COLLEGE OF MEDICINE AND HEALTH SCIENCES

DEPARTMENT OF PUBLIC HEALTH

VITAMIN A SUPPLIMENTATION COVERAGE AND ITS ASSOCIATED FACTORS AMONG CHILDREN AGED 6-59 MONTHS IN WEST AZERNET BERBER WOREDA, SOUTH WEST ETHIOPIA, 2021

BY: BIHON BERIHUN (BSC)

MASTER OF PUBLIC HEALTH (IN PUBLIC HEALTH NUTRITION) THESIS

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BY: BIHON BERIHUN (BSC)

ADVISORS

- ✓ Mr. FANTAYE CHEMIR (MSC, ASSISTANT PROFESSOR)
- ✓ Mr. MEHARI GEBIRU (BSC, MPH)

A THESIS REPORT WILL BE SUBMITTED TO THE DEPARTEMENT OF PUBLIC HEALTH COLLEGE OF MEDICINE AND HEALTH SCIENCES WOLKITE UNIVERSITY IN PARTIAL FULFILEMENT OF THE REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN PUBLIC HEALTH NUTRITION

WOLKITE, ETHIOPIA

June / 2021

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ACKNOWLEDGMENT

First and for most, I am very thankful to God for his protection, strength and abundant provision. My special thankfulness goes to my advisors; Mr. Fantaye Chemir (MSC, Assistant professor and Mr. Mehari Gebru (MPH) for their kind advice, support and assistance; since the very beginning of title selection. I would like to thanks to West Azernet Berbere woreda Health office, study participants and data collectors. Finally, I would like to express my great thanks to Wolkite University College of medicine and health sciences, department of public health for the opportunity given to do this research.

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ACRONYMS AND ABBREVIATIONS

WKU – Wolkite University

AOR - Adjusted Odd Ratio

WHO – World Health Organization

BMI - Body Mass Index

CI - Confidence Interval

SPSS: Statistical Package For Social Sciences

VAS – Vitamin A Supplementation

VA: Vitamin A

HEP- Health Extension Program

EOS – Enhanced Outreach Strategy

CHD – Community Health Day

VAD- Vitamin A Deficiency

WABW- West Azernet Berbere Woreda

COR: Crud Odds Ratio

UNICF: United Nations International Children's Fund

ABSTRACT

Background

Vitamin A deficiency is one of major public health significance; it is a risk factor for childhood mortality from diarrhea and measles in low and middle income countries and an important cause of preventable child hood blindness in low income countries. Vitamin A supplementation will be supplemented in many low and middle income countries and high coverage reduces the prevalence of blinding corneal diseases in children. Therefore, the objective of this study was to assess vitamin A supplementation coverage and its associated factors among children aged 6-59 months in West Azernet Berber woreda, southern Ethiopia, 2021

Methods: A community based cross-sectional study was conducted in April to May 2021.A total sample size of 471 study participants was involved in the study area. A simple random sampling technique was used to recruit study subject. A pretest structured interviewer administered questionnaire was used. Binary logistic regression was used to identify associated factors of vitamin A supplementation. After adjustment of independent factors the model was fitted.

Result: In this study a total of 471 respondents were successfully interviewed with response rate of 97.3%. The coverage of vitamin A supplementation was 58.0% [95% CI (53.7, 62.0)]. Family monthly income [AOR=2.44%,95% CI(1.44,4.135)], having PNC visit [AOR=2.052, 95%CI (1.227,3.430)] advice from peers or family [AOR=1.158, 95%CI (0.288,3.646)], husbands disapproval about vitamin A supplementation [AOR=0.303, 95%CI(0.116,0.795)], information about vitamin A supplementation [AOR=2.060, 95 CI (1.075,3.947)and maternal knowledge [AOR=0.589,95% CI (0.376,0.923)] were factors significantly associated to vitamin A supplementation.

Conclusion: The VAS coverage at the study area was lower than national excepted target 80%. However, VAS can be enhanced through awareness creation and improving socio-economic status of the community. Therefore intervention should be given at each factor to employ vitamin A Supplementation.

1. INTRODUCTION

1.1 BACKGROUND

Vitamin A is a fat soluble compound that can be categorized in to two classes which found in animal food sources (performed vitamin A or retinol) and fruit and vegetable sources (pro-vitamin carotenoid),which can be cleaved into retinol in the body: the carotenoid beta-carotenes is most effectively converted in to retinol, making it an important vitamin A sources (1). Vitamin A is important for the integrity and regeneration of respiratory and gastrointestinal epithelia that involved in regulating human immune function(2). Vitamin A plays a fundamental role in numerous physiological functions including vision, immunity, red blood cell production and growth(3). According to the United Nations Children's Fund (UNICEF), Vitamin A is important for a strong immune system and health growth and development of children (UNICEF, 2012). Further, if there is inadequate intake of vitamin A in children, there is an increased risk to illness, blindness, death, measles, and diarrhea. Vitamin A maintains the surface linings of the eye, respiratory, urinary, and intestinal tracts and is essential for the functioning of an individual's immune system (smith, 2012).

According to the World Health Organization (WHO), Vitamin A is essential for proper fetal development right from the embryonic stage (WHO, 2015).The world health organization (WHO, 2011) recommends for the routine administration of VAS to children 6-59 months twice a year.

Globally the prevalence of vitamin A deficiency (VAD) and night blindness estimated to be 1/3rd (33.3%) 190 million and 0.9% respectively among children under-five years causing one up to two million deaths annually(2).

In Africa an estimated 44.4% of preschool children are Vitamin A deficiency. It also 2%, of preschool age children are affected by night blindness in Africa which is four times higher than the proportion in South East Asia (0.5%), In Africa and Asia there are also 1.5 million blind children. Approximately 250,000 to 500,000 malnourished children in the developing world developed blindness each year from a deficiency of vitamin A, nearly half of them die within twelve month of losing their vision(4).

In Ethiopia, the prevalence of vitamin A deficiency is one of the significant public health problems. it leads to 80,000 deaths in a year and affects in moderate risk studies, 62.4% (95% CI:44.2%-80.5%),was higher than that in with low risk of preference,35.2%(95% CI:18.9%-51.5%)(5). In Ethiopia VAS is disseminated through three strategies: Enhanced outreach strategy, Community Health Days and the routine Health extension program. Vitamin A intake leads to its deficiency which causes depressed immune response, impaired movement of iron, poor growth, night blindness and exophthalmia major public health concerns, Periodic supply is a major intervention program to reduce the morbidity, mortality and blindness among the children in Ethiopia (3).

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1.2. STATEMENT OF THE PROBLEM

Globally, the coverage of vitamin A supplementation (VAS) remains unsatisfactory than that is required to protect the health of children 6-56 months. Vitamin A deficiency is one of the most prevalent micronutrient deficiencies in the world. An estimated 2% of all deaths among children under five years are attributable to vitamin A deficiencies(6).

