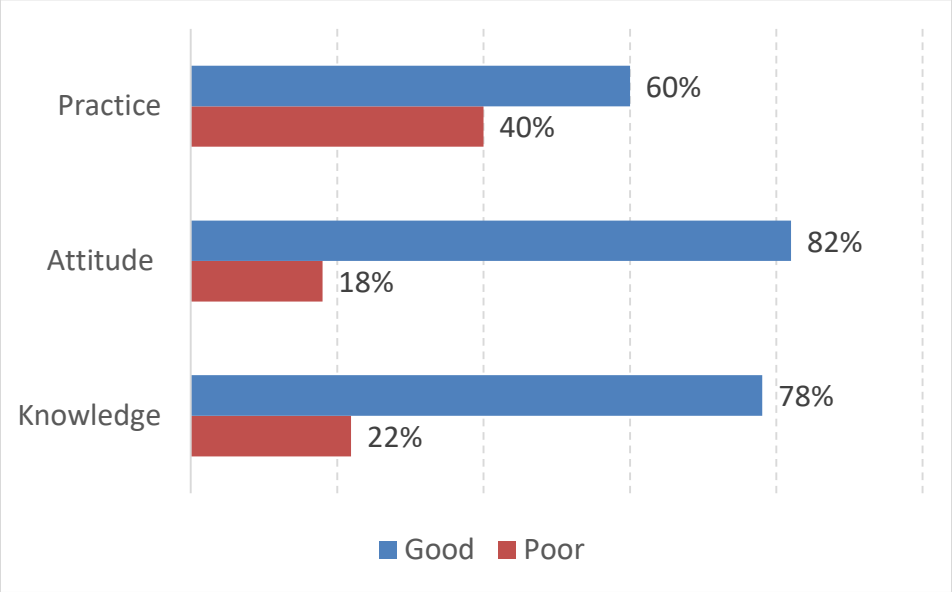

Figure 4: Knowledge, Attitude, and Practice of mothers on child soft drink consumption

5.2.2 Knowledge of target group mothers

Mothers who know soft drinks have no adequate nutritional value were 69%. Mothers who know soft drinks have high caloric value were 67%. Mothers who know soft drink affect teeth health were 81%. Mothers who know soft drink affect human health was 61% (Table 2).

Table 2: Knowledge of mothers on carbonated soft drink consumption of children age 6-59 months in Yeka sub-city, Addis Ababa Ethiopia, 2019

Knowledge	Response	Frequency	Percentage
Soft drinks do not have adequate nutritional value	No	109	31%
	Yes	238	69%

Soft drinks have high caloric value	No	115	33%
	Yes	232	67%
Soft drinks affect the teeth of children	No	67	19%
	Yes	280	81%
Soft drinks can affect child's health (e.g., dental caries)	No	137	39%
	Yes	210	61%
Aware of sugar-free soft drinks	No	228	66%
	Yes	119	34%
Fresh juice has nutritional benefits than soft drinks	No	29	8%
	Yes	318	92%

5.2.3 The attitude of target group mothers

Mothers who want to provide carbonated soft drink to their child were only 16% compared to who do not want. Mothers who were interested to take free access soft drink were only 16% compared to who were not. Mothers who want to buy a soft drink when it was advertised were only 20% compared to thosewho do not (Table 3).

Table 3: Attitude of mothers on soft drink provision to children age 6-59 months in Yeka sub-city, Addis Ababa Ethiopia 2019Addis Ababa -

Attitude	Response	Frequency	Percentage
Do you want to provide a soft drink to your child	No	290	84%
	Yes	57	16%
If you have free access to soft drink do you give to the child	No	292	84%
	Yes	55	16%
Do advertisements for soft drinks make you buy	No	276	80%
	Yes	71	20%

5.2.4 The practice of target group mothers

Target group mothers who do not provide carbonated soft drink to their child were 60% compared to mothers who provide, 40% (**Error! Reference source not found.**).

Other variables related to the practice

Mothers who provide soft drinks to children were asked additional soft drink practice questions. Based on their reply amount of carbonated soft drink consumed by a child at oncewas < 150 milliliters (ml) by54% of the children, between 151-350 ml by46% of the children.From the

interviewed mothers, whose children started soft drink consumption before 12 month of age were 68%, and 28% of them started between 13– 24 month old, only 4% of them start between 25– 36 month old.

With regards to children's preference,42% of the children prefer milk, followed by fresh juice (25%) and Soft drink (20%).

The frequency of meals (or snaking) by 58% of the children was 3 times a day, followed by25% of the children eating 4 times a day, the rest of the children eat2 times a day and 5 times a day respectively each accounted for9%.

The main factors that influence mothers to provide carbonated soft drink to children were Media(36%), Easy availability(15%), the Influence of others at home (14%), and others (22%), (Figure 5).