The magnitude of Vitamin A supplementation coverage in Bangladesh in 2014 is 63.5% which does not meet the sustainable development goal (SDG) target(7). .In 2014 a study conducted in Hegarmanah village, Jatinangar VAS was 97.2% and the mothers understanding about VA is generally good (8). The study conducted in thirteen sub Saharan African countries the magnitude of door to door vitamin A supplementation has higher coverage than fixed-site plus out-reach approach 91% and 63% respectively (9). A similar study conducted in twenty three sub Saharan African countries found the magnitude of vitamin A supplementation was low(59.4%) among children's aged 6-59months which is very high variation from door to door supplementation(10). A study conducted in Federal Territory, Abuja, Nigeria VAS coverage show that knowledge of VA among caregivers was poor, 40.3% did not know any benefit of VA, more than half of them (58.3%) did not the age at which children should receive VA for the first time and 72.5% did not know the frequency of VAS receipt(11).

The magnitude of vitamin A supplementation coverage in Ethiopia, according to the World Bank data, vitamin A supplementation remained above 80% from 2006 to 2011. However after 2012 which coincides with shift from campaign based approach the coverage dropped below 80%(3). EDHS 2016 also reported only 45% of children received the supplementation in the preceding 6 month of the survey(3). The magnitude of vitamin A supplementation coverage in children aged 6-59 months in Humbo district was 75%. In EDHS 2019, 47% of children aged 6-35 months have received vitamin A supplements this indicates due to lack of awareness child caregiver, birth intervals, and ANC follow up(12). A study conducted from 2005 to 2019 in Ethiopia VAS saved 167,563 to 376,030 child lives, but additional lives greater than 42,000 could have been saved with a universal coverage (95%)(13). .Preschool children are the most vulnerable group to vitamin A deficiency: knowing the status of vitamin A determinant factors among children is important to identify the factors in a given community and to design an effective intervention program. Since VAS coverage is still not reach WHO recommendation and national targets

(80%(3). Therefore the current vitamin A supplementation and its associated factors are not apparently studied among children aged 6-59 months; however there was no such like study in the study area vitamin A supplementation and associated factors in preschool children. These study aims to address the gap (postnatal care, husbands disapproval, advice from peers/family and care giver knowledge of vitamin A supplementation remains the most important factors of vitamin supplementation) among children aged 6-59 months.

1.3. SIGNIFICANCE OF THE STUDY

The findings of the study will provide a paramount significance to children to prevent the negative consequences of vitamin A deficiency by creating awareness for caregivers about the problems and finding solutions. Mortality rates are increased among children with vitamin A deficiency and in many areas, improvement in vitamin A coverage can reduce the risk of mortality from childhood infection.

The finding of this study will be crucial to implement intervention of nutritional status of the preschool children by reducing the rate and burden of morbidity and mortality. The finding of this study will also have a potential contribution for woreda health office for door to door supplementation of vitamin A.

The findings may help to improve the vitamin A coverage and factors affecting the vitamin A supplementation. The result will have an input for health institutions, health professionals and policy makers at different level and further studies related with vitamin A.

2. LITERATURE REVIEW

2.1. INTRODUCTION

This chapter includes literature under the following subheading; coverage of vitamin A supplementation among children aged 6 to 59 months, factors affecting vitamin A supplementation among children below five years.

2.2. Coverage of VAS among children Aged 6 to 59 Months

The study done in Indian 67.3% of the children received full vitamin A supplementation, two times a year (14). A study done in Bangladesh vitamin supplementation coverage is (63.5%)(7). A study conducted in Alagoas (Brazil) vitamin A supplementation in children aged 6-11.9 months was 91.9% and in children aged 12-59 months was 38.6% (15). Vitamin A supplementation in Federal capital territory (Abuja: Nigeria) among children aged 6-59 month was (67.0%)(11). Across sectional study in Mali vitamin A supplementation was 83%(16). The coverage of vitamin A supplementation in door to door distribution among children aged 6-59 months in thirteen sub-Saharan African countries reviled higher (91%)(9).Whereas another survey done in twenty three sub-Saharan African countries found vitamin A supplementation coverage was (59.4%)(10).

A study done in a community based cross sectional study in Humbo district, Southern Ethiopia vitamin A supplementation coverage was (75%) (3). A cross-sectional study design conducted in public hospital Jimma zone South West Ethiopia, Vitamin A supplementation was 26.1% (P= 0.002, AOR=0.168) (17). Vitamin A supplementation has saved between 167,563 to 376,030 child lives (20005-2019) in Ethiopia (13). Similarly a study conducted in Ethiopia vitamin A supplementation coverage in routine health service comparing with campaign drops slightly which routine district was 85% compared to 91.7% in the campaign ones (18). A community based cross-section study conducted in Wonago district, southern Ethiopia, VAS coverage was 59.3% within the last 6 months (AOR=2.79, CI 95%,: 1.59-4.90) (19).

2.3. Factors associated with vitamin A supplementation

2.3.1. socio-demographic and economic factors

A study conducted in Mbagathi district Hospital, Kenya 88% of the mothers reported they would take their child the next dose of vitamin A, very few(4%) of them would fail to take their child for the next does due to lack of time(46%),and far distance/transport(23%)(20). A cross-sectional study conducted in India children of educated mothers (OR: 2.40;95% CI ;2.04-2.83:P<0.0001)were more likely received VA supplementation than others(14). The national Micronutrient status survey of Bangladesh show that children from poorer wealth quintile families had less attendance to the VAS program over the preceding 6 months (70-76%) compared to in higher quintiles (75-88%) due to the absence of knowledge, lack of understanding about the importance of VAS or because of geographic barriers to seeking immunization services in the former group(21). A cross-sectional study conducted in South Dayi district, Ghana being female child (OR=2.3) were significantly associated receipt VAS (P<0.05(22). A study in Senegal show that Children from poorest, poor and intermediate socio-economic statues households had 5.64,2.33 and 4 times greater risk of VAS, respectively (p<0.01than their wealthiest peers(23). Children from families in the" rich" wealth tertile had 1.8 times higher odds of receiving VAS than those from the poor households. On the other hand, children with mothers having no formal education had increased odds of receiving a vitamin A capsule than educated mothers (3).

2.3.2 Factors associated maternal knowledge of vitamin A supplementation

The study shows in Mbagathi district Hospital, Kenya the reasons given for children missing VAS which include: the mother not being aware of VAS schedule (41%), completed immunization (34%), child being sick (7%),lack of time (5%),negative staff attitude(5%), failure to know the benefit(31%),stoke out of vitamin A capsule (5%), in health institution and long distance from health institution (3%)(20). A study conducted in Federal Capital Territory, Abuja, Nigeria, show that (18%) of mothers could correctly state the frequency of VAS receipt among eligible children (every 6months),more than seventy percent (72.5%) did know this fact, whereas 20% of caregivers knew the correct age at which a child should receive vitamin A for the first time (at 6 month) and more than half (58.3%) did not know the correct age(11). A study shows in Humbo district was found that mothers who were aware of the benefit of VAS had 1.5 times

increase odds of receiving the supplement. Further, mothers who obtain information on VAS from HEWs and HADs had 1.5 times increase odds of utilizing the services than those were contacted by health professionals(3). A cross-sectional study conducted in Sidama and wolayta zone in SNNP caregiver's knowledge about vitamin A was 63% (24).