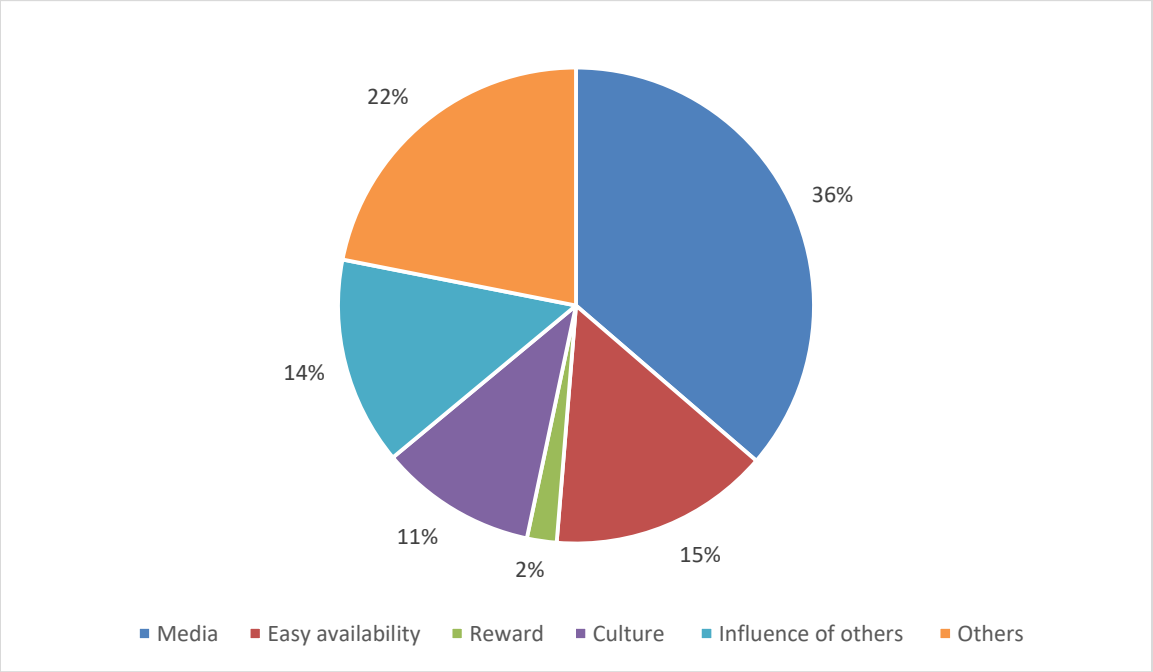

Figure 5: Factors for the provision of carbonated soft drinkto children age 6-59 months.

5.3 Factors associated withthe practice of mothers onchild soft drink consumption

Logistic regression analysis was carried out to identify factors associated with the practice of mothers on child soft drink consumption. Among the total 12variables checked using bivariate

regression, 9 variables particularly Age of the mother, Mother Education, Knowledge of the mother, Attitude of the mother, Sex of child, Age of the child, Advertisement, Household income, and Easy availability showed statistical significance at p<0.2 and these variables entered into a multivariate logistic regression model. In the multi-regression analysis, 4 variables (attitude of the mother, age of the child, advertisement, and easy availability) retain their statistical significance at p<0.05.

The multivariablelogistic regression analysis indicated that mothers with good nutritional attitudes were 98% less likely to practice the provision of soft drink to their child than mothers with poor nutritional attitudes (AOR= 0.02, 95% C.I.: 0.01-0.07). Children agedbetween 49-59monthsold were 71.59 times more likely to practice soft drink consumption than children whoseage wasless than 12 monthsold (AOR= 71.59, 95% C.I.: 15.74-325.66). It also showed older children most likely to use soft drinks than younger children. Children with easy soft drink availability were 2.66 times more likely to practice soft drink consumption (AOR=2.66, 95% C.I.: 1.214-5.82). Moreover,mothers who listen to soft drink advertisements were3.73 times more likely to practice child soft drink consumption (AOR= 3.73, 95% C.I.: 1.74-7.98).

Table 4: Bivariate and Multivariate logistic regression analysis of associated factors related to the practice of mothers on child soft drink consumption aged 6-59 months in Yeka sub-city, Addis Ababa, Ethiopia. November 2020. (n=347)

Characteristics		**Practice**		**COR (95% CI)**	**AOR (95% CI)**	**P-value**
		Good	**Poor**			
Age of the mother (years)	15-24	45	13	1	1	
	25-34	139	98	**2.441(1.250-4.765)**	1.283(0.472-3.491)	0.625
	Above 35	25	27	**3.738(1.642-8.511)**	1.745(0.527-5.775)	0.362
Mother Education	Cannot read/write	10	18	1	1	
	Primary education	12	15	0.694(0.235-0.664)	0.680(0.146-3.170)	0.623
	Secondary education	46	31	**0.374(0.153- 0.918)**	0.864(0.238-3.135)	0.823
	College diploma	141	74	**0.292(0.128-0.664)**	0.640(0.195-2.098)	0.461
Mother occupation	Housewife	108	77	1		
	Employed	101	61	0.847(0.550-1.305)		
Knowledge of the mother	Poor	18	26	1	1	
	Good	97	63	**0.546(0.327-0.912)**	0.715(0.318-1.611)	0.418
The attitude of the mother	Poor	4	60	1	1	
	Good	78	63	**0.025(0.009-0.072)**	**0.020(0.006-0.068)**	**0.000**
Sex of child	Male	89	76	1	1	
	Female	120	62	**1.653(1.072-2.549)**	1.129(0.599-2.127)	0.708
Age of the child (months)	6-11	91	9	1	1	
	12-23	65	39	**31.457(11.384-86.922)**	**10.866(2.872-41.104)**	**0.000**
	24-35	28	35	**5.185(2.217-12.125)**	**18.736(4.651-75.486)**	**0.000**
	36-47	16	27	**2.489(1.011-6.125)**	**43.916(10.23-188.50)**	**0.000**