2.3.3. Factors associated with child health characteristics

A cross-sectional study conducted in Humbo district southern Ethiopia, children from families in the rich wealth tertile had 1.8 times higher odds of receiving vitamin A supplementation than those from the 'poor' households(3). A cros-sectional study condacted Bangladish families having three or more children were less likely to consume vitamin A supplementation than single children families (OR:0.923,CI: .0.765-1.113) (7).

3.3.4 Maternal related characteristic

A population based cross-sectional study conducted Sokoto state, Nigeria fathers disapproval about VAS was the most common barrier to vitamin A supplementation 69% and advices from peers (7.2%)(25). Mothers who had two ANC visits were 34%(AOR=1.34,95% CI:1.04,1.73) more likely to receive vitamin A capsule for their child than not receive, mothers who got post natal care after delivery 1.3 times (AOR=1.32,95% CI: 1.02, 1,71) more likely receive VAS than not visit post natal care(5).

2.4. Conceptual framework

This conceptual framework is prepared after revising the above literature review. The dependent Variable in the center and the independent variables are adopted from the revised literature.

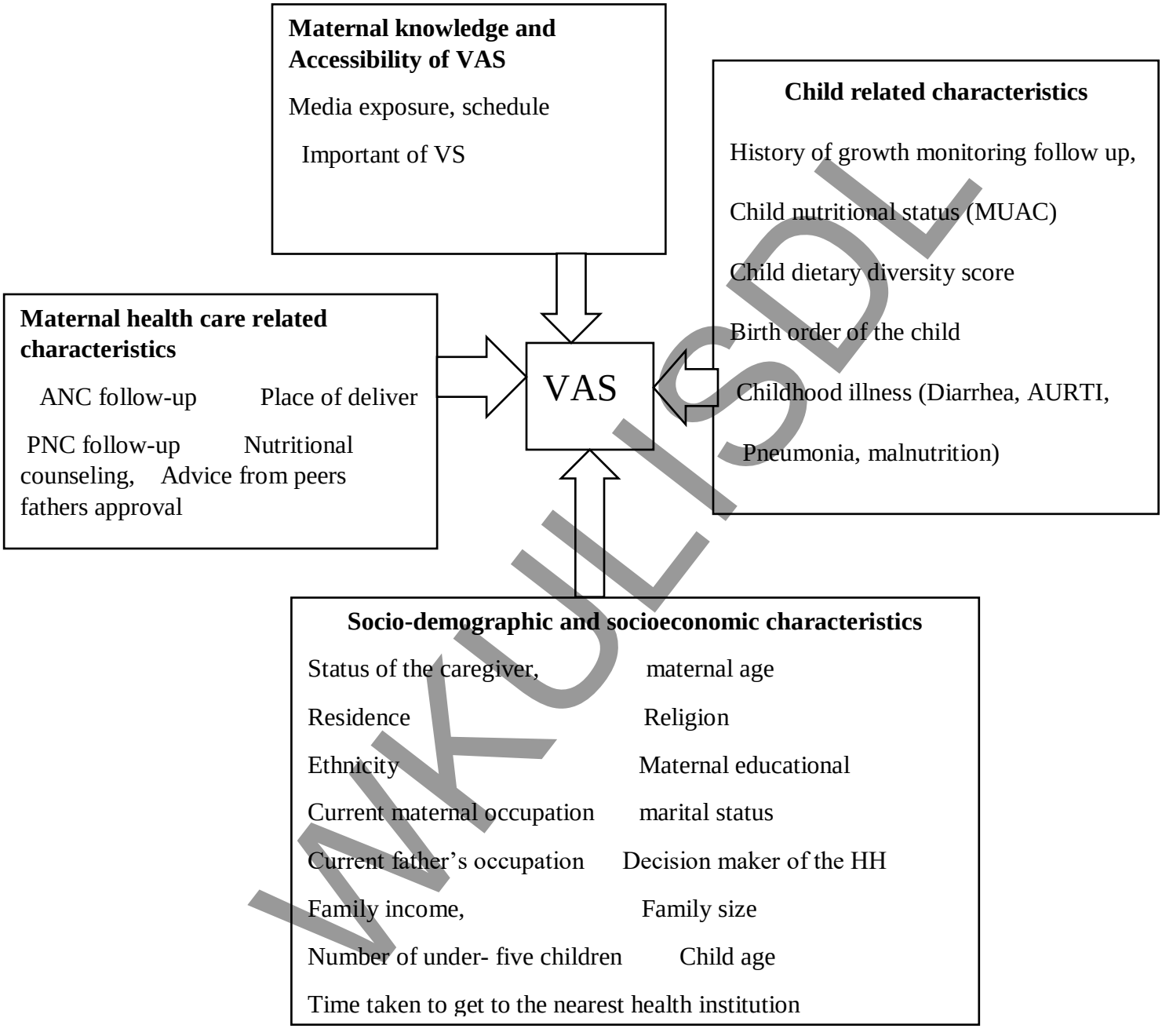

Figure 1; Conceptual framework for vitamin A supplementation coverage and associated factors among children aged 6-59 months in west Azernet Berber woreda.

3. OBJECTIVE OF THE STUDY

3.1. GENERAL OBJECTIVE

- ✓ To assess vitamin A supplementation coverage and its associated factors among children aged 6-59 months in West Azernet Berbere woreda, South west Ethiopia, 2021

3.2 SPECIFIC OBJECTIVES

- ✓ To assess vitamin A supplementation coverage among children aged 6-59 months in West Azernet Berber woreda,
- ✓ To identify factors associated with VAS among children aged 6-59 months in West Azernet Berber woreda,

4. METHODS AND MATERIALS

4.1 STUDY AREA AND PERIOD

West Azernet Berber Woreda is found from 267 km away from Addis Ababa, the capital city of Ethiopia in south west direction along the main Addis Ababa to Hosanna road, and 274km from the capital city of SNNP region of Hawassa town. According to West Azernet Berber Woreda town city administration health office report in 2012, the population size of the town is estimated to be 83101 and from these 40717 male, 42382 is females, infants 2651and children 6-59 months of age 10,024.West Azernet Berber Woreda had 4 health centers, 2 urban and 2 rural, 18 rural and 1 urban health posts. The study was conducted from April to May 2021.

4.2 STUDY DESIGN

A community based cross-sectional study design was conducted

4.3 POPULATION

4.3.1 SOURCE POPULATION

The source population was all mothers of children aged 6-59 months in WABW, SNNP region.

4.3.2 STUDY POPULATION

The study population was randomly selected mothers of children aged 6-59 months.

4.3 ELIGIBILITY CRITERIA

4.3.1 INCLUSION CRITERIA

All mothers of Children aged between 6-59 months which lives greater than 6 months was included

4.3.2 EXCLUSION CRITERIA

All mothers who were seriously ill, and had difficulty to communicate were excluded from the study.

4.4. STUDY VARIABLES

4.4.1. DEPENDENT VARIABLE

Vitamin A supplementation

4.4.2 INDEPENDENT VARIABLES

Socio-demographic and socioeconomic characteristics

- ✓ Status of the caregiver
- ✓ Maternal age
- ✓ Residence
- ✓ Religion
- ✓ Ethnicity
- ✓ Maternal educational level
- ✓ Current maternal occupation
- ✓ Marital status
- ✓ Current fathers occupation
- ✓ Decision maker of the HH
- ✓ Family income
- ✓ Family size
- ✓ Number of under five children
- ✓ Child age
- ✓ Time taken to get to the nearest health institution

Maternal health care related characteristic

- ✓ ANC follow-up
- ✓ Place of delivery
- ✓ PNC follow-up
- ✓ Nutritional counseling
- ✓ Advice from peers
- ✓ Fathers approval

Maternal knowledge regarding VA and Accessibility of VAS

- ✓ Maternal knowledge regarding vitamin-AS
- ✓ important of VAS
- ✓ Schedule
- ✓ Media exposure

Child related characteristics

- ✓ History of growth monitoring follow up
- ✓ Child nutritional status (MUAC)
- ✓ Child dietary diversity score
- ✓ Birth order of the child
- ✓ Childhood illness (Diarrhea, AURTI, pneumonia, malnutrition)

4.5 OPERATIONAL DEFINITION AND STANDARD DEFINITION

Vitamin-A-supplementation (Yes/No) Yes = if the child took 100,000 IU below 12 month and 200,000 IU greater than 12 months of vitamin-A supplementation ,No = if the child did not take VAS at all by showing the vitamin A capsule.

Knowledge about VAS (Poor/Good) - There are four knowledge questions which score a total of eight; Poor = score of <50%, Good = score of ≥50%

VA supplemented child; a child who was given VA in the preceding 6 month of the study as reported by the mother.

Child nutritional status (Severe malnutrition MUAC<11 cm, moderate malnutrition MUAC 11-11.9 CM) and mild malnutrition MUAC 11.5-12.4 cm, normal= MUAC ≥ 12.5(26) (27).

Child dietary diversity score: was assessed by counting, and adding the number of food groups the child ate, regardless of portion size, in the last 24-hours (using WHO 7 food groups), poor ≤3 food groups, good ≥4 food groups (28).

4.6. SAMPLE SIZE DETERMINATION AND PROCEDURE

4.6.1 SAMPLE SIZE DETERMINATION

1. Sample size determination for first specific objective

Single population proportion formula was used for sample size determination considering the assumptions of the proportion of vitamin-supplementation coverage in Humbo district, Southern Ethiopia (75%) (29).

$$n = (Z\alpha/2)2\ P(1-P)/\delta 2$$

n= 1.96*1.96*0.75(1-0.75)/0.05*0.05

n= 288 adding 10% =317

Where as

n= sample size

p= population proportion 0.75

α/2=level of significance=1.96

δ=margin of error=5% = 0.05

2. **Sample size calculation for second specific objective**

The sample size is calculated by using simple random sampling formula by using Epi info version 7 with the assumption of 95% confidence interval, ratio of exposed to unexposed one and power of 80%.

Table 1: Sample size determination using second objective for vitamin A supplementation coverage and associated factors in west Azernet Berber district

SN	Factors	Proportion (%)		Power	AOR	sample size including 10% response rate	Reference
		Exposed	Unexposed				
1	knowledge on VAS	64.6	35.4	80	0.55	475	(30)
2	Educational status of respondent	71.5	81.8	80	0.53	484	(29)
3	Wealth index	25	25.39	80	1.80	469	(29)

Total sample size was compared between for first and second specific objective and the largest sample size 484 was taken including 10% none response rate.

4.6.2 SAMPLING TECHNIQUE

Simple random sampling technique was used to employ the required study participants. In this study all four cluster was included in the study. First total sample size were proportionally allocated to each cluster based on the total number of women having eligible child in each cluster ,then I was take registered data from HEW before data collection to provide an identity code for each eligible household in all clusters. After addressing the number of mothers having eligible children computer generated random sampling technique was used in each clusters separately.