	48-59	9	28	**1.844(0.697- 0.697)**	**71.59(15.738-325.66)**	**0.000**
Child frequency of meals per day	2_times	4	26	1	1	
	3_times	89	112	5.165(1.739-15.345)		
	4_times	35	51	4.461(1.431-13.909)		
	5_times	10	20	3.250(0.658-16.040)		
Household income (birr/ month)	<5000	35	36	1	1	
	5000 – 10000	168	94	**0.544(0.320-0.924)**	1.044(0.148-7.379)	0.965
	>10000	6	8	1.296(0.408-4.120)	0.486 (0.081-2.912)	0.430
Easy availability	No	104	86	1	1	
	Yes	105	52	**0.599(0.386-0.928)**	**2.659(1.214-5.824)**	**0.014**
Advertisement (radio/TV)	No	19	62	1	1	
	Yes	120	146	**3.981(2.292-6.915)**	**3.726(1.740-7.979)**	**0.001**
Influence of others	No	92	59	1		
	Yes	117	79	1.058(0.682-1.625)		

6. DISCUSSION

In this study, 78% of the mothers had good knowledge about the health effect of carbonated soft drinks on their child's health.A study conducted in Nairobi, Kenya also indicates that 67 % of the target group had good knowledge about the health effect of such soft drink (Kigaru et al., 2015).In this study, 61% of the target groups were aware of soft drink effects on health and 81% of them were aware of the soft drink effect on teeth health. These findings were much higher than the study conducted in Aljouf Province of Saudi Arabia, only 37.71% of the individuals were aware of the ill-effects of consuming carbonated beverageson health and 26.27% knew ill effects of carbonated drink on teeth(Mohammed OA et al., 2017). The difference between the two studies could be this study interviewed mothers (who could have better knowledge than children at school), but the other study interviewed school children. In a similar study conducted in Hanoi, Vietnam target groups who were aware of the health risks associated with consumption of soft drinks wereonly 14% (Thanh et al., 2017).In this study 67% of the target group wereaware of the high caloric content of the soft drink, this finding was more than double the study conducted in AljoufProvince of Saudi Arabia where only27% of individuals wereaware of the high calories content of carbonatedbeverages. This could be for the same reasoning mentioned earlier.

In this study, 82% of the study groups had a good attitude towards not providing carbonated soft drinksto their children. This finding was higher than a similar study conducted in Hanoi, Vietnam where only half (50%) of the target group had a good attitude towards the health effect of carbonated soft drink consumption (Thanh et al., 2017). The difference between the two

studies could be this study interviewed mothers (who could have better knowledge than children at school), but the other study interviewed school children. In this study, 16% of the target group doesn't want to give carbonated soft drinks to their child, in a similar way a study conducted in Aljouf Province of Saudi Arabia reported that 14% of participants don't want to stop drinking carbonated drinks(Mohammed OA et al., 2017).In a similar study conducted in Hanoi, Vietnam, despite being aware of the health risks associated with the consumption of carbonated soft drinks, about 31.4% of the target groups were not willing to stop the habit of drinking them (Thanh et al., 2017).

In this study,60% of the study group had a good practice of not providing carbonated soft drinksto their children. This finding was almost similar to a study conducted in Malaysia where 40.5% of the target group practice not providing carbonated soft drinks (Teng et al., 2020). In this study, 36% of the target group considered that media was one of the top reasonsfor child soft drink consumption, in a similar study conducted in Aljouf Province of Saudi Arabia25.84%of their study participants considered that the media advertisement was the top influencing factor for starting drinking of soft drinks (Mohammed OA et al., 2017).The majority of the mothers in this study who watch television and listen to the radio provide carbonated soft drinks to their children at higher levels. These televised adverts greatly influence the dietary habits of mothers and children. Similarly, a study on chronic non-communicable diseases in Brazil noted that a considerable number of the foods requested by children were advertised on TV (Schmidt MI., et al., 2011).

In this study, the major factors that affect child carbonated soft drink consumptionwere media advertisement, easy availability, mother nutritional attitude, and child age.Mothers who were highly exposed to media advertisements, as well as mothers who have poor nutritional attitudes, were more likely to provide soft drinks to the child. In a similar study in Aljouf Province of Saudi Arabia, media advertisement was the major factor for the provision of carbonated soft drinksto their children (Mohammed OA et al., 2017). In another study conducted in Jazan, Saudi Arabia, target groups with poor nutritional attitudes were more likely to be affected by dental issues (Quadri et al., 2015). In thise study children with easy access to carbonated soft drinkwas more likely to consume the soft drink. A study conducted in Malaysia also reported that soft drink easy availability was more likely correlated with child soft drink consumption

practice(Teng et al., 2020).Moreover,in this study,as the age of children increases, the practice of consumption of carbonated soft drinks increases. The finding was in agreement with a study conducted in Malaysia indicating that as the age of study groups increases, they were more likely to consume carbonated soft drinks (Teng et al., 2020).

7. STRENGTH AND LIMITATIONS OF THE STUDY

7.1 Strength

This study tried to assess the knowledge, attitude, and practice of mothers on child soft drink consumption and associated factors that affect child soft drink consumption. There was no similar study conducted in Ethiopia, therefore the findings of this study could provide insight for policymakers, practitioners, and researchers. Moreover, the finding could be generalized for the source population.