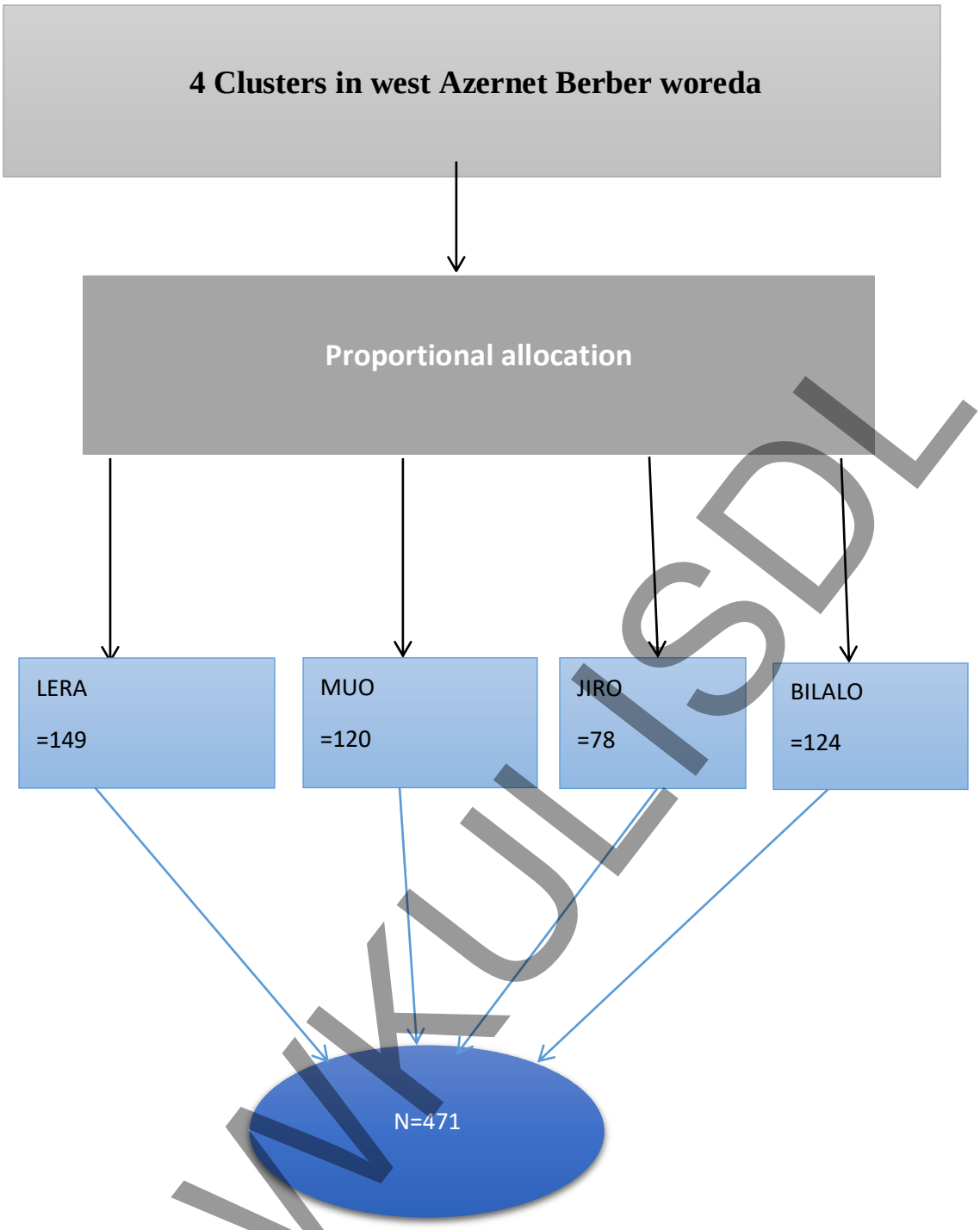

Figure 2; Sampling procedure for vitamin A supplementation coverage and associated factors in west Azernet Berber Woreda South West Ethiopia, 2021

4.7. DATA COLLECTION PROCUDER

4.7.1. Data collection Tool

Structured questionnaire was developed through critical review of relevant literature (31). The questionnaire had four parts. These are Socio-demographic and socioeconomic characteristics, maternal health related characteristics, maternal knowledge regarding vitamin-A and VAS, and child health care related characteristics.

4.7.2 DATA COLLECTORS

Eight Diploma health professionals as data collectors and two BSC public health professionals as supervisors working in the district were recruited.

4. 7.3 DATA COLLECTION TECHNIQUE

Direct face to face interviewing was conducted with mothers or caregivers having children aged 6-59 months, by giving a code for that specific household, to make sure whether the child took VAS or not. EPI chart was used, for those who don't have EPI chart maternal recall was considered.

4.8. DATA QUALITY CONTROL MEASURES

4.8.1 QUESTIONNAIRE

The research questionnaire was prepared in English version and translated into local language (Amharic) and retranslated back to English to check consistency by experts. Before the actual data collection the questionnaire was pre-tested on 10% of the calculated sample size, and then necessary modification was done accordingly. To minimize recall bias error on whether the child took vitamin-A supplementation cross checking with the other family member was done.

. 4.8.2 SUPERVISION AND FOLLOW-UP

Continuous supervision and follow up of the data collectors were made to review and check for completeness and consistency of the collected data on daily bases by supervisors and principal investigators. Incomplete and unclearly filled questionnaires were given back to the interviewer and the interviewers were going back to the coded household and fulfill the questionnaire by interviewing the mother. The collected data will be handled and stored carefully and appropriately.

4.9. METHODS OF DATA ANALYSIS

Data cleaning and editing was started from the start of data collection to data entry. Data was coded and entered in to Epi-data version 3.1 then it was transferred in to Software for Statistics and Data Science (SPSS) version 21 for data processing and analysis. Data cleaning was performed to check accuracy, consistencies, missing values and variables.

Descriptive statistics was carried out to illustrate the percentage and frequencies of study variables. Bivariate logistic regression model was used to test if there was an association between a dependent variable and each independent variable factors statistically significant at a P-value of used 0.2 and less at bivariate logistic regression were taken to multivariable logistic regression. Variables with the P-value of ≤ 0.05 and AOR 95% CI was considered as statistically significant. The goodness of the model was assessed whether the required assumptions for the application of multivariate logistic regression were fulfilled or the model was adequately fit the data. Hosmer and Lemeshow test was used to check model fitness and multicollinearity was assessed using the variance inflation factor (VIF).

4.10 ETHICAL CONSIDERATION

Ethical clearance was obtained from institutional review board of collage of medicine and health science Wolkite University, and it was offered to west Azernet Berber woreda town health office .All the basic principles of human research ethics (respect of persons beneficence, voluntary participation, COVID19 protection technique and confidentiality) were respected. The purpose and important of the study was explained, and written informed consent were secured .participant's involvement in the study was voluntary bases and that they could withdraw any time if they wanted. All the information's was taken from the respondents have been used for research purpose only. Confidentiality and privacy was maintained by omitting the name of the respondent's.

4.11 DISSEMINATION OF RESULT

The results of the study will be disseminated to Wolkite University College of medicine and health science department of public health and also will be shared to the WABW health Department and health institution offices. The discussion will be held with the health centers so as to share the findings of the study and to give recommendations on areas of improvement to sustain the objectives of the study. Finally, results will be published on the reputable national and international journal.

5. RESULT

5.1 SOCIO-DEMOGRAPHIC AND ECONOMIC CHARACTERISTIC

In this study a total of 471 caregivers were participated with the cumulative response rate of 97.3%. Regarding marital status 421(87.5%) marred. The majority of mothers age 280(59.4%) were 25-34 years. The majority of mothers 340(72.2%) lived in rural area. The majority of mothers 315(66.9%) were Silte and 319(67.7%) of mothers are Muslim. Regarding number of under five children in household 432(93.2%) of mothers had one to two children. The mean (±standard deviation (SD) age of the mothers and their children were 1.0318 ±0.63668 and 1.8811±0.32401 respectably. The majority of mothers 305(64.8%) were primary and secondary educational level. Regarding economic status of the family 270(57.3%) had less than 2000 Ethiopian birr monthly income. Regarding maternal employment status 73(15.5%) of the mothers had government employee, **as show table 2**

Table 2; Socio-demographic characteristic of care givers who have children aged 6-59 months, in West Azernet Berber woreda, south west Ethiopia,2021

Variables	**Total(N=471)**	
	Frequency	**Percentage (%)**
Child age		
6-11	56	11.9
12-59	415	88.1
Child sex		
Male	256	54.4
Female	215	45.6

Maternal age		
15-24	88	18.7
25-34	280	59.4
35-49	103	21.9
Maternal relation		
Biological	467	99.2
Foster	4	0.8
Residence		
Rural	340	72.2
Urban	131	27.8
Ethnicity		
Silte	315	66.9
Gurage	61	13
Oromo	5	1.1
Amara	41	8.7
Hadiya	49	10.4
Religion		
Orthodox	92	19.5

Muslim	319	67.7
Protestant	60	12.7
Maternal education		
Unable to read and write	101	21.4
Primary and secondary	305	64.8
Tertiary education	60	12.7
Religious education	5	1.1
Maternal occupation		
Student	23	4.9
Housewife	272	57.7
Government employee	73	15.5
Non-government employee	13	2.8
Merchant	85	18
Daily laborer	5	1.1
Marital status		
Single	0	0
Married	421	87.5
Divorced	16	3.4
Widowed	11	2.3

Separated	32	6.8
Fathers educational status		
Unable to read and write	38	9.2
Primary and secondary	242	58.7
Tertiary	127	30.8
Religious education	5	1.1
Fathers occupation		
Student	1	0.2
Government employee	121	29.4
Non-government employee	47	11.4
Merchant	93	22.6
Daily laborer	48	11.7
Farmer	102	24.8
Monthly income		
<2000	270	57.3
>2000	201	42.7
Household decision maker		
Husband	183	38.9

Wife	98	20.8
Jointly	190	40.3
Family size		
≤4	204	43.3
5-6	200	42.5
7-10	67	14.2
Number of <5 children		
≤2	438	93.2
3-4	32	6.8
Times take to health facility (minutes)		
10-35	226	48
36-60	187	39.7
61-90	58	12.3
Ownership of livestock		
Yes	302	64.1
No	169	35.9
Ownership of agricultural land		
Yes	256	54.4
No	215	45.6

5.2 MATERNAL HEALTH CARE RELATED CHARACTERISTICS

In this study majority of mothers 347(79.6%) had 3-4 ANC visit, 219(46.5%) mothers had postnatal care, 253(53.7%) mothers got advice from peers/ family about vitamin A supplementation, 34(7.2%) mothers disapproved by husbands about vitamin A supplementation, whereas, 331(70.3%) of mothers got nutrition related counseling by health workers, 267(57.4%) mothers deliver the index child above two years interval, **as shown table 3**

Table 3;Maternal health care related characteristics of care givers who have children aged 6-59 months, in West Azernet Berber woreda, south west Ethiopia,2021

Variables	**Total(N=471)**	
	Frequency	**Percentage (%)**
Number of pregnancy		
≤3	312	66.2
4-6	147	31.2
7-9	12	2.5
Alive child		
≤3	337	71.5
4-6	126	26.8
7-9	8	1.7
Age at marriage		
15-20	397	84.3
21-25	67	14.2
26-30	7	1.5
Age at first pregnancy		

15-20	329	69.9
21-25	124	26.3
26-33	8	3.8
ANC follow-up		
Yes	436	92.6
No	35	7.4
Number of ANC follow up		
≤2	89	20.4
3-4	347	79.6
Birth place		
Health institution	428	90.9
Home	43	9.1
Postnatal care visit		
Yes	219	46.5
No	252	53.3
Place of PNC		
Home	41	18.7
Health institution	178	81.3
Birth interval		
≤23 month	198	42.6
24-75 month	267	57.4
distance to health facility(km)		
0.250-2.5	363	77.1
2.6-5.00	108	22.9
Nutrition counseling by Health work		
Yes	331	70.3

No	140	29.7
Advice from peers/family about VAS		
Yes	253	53.7
No	218	46.3
Husbands disapproval		
Yes	34	7.2
No	437	92.8
Maternal work load		
Yes	70	14.9
No	401	85.1

5.3 MATERNAL KNOWLEDGE RELATED CHARACTERISTICS

5.3.1 MATERNAL KNOWLEDGE RELATED TO VITAMIN A FOOD SOURCE

The majority of caregivers 352(74.7%) of them heard vitamin A source foods, 30(8.5%) caregivers did not mention any food source and 170(48.2%) did not know medical consequence of VAD.

Table 4;Maternal knowledge related characteristics of care givers who have children aged 6-59 months, in West Azernet Berber woreda, south west Ethiopia, 2021

Variables	**Total(N=471)**	
	Frequency	**Percent (%)**
Have you heard VA source food		
Yes	352	74.7
No	119	25.3
Mention VA Food source		
Not mention	30	8.5
Vegetable and fruits	132	37.4
Egg and milk	191	54.1
Mention Medical Consequence of VA		
Not mention	170	48.2
Night blindness	131	37.1
Growth failure and skin dryness	52	14.7

5.3.2 Maternal knowledge related to vitamin A supplementation

In this study 247(52.65%) mothers heard vitamin A supplementation, from those mothers 44.76% of them heard from health workers, **as shows figure 3**