7.2 Limitation

One of the limitations of this study was movement restriction imposed by the government due to Covid-19 so that randomization was not possible as plannedand civil unrest in Addis Ababa, and internet blackout during the data collection period. These all affected the data collection process;as a result, the data collection took more time than expected. Moreover, there was almost no similar study conducted in Ethiopia and even there was limited documentation so that the discussion was not adequately described.

8. CONCLUSIONAND RECOMMENDATION

8.1 Conclusion

The majority (78%), of mothers,had good knowledge on the health risk of soft drink provision to children, 82% of them had a good attitude, and 60% of the mothers had a good practice on not provide soft drink to children.Maternal attitude, child age, advertisement and easy availability of soft drink were the factors associated with the practice of mothers on the provision of soft drink to their children.

8.2 Recommendation

Health education/promotion programs focusing on the child health effect of soft drink needs to be strengthened. Moreover, there should be appropriate enforcement of policies on child soft drink advertisements. Further research considering the effect of soft drinks on child mental and physical development is recommended.

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ANNEX

Questionnaire

Title of the project – Knowledge, Altitude and Practices of mothers towards feeding soft drinks for children from 6 month -5 years in yeka sub city Addis Ababa Ethiopia.
Name of investigator MekdesDesiybelew / BSc Nurse/ Tel. 0979992772
Name of organization: Bahir Dar University Institute of Technology School of Chemical And Food Engineering.
Funding organization: To be determined
Date: _____

Introduction:
The main aim of this project is to assess Knowledge, Altitude and Practices of mothers towards feeding soft drinks for children from 6 month -5 years in Yeka sub city Addis Ababa Ethiopia, and to recommended possible interventions based on the findings.
This questionnaire is prepared to collect KAP data from mothers who have children from 6 month up to 5 years and who are feeding the children soft drinks. Before the data collection starts every mother will be asked for her consent, and the data collection will continue only if she gives her consent.
Procedure: You are invited to participate in the project. If you are willing to participate in this project you need to understand and sign the agreement form. Then you will be requested to give response to some questions that will take few minutes. The questions will assess knowledge, attitude and practices of mothers towards feeding soft drinks for children from 6 month -5 years in Yeka sub city, Addis Ababa Ethiopia. All the response given by you will be kept confidentially by using coding system where - by no one will have access to your response.
Risk: By participating in this study you may feel discomfort particularly on wasting your time (10 minutes) to respond questions but this may not be too much as you are one of the members of the community. Your response will help us to gather information on the research which will be very useful for improving mothers feeding practice.
Benefits: If you participate in the study you may not gain direct benefit but your participation will help us to gain information on the findings and improve mothers feeding practice.
Confidentiality: We guarantee confidentiality by excluding names or any other personal identifiers from data-collection sheets and reports. The identifier for each eligible subject will be replaced by a code.
Participation: you have to know that your participation is largely based on your willingness and approval there are questions to be answered by you but you have the right to say no and not participate in the study. You have also a full right to withdrawal without losing any of your right and without any penalty.
Person to contact: this research project will be reviewed and approved by the ethical committee of Bahir Dar University. If you want to know more information you can ask questions any time. Your contact for any question is:

1. MekdesDesiybelew (BSc Nurse)
   Tell. O9 -79-99-27-72 or 09-11-70-54-51 Email: mdesiybelew@gmail.com
2. DerejeBirhanu (MPH), PhD fellow at A.A .U, Ethiopia)

Assistant professor of public Health at Bahir Dar University, School of public Health , P. O. Box: 79, Mob +251-918146608 Email: Dereje.Birhanu@bdu.edu.et

3. D/r MesfinWogayehu (PhD) (Department of Applied Human Nutrition Bahir Dar University) Mob +11-31-91-36, E-mail: mesfinwogayehu@hotmail.com

Are you willing to participate in the study?

1. **Yes,** I am happy and I am volunteer to participate in the study.
   Signature ---------- Date---------- Name: ----------
   Data collector's signature---------- Date ------- Name: ----------
2. **No,** if not voluntary please stophere.

If you are voluntary to participate in the study; we kindly request you to provide your genuine response for the interview. Thank you for your volunteer participates.

Part 1: Demographic and socio-economic characteristics

Participant ID: _ _ _
Woreda no: _____
Health center name: _____
GPS location: _____

S/n	Questions	Choice for response (circle the right answer)
1	Age of the mother	
2	Age of the father	
3	Marital status	Married ----------1 Divorced ----------2 Single---------- 3 Widowed---------- 4
4	Maternal Educational	Unable to read and write----------1 Read and write only ----------2 Illiterate ----------3 Primary education ----------4 Secondary education----------5 College diploma and above----------6
5	Husband education	Unable to read and write----------1 Read and write only ----------2 Illiterate ----------3 Primary education ----------4 Secondary education----------5 College diploma and above----------6
6	Mother occupation	Government employed----------1 Private employed----------2 Own business----------3 Other----------4
7	Husband occupation	Government employed----------1 Private employed----------2 Own business----------3 Other----------4
8	Household average monthly income	_____birr