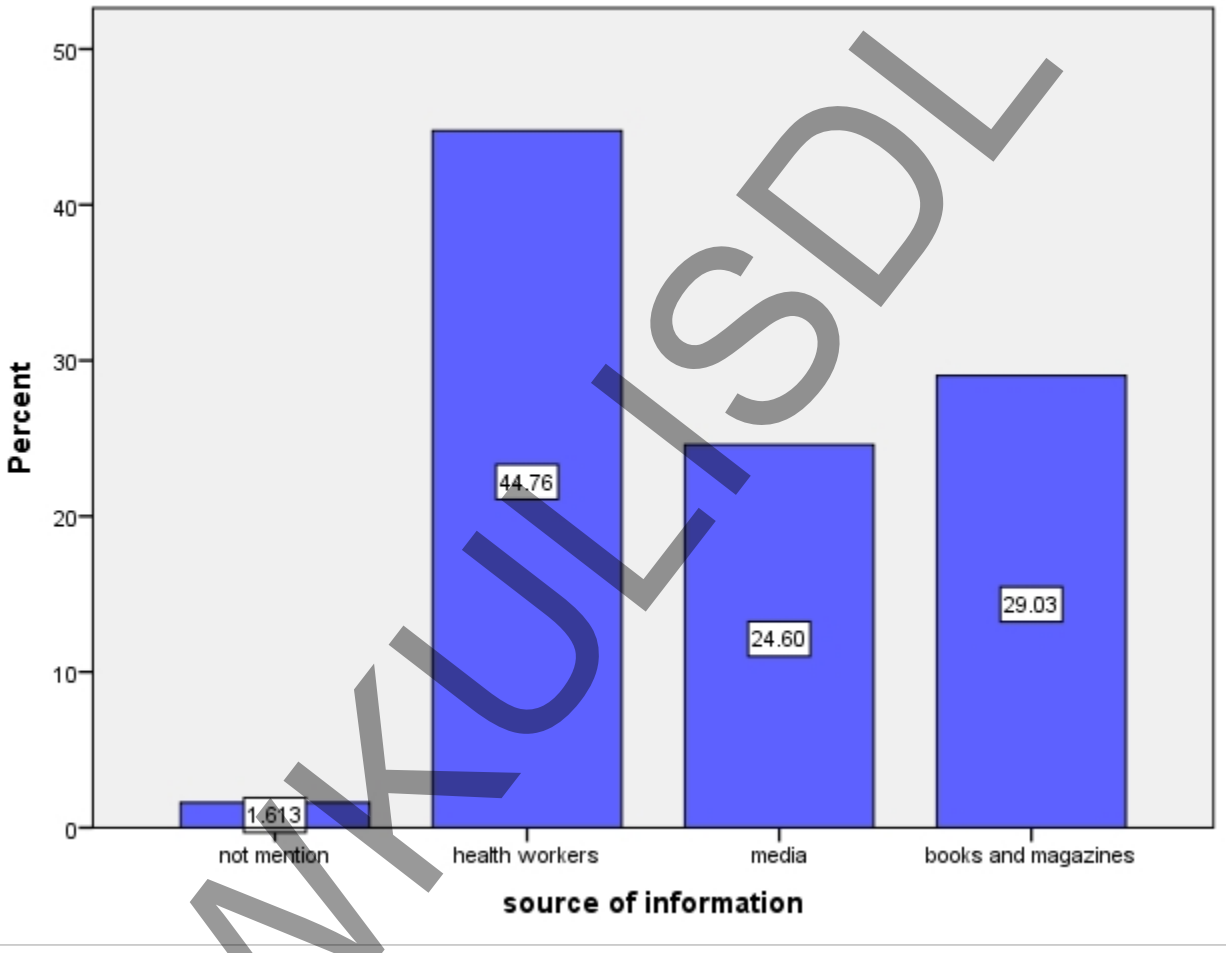

Figure 3; Source of information about vitamin A supplementation among mothers who had children aged 6-59 months in West Azernet Berbere Woreda South West Ethiopia, 2021

In this study 249(52.9%) of mothers had good knowledge about vitamin A supplementation **as show figure 4**

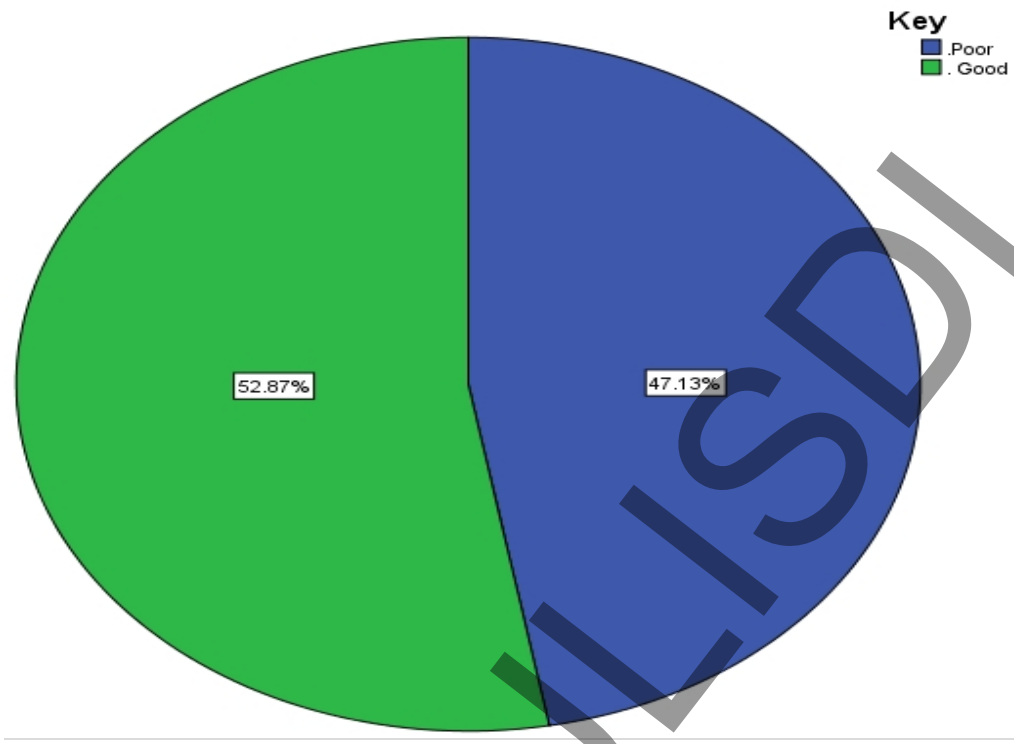

Figure4; maternal knowledge about vitamin A supplementation in West Azernet Berber Woreda, south west, Ethiopia 2021

5.4 VITAMIN A STATUS OF CHILDREN

In this study 273(58%) of children received vitamin supplementation, **as show figure**

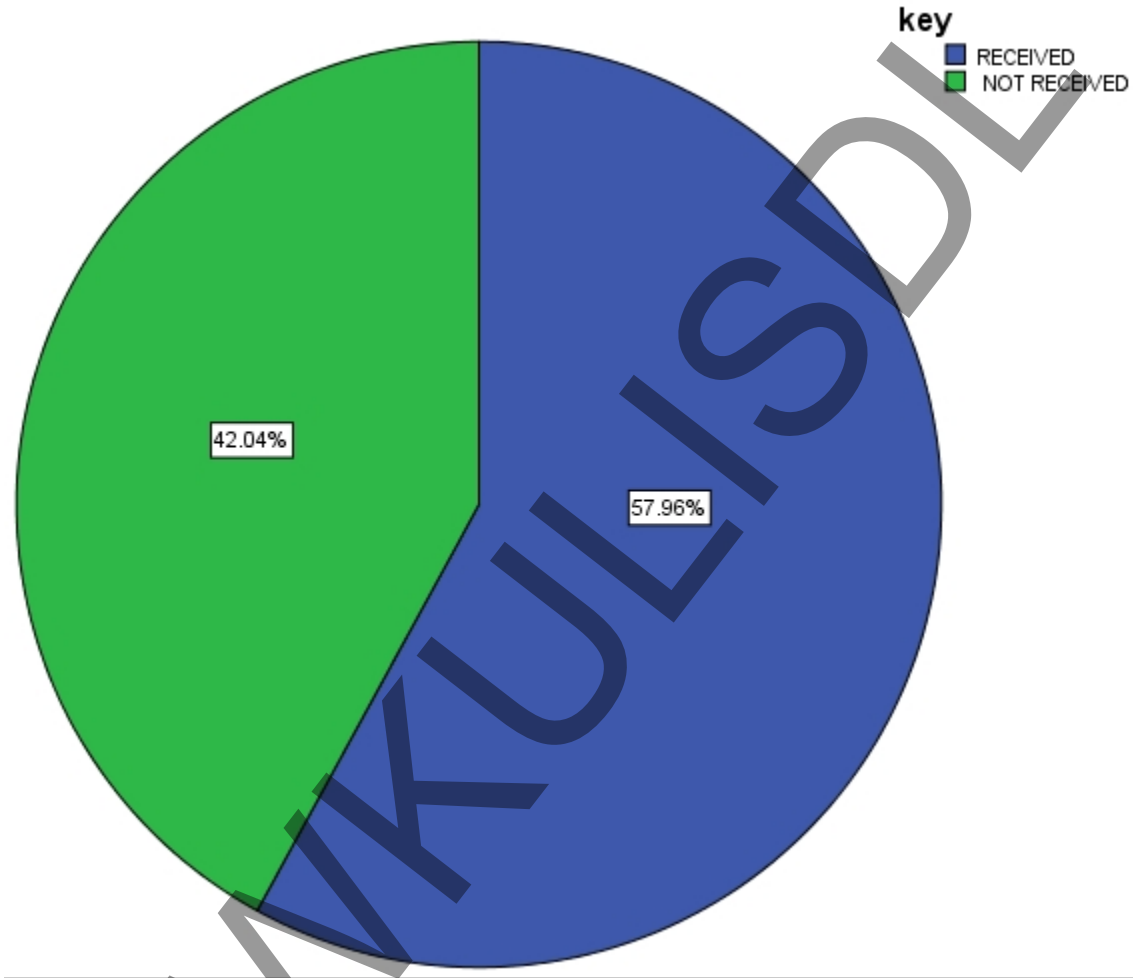

Figure 5; Children vitamin A supplementation status in West Azernet Berbere Woreda, south west, Ethiopia, 2021