9	Do you have any health problem	Yes ----------1 No ---------- 0
10	If Yes to question above, what is the heath condition	
11	Does your husband has any health problem	Yes ----------1 No ---------- 0
12	If Yes to question above, what is the heath condition	
13	Housing condition	Rent----------1 Own----------2 Dependent----------3
14	Which household asset do you have	TV----------1 Radio----------2 Refrigerator----------3 Sofa----------4 Car----------5 Other Specify_____
15	Number of household members	
16	Number of under five children?	
17	Age of the index child in month	
18	Sex of the child	Male----------1 Female----------2
19	Who mainly care children?	Mother----------1 Father----------2 Relative (sister/grandmother) ----------3 Professional child care givers----------4 Servant----------5
20	Does the index child have any health problem?	Yes ----------1 No ---------- 2
21	If yes, please specify	
22	How do you rate your child appetite?	High---------- 1 Normal----------2 Low----------3 Very low----------4
23	Do you breast feed the child?	Yes----------1 No----------2
24	If yes, when do you start breast feeding after birth? In hours	
25	If yes, how long/how many months did you feed breast milk only?	
26	When did you initiate additional food (complementary feeding)? In months	
27	What is the food composition while initiating complementary	

	feeding?	
28	Frequency of feeding per day?	
29	Have you ever taken nutrition education	Yes----------1 No----------0
30	If yes, who gave you the education?	Health center----------1 Health extension worker -------2 Hospital----------3 Mass media (TV,Radio,,,,)---------4 NGO----------5 Other---------6
31	If yes, for how many times?	
32	If yes, was there any demonstration of food preparation and so on	
33	Have you had antenatal care (during pregnancy)	Yes----------1 No----------0
34	If yes, times?	
35	If yes, where	
36	Has the child followed immunization programs	Yes----------1 No----------0
37	If yes, which immunizations	Polio-0 and BCG (at first day of birth----------1 Pilio-1, PENTA-1, PCV-1, ROTA (after 1 month and half) ----------2 Pilio-2, PENTA-2, PCV-2, ROTA (after 2 month and half) ----------3 Pilio-3, PENTA-3, PCV-3, ROTA (after 3 month and half) ----------4 Measle (9 month) ----------5 Vitamin (every 6 month between 6 month and 5 years) ----------6
38	Do you know/check the weight and height of this child	Yes----------1 No----------0

Part 2. Questions on Knowledge, attitudes, and practices of mothers (KAP) on soft drink consumption of their children

S/N	Nutrition knowledge questions	Choice
1	Soft drinks do not have adequate nutritional value as other food types for child growth	Yes----------1 No ----------0
2	Soft drinks have a high caloric value	Yes----------1 No ----------0
3	Soft drinks affect the teeth of children	Yes ----------1 No----------0
4	Do you know about the adverse effect of soft drink on teeth	Yes ----------1 No----------0

5	Soft drinks can affect child's health (such as NCD- obesity, hypertension, heard, diabetic, kidney disease)	Yes ----------1 No----------0
6	Are you aware of sugar free soft drinks?	Yes ----------1 No----------0
7	Does fresh juice has health benefits than soft drinks?	Yes ----------1 No----------0
8	Do soft drinks have good nutritional value?	Yes ----------1 No----------0
9	If anwered "yes", which are they	Water ---------- 1 Carbohydreate---------- 2 Fat ---------- 3 Protien---------- 4 Mineral/vitamin ----------5
	Attitude questions	**Choice**
1	Have you tried to stop consumption of soft drink	Yes ----------1 No----------0
2	If you were asked, would you quit providing soft drink to the child?	Yes ----------1 No----------0
3	If you are providing soft drinks to your child, do you want to continue?	Yes ----------1 No----------0
4	Do you encourage soft advertising?	Yes ----------1 No----------0
5	If you have free access to soft drinks, will you consume?	Yes ----------1 No----------0
6	Do advertisements for soft drinks make you want to buy soft drinks?	Yes---------- 1 No---------- 0
	Practice questions	
1	Give advice/convenience children on the effect of carbonated soft drink to his/her health	Yes ----------1 No----------0
2	Provide carbonated soft drink occasionally, only during holidays, celebrates)	Yes ----------1 No----------0
3	Mostly provide soft drinks other than a carbonated soft drink	Yes ----------1 No----------0
4	Provide a reduced amount of carbonated soft drink when the child for soft drink	Yes ----------1 No----------0
	Other practice-related questions	**Choice**
1	Amount of Soft drink consume at once by the child?	Small glass (<150ml) ---------- 1 Medium glass (151-350 ml) ---2 Large glass (351-500 ml)---3 Very large (1000 ml)---4 Above 1000 ml---5
2	At what age does the child start drinking soft drinks	_____ Years
3	How frequently do soft drinks available at your home?	Never ----------1 Rarely----------2 Sometimes----------3 Usually----------4 Always----------5
4	Who mostly avail the soft drink to the child?	Mother----------1

		Father----------2 Relative (sister/grandmother) --3 Professional child caregivers----4 Servant----------
5	What are the factors that initiate drinking soft drinks	Test----------1 Media----------2 Easy availability----------3 Peer pressure----------4 As a reward----------5 Culture----------6 Appeal/addiction----------7 Influence of another user in the house ----------8
6	What is the reason for the preference for the soft drink of the child?	Test----------1 Size----------2 Energy----------3 Price----------4 Advertisement----------5 Easy availability/ access----------6 Other _____----------
7	Has the child consumption of soft drink increased or Decreased recently?	Increased ---------- 1 Decreased ----------2 Other ---------- 3
8	Has the child experienced any ill effects of consuming a soft drink to the child?	Yes---------- 1 No---------- 2 Other ----------
9	Did you see any discomfort on the child after soft drink consumption?	Yes---------- 1 No---------- 2 Other ----------
10	If yes, to the above, please specify	
11	Did you see any appetite change in your child after consuming soft drinks?	Yes---------- 1 No---------- 2 Other ----------
12	Does the child take a soft drink in place of a snack?	Yes---------- 1 No---------- 2
13	How many meals does the child take in a day?	Once---------- 1 Twice----------2 3 times ----------3 4 times----------4 5 times----------5 Other----------6
14	What is the child favorite drink	Water---------- 1 Milk ----------2 Fresh juice----------3 Soft drink ----------4 Other----------5
15	On what occasions, does the child drink soft drinks? (Please tick all appropriate boxes)	Holidays/birthdays---------- 1 With meals----------2 After meals----------3 With snack----------4

		While traveling---------- 5 After playing---------- 6 Without any reason---------- 7
16	Do any family members/friends discourage the child from consuming soft drinks?	Yes---------- 1 No----------2
17	Do you and your family typically eat meals and snacks in front of the television/listening to the radio?	Yes---------- 1 No----------2
18	How many hours of television and radio time do you spend?	None----------1 Less than 3 hrs./day----------2 3-6 hrs./day----------3 6 -9 hrs./day----------4 More than 9 hrs./day----------5 Other _____
19	Are there shops selling soft drinks near your house?	Yes---------- 1 No----------2
20	If yes, do you buy a soft drink from these shops?	Yes---------- 1 No----------2

መጠይቅ

የእናቶችየስረዓተ-ምግብእጪቀትዳሰሳጥናትበህፃናትልጆቻቸዉ (ከ 6 ወርእስከ 5 ዓመትለሆኑሕፃናት) በሚሰጡትየለስላሳመጠጦችላይ

መለያቁጥር ----------

ወረዳ ----------

የጤናጣቢያ ----------

ምዕራፍ 1 ማህበራዊእናኢኮኖሚያዊ

ተ/ቁ	ጥያቄዎች	የምርጫመልሶች
1	የእናትእድሜ	
2	የአባትእድሜ	
3	የትዳርሁኔታ	የገባ ----------1 የተፋታ ----------2 ያላገባ ----------3 የሞተባት----------4
4	የእናትየትምህርትሁኔታ	ማንበብናመፅሃፍየማይችል ----------1 ማንበብናመፅሃፍብቻ ----------2 ያልተማረ----------3 አንደኛደረጃ----------4 ሁለተኛደረጃ----------5 ከልጅእናከዚያበላይ----------6
5	የአባትየትምህርትሁኔታ	ማንበብናመፅሃፍየማይችል ----------1 ማንበብናመፅሃፍብቻ ----------2 ያልተማረ----------3 አንደኛደረጃ----------4 ሁለተኛደረጃ----------5 ከልጅእናከዚያበላይ----------6
6	የእናትየስራሁኔታ	የመንግስትተቀጣሪ----------1 የግልተቀጣሪ----------2 የግልስራ----------3 ሌላ----------4
7	የአባትየስራሁኔታ	የመንግስትተቀጣሪ----------1 የግልተቀጣሪ----------2 የግልስራ----------3 ሌላ----------4
8	የቤቱዓማካይየወርገቢ	---------- ብር
9	የጤናችግርአለዎት	አዎ----------1 የለም----------2
10	መልሱአዎከሆነ፣ ምንአይነትየጤናችግር	
11	ባልየጤናችግርአለበት	አዎ----------1 የለም----------2

12	መልሱአዎከሆነ፣ ምንአይነትየጤናችግር	
13	የቤትይዞታ	ኪራይ----------1 የራስ----------2 ተጠጊ----------3
14	የትኞቹየቤትእቃአለዎት	ቲቪ----------1 ራዲዮ---------2 ፍርጅ---------3 ሶፋ----------4 መኪና--------5 ሌላ-----
15	የቤተሰብብዛት	
16	ከ 5 ዓመትበታችሕፃናትቁጥር	
17	ለዚህጥናትአንዱንሕፃንይምረጡናእድሜዉንይንገሩን	
18	የሕፃኑፆታ	ወንድ----------1 ሴት----------2
19	ልጆችንበአብዛኛዉማነዉየሚንከባከበዉ	እናት----------1 አባት----------2 ዘመድ----------3 የሰለተኑየልጅተንከባካቢ----------4 የቤትሰራተኛ----------5
20	ህፃኑየጤናችግርአለበት	አዎ----------1 የለም----------2 (ይህንከመለሱወደጥ.ቁ. 24 ይሂዱ)
21	መልሱአዎከሆነ፣ ምንአይነትየጤናችግር	
22	ህፃኑለምግብያለዉፍላጎትንእንዴትይመዝኑታል	ከፍተኛ----------1 የተለመደ(ኖርማል)----------2 ዝቅተኛ----------3 በጣምዝቅተኛ----------4
23	ህፃኑጡትየጠባነው	አዎ----------1 የለም----------2 (ይህንከመለሱወደጥ.ቁ. 30 ይሂዱ)
24	መልሱአዎከሆነ፣ በወሊድጊዜከስንትሰዓትበኃላጡትመጥባትጀመረ	
25	በአጠቃላይለስንትወራትጠባ	
26	ከጡትወተትበኃላተጨማሪምግብበስንትወሩጀመረ	
27	የተጨማሪምግብይዘትምንምንነበረ	
28	በቀንስትጊዜይመገባል	
29	እርሶየስነምግብስልጠናወስደዉያቃሉ	አዎ----------1 የለም----------2 (የህንከመረጡወደ ጥ.ቁ. 35 ይሂዱ)
30	መልሱአዎከሆነ፣ ማንስልጠናዉንሰጦት	
31	ስልጠናዉለምንያህልሰዓትነበር	
32	ስልጠናዉሰርቶማሳያነበረዉ	አዎ----------1 የለም----------2
33	ሕፃኑንባረገዙጊዜየቅድመ-	አዎ----------1

	ወሊድክትትልአድርገውነበር	የለም----------2(የህንከመረጡወደጥ.ቁ. 38 ይሂዱ)
34	መልሱአዎከሆነ፣ በስንተኛውወር	
35	የትነበርክትትልያደረጉት	
36	ሕፃኑየክትባትክትትሎችንነበሩት	አዎ----------1 የለም----------2 (የህንከመረጡወደጥ.ቁ. 40 ይሂዱ)
37	መልሱአዎከሆነ፣ የትኛዎቹንክትትሎች	ፖሊዮእናቢሲጂበተወለደቀን----------1 ፖሊዮ፣ ፔንታ፣ ፒሲቪ፣ ሮታ (ከ 1 ዓመትበኃላ)----------2 ፖሊዮ፣ ፔንታ፣ ፒሲቪ፣ ሮታ (ከ 2 ዓመትበኃላ)----------3 ፖሊዮ፣ ፔንታ፣ ፒሲቪ፣ ሮታ (ከ 3 ዓመትበኃላ)----------4 ሚዝልስ (በ 9 ወር)----------5 ቪታሚን (ከ 6 ወርእስከ 5 ዓመት)----------6
38	የህፃኑንክብድተናቁመትአስለክተዉያዉቃሉ	አዎ----------1 የለም----------2

ምዕራፍ 2 የእናቶችየለስላሳመጠጦችእዉቀት፣ ምልከታእናልምምዶችበልጆቻቸዉ ላይ

ተ/ቁ	የእናትንእዉቀትየሚለኩጥያቄዎች	የምርጫመልሶች
1	የለስላሳመጠጦችለህፃናትእድገትበቂንጥረነገሮችየላቸዉም	አዎ----------1 የለም----------2
2	የለስላሳመጠጦችከፍተኛየሀይልይዘትአላቸዉ	አዎ----------1 የለም----------2
3	የለስላሳመጠጦችየልጆችንጥርስሊጎዱይችላሉ	አዎ----------1 የለም----------2
4	የለስላሳመጠጦችጥርስላይሊያመጡየሚችሉትንየጎንዮሽጉዳትያውቃሉ	አዎ----------1 የለም----------2
5	ለስላሳመጠጦችየህጻናትጤናላይየሚያመጡትንየጎንዮሽጉዳቶችያውቃሉ	አዎ----------1 የለም----------2
6	ስኮርየሌለባቸውየለስላሳመጠጦችእንዳሉያውቃሉ	አዎ----------1 የለም----------2
7	ቤታችንውስጥየምናዘጋጃቸውጭማቂዎችየተሻለየጤናጥቅምይኖራቸዋለልን	አዎ----------1 የለም----------2
8	የለስላሳመጠጦችየተሻለየስነ-ምግብይዘቶችንአላቸዉ	አዎ----------1 የለም----------1
9	አዎከሆነመልሶ ፣ የትያውንሊሆንይችላል	ውሃ----------1 ካርቦሃይድሬት(ስኮር)----------2 ቅባት----------3 ፕሮቲን(ገንቢ)----------4 ማዕድናት/ቫይታሚኖች----------5
	የእናትንአመለካከትየሚለኩጥያቄዎች	**የመልስ ምርጫ**

1	ለልጅሽለስላሳመጠጥመስጠትለማቆምወስነሽታውቂያለሽ	አዎ----------1 የለም----------2
2	እድታቆሚብትጠየቂፍቃደኛነሽ	አዎ----------1 የለም----------2
3	ለልጅሽለስላሳመጠጥየምትሰጭውከነበርአሁንምትቀጥያለሽ	አዎ----------1 የለም----------2
4	በተለያዩመገናኛብዙሃንላይየሚተላለፉየለስላሳመጠጦችንማስታዎቂያዎችያበረታታሉ	አዎ----------1 የለም----------2
5	የለስላሳመጠጦችንበነጻቢያገኙይጠቀማሉ	አዎ----------1 የለም----------2
6	የለስላሳማስታወቂያዎችለስላሳአንዲገዙያደርጋሉ?	አዎ----------1 የለም----------2
	የእናትን ልምምድ የሚለኩጥያቅዎቸ	**የመልስ ምርጫ**
1	ልጅሽለስላሳአንዳይጠጣትመክሪያለሽ	አዎ----------1 የለም----------2
2	ልጅሽ ለስላሳ መጠጥ ይጠቀማል	አዎ----------1 የለም----------2
3	በአብዛኛው ጋዝ የሌላቸውን የለስላሳ መጠጦች ይጠቀማሉ	አዎ----------1 የለም----------2
4	ለልጆመጠኑያነሰየለስላሳመጠጥነዉየሚሰጡት	አዎ----------1 የለም----------2
	ተጨማሪ የልምምድ ጥያቄዎች	
	1. በአንድ ጊዜ ምን ያህል ይዎስዳል	ትንሽ ብርጭቆ (‹150ሚሊ) ----------1 መካከለኛ ብርጭቆ(151-350ሚሊ)----------2 ትልቅ ብርጭቆ(351-500ሚሊ)----------3 በጣም ትልቅ ብርጭቆ(1000ሚሊ)----------4 ከዚያ በላይ(›1000ሚሊ)----------5
	2. ልጅሽ በስንት አመቱ ጀመረ	-------እድሜ
	3. ለስላሳ መጠጥ በምን ያህል ጊዜ ቤት ውስጥ ሊኖር ይችላል	በፍጹም አይኖርም----------1

		አልፎ አልፎ----------2 አንዳንዴ----------3 በአብዛያው----------4 ሁልጊዜ----------4
	4. በተደጋጋሚ ጊዜ ለስላሳ መጠጦችን ወደ ቤት ሚያመጣው ማነው	እናት----------1 አባት----------2 ዘመድ----------3 የሰለጠኑ የልጅ ተንከባካቢ ባለሙያ----4 የቤት ሰራተኛ----------5
	5. ለልጅሽ የለስላሳ መጠጥ እድትሰጭ የሚያነሳሳሽ ሁኔታ	ጣእሙ----------1 በማስታወቂያዎችን ስለማይ---------2 በቀላሉ ቤት ውስጥ ስለሚኖር---------3 የአቻ ግፊት----------4 እደሰሽልማት----------5 ባህል----------6 ሱስ----------7 ቤት ውስጥ ሌላው ሲጠጣ ስለሚያይ----------8
	6. ልጅሽ ለስላሳ መጠጥ አንዲመርጥ የሚያረገዉ ምክንያት ምንድነው	ጣአም----------1 ምጠን----------2 ጉልበት----------3 ዋጋ----------4 ማስታወቂያ----------5

		ብቀላል ስለሚገኝ----------6 ሌላ
	7. የልጅሽ የለስላሳ መጠጥ የመጠቀም ሁኔታ በቅርብ ጊዜ ውስጥ እዴት ነው	ጨምሮል ----------1 ቀንሶአል----------2 ተመሳሳይ ነው----------3
	8. ልጅሽ ለስላሳ መጠጥ በሚጠጣ ጊዜ የሕመም ምልክት አሳይቶ ያውቃል	አዎ ----------1 የልም----------2 ልላ----------3
	9. ልጅሽ ለስላሳ መጠጥ በሚጠጣ ጊዜ ያለመመቸት ስሜት አሳይቶ ያውቃል	አዎ ----------1 የልም----------2 ልላ----------3
	10. መልሱ አዎ ከሆነ፣ ይዘርዝሩ	
	11. ልጅሽ በለስላሳ መጠጥ ምክንያት የምግብ ፍላጎቱ ላይ ለዉጥ አስተውለዋል	አዎ ----------1 የልም----------2 ልላ----------3
	12. ልጅሽ በመክሰስ ፋንታ የለስላሳ መጠጥ ይወስዳል	አዎ ----------1 የልም----------2
	13. ልጅሽ በቀን ምን ያህል ጊዜ ምግብ ይወስዳል	አንዴ----------1 ሁለቴ----------2 ሶስቴ----------3 አራቴ----------4 አምስቴ----------5 ሌላ----------6
	14. የልጅሽ ተወዳጅ የለስላሳ መጠጥ ምንድነው	ዉሃ----------1 ወተት----------2 አዲስ ጁስ (ፍሬሽ)----------3 የለስላሳ መጠጥ----------4
	15. ልጅሽ በምን ሁንታ ላይ ሳለ የለስላሳ መጠጥ ሊጠጣ ይችላል	በልደት/በዓል----------1 ከምግብ ጋር----------2 ከምግብ በሓላ----------3 ከመክሰስ/ስናክ ጋር----------4 በጉዞ ላይ----------5 ከጫወቻ በሓላ----------6

		ያለምንም ምክንያት----------7
	16. ዘመድ አዝማድ/ጉአደኛ ልጁ የለስላሳ መጠጥ እንዳይጠጣ ይቃወማል	አዎ----------1 የለም----------2
	17. ልጅሽ ከቤተሰብ ጋር አብሮ ቲቪ/ራዲዮ ያያል/ይሰማል	አዎ----------1 የለም----------2
	18. ለምን ያህል ሰዓት በቀን ቲቪና ራዲዮ ያያሉ/ይሰማሉ	አላይም----------1 ከ 3 ሰዓት ላነሰ----------2 ከ 3-6 ሰዓት በሆነ----------3 ከ 6-9 ሰዓት በሆነ----------4 ከ 9 ሰዓት በላይ----------5 ሌላ----------6
	19. በሚኖሩበት አካባቢ የለስላሳ መጠጦች የሚሸጡባቸዉ ሱቆች አሉ	አዎ----------1 የለም----------2
	20. መልሶ አዎ ከሆነ፣ የለስላሳ መጠጦች ከነዚህ ሱቆች ይገዛሉ	አዎ----------1 የለም----------2