In this study children's received vitamin A supplementation 94(34.4%) door to door supplementation stratagem, **as show figure 6**

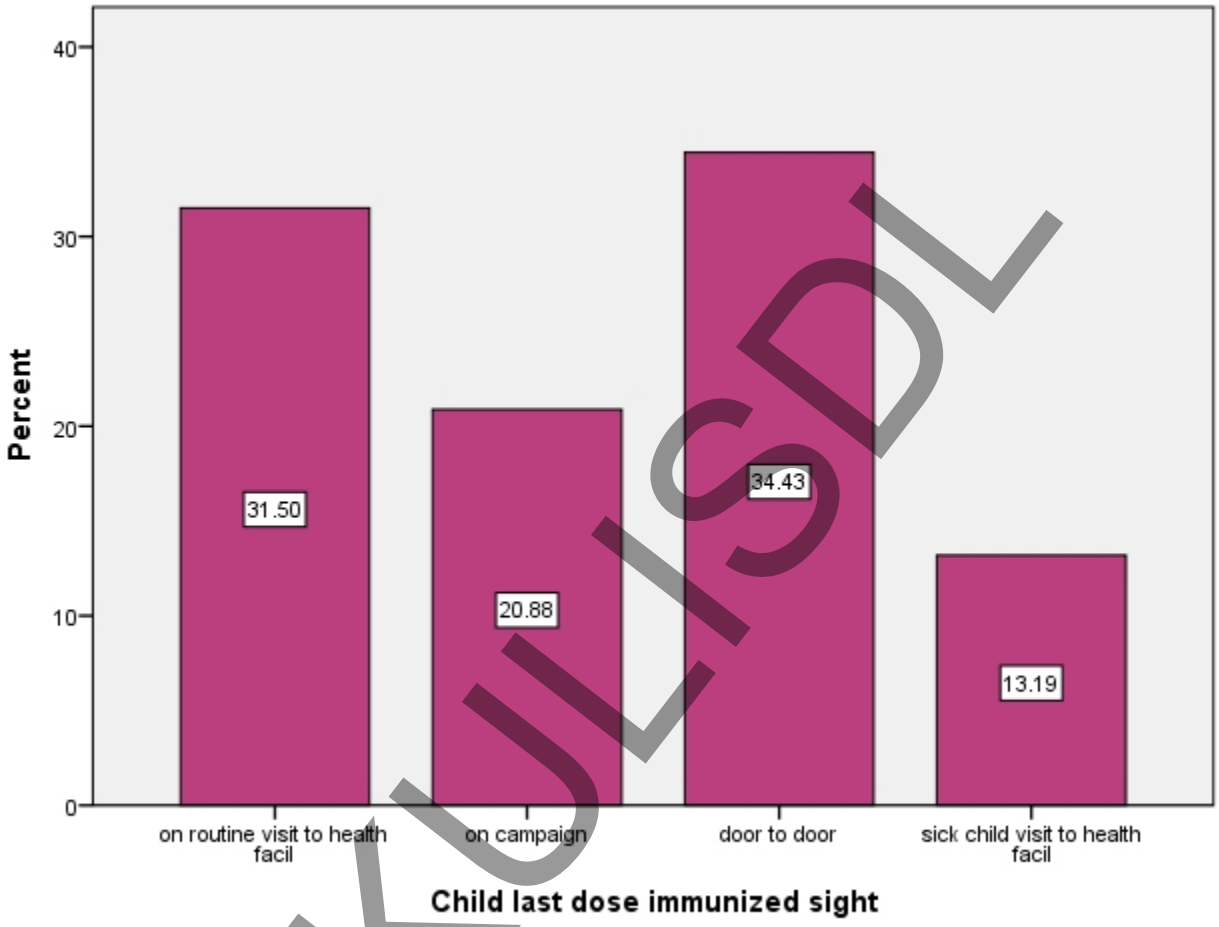

Figure 6; Immunization sight of vitamin A supplemented children in West Azernet Berbere Woreda, South West ,Ethiopia, 2021

5.4.1 REASONS WHY NOT CHILDREN RECEIVED VAS

Among those reasons 90 (91.1%) mothers had not awareness about vitamin A Supplementation. However 24 hours recall 43(9.1%) of children eat greater than four food groups **as shows Table**

Table 5;Maternal reasons why not their child take vitamin A supplementation and 24 hours recall in West Azernet Berbere Woreda, South West, Ethiopia, 2021

Variables	**Total(N=471)**	
	Frequency	**Percent (%)**
Reasons not take VAS		
Not aware	90	91.1
Fear of toxicity	27	5.7
Forgetting	57	12.1
Need of other incentive	15	3.2
Paternal disapproval	9	1.9
24 hours recall		
<4 food groups	428	90.9
≥4food groups	43	9.1

5.5 Child health care related characteristics

From the total of 471 children 264(56.1%) gate weight, height and MUAC measurement, 171(36.1%) children developed diarrhea the last two weeks, 172(36.5%) were developed cough, difficulty of breathing **as shows table**

Table 6 child health care related characteristics of care givers who have children aged 6-59 months, in West Azernet Berber woreda, south west Ethiopia, 2021

Variables	**Total(N-471)**	
	Frequency	**Percent (%)**
Measurement of Height, Weight, MUAC)		
Yes	264	56.1
No	207	43.9
Diarrhea the last 2 weeks		
Yes	171	36.3
No	300	63.7
Cough within 2 week		
Yes	172	36.5
no	299	63.5

5.5 ANTHROPOMETRIC MEASUREMENT

In this study 68(14.4%) of mothers had mild malnutrition and 2(0.4%) of children were developed severe acute malnutrition **as shows table**

Table 7; Anthropometric measurements of mothers and their children aged 6-59 months, in West Azernet Berber woreda, south west Ethiopia, 2021

Variables	**Total(N=471)**	
	Frequency	**Percent (%)**
Mothers MUAC(CM)		
19-21.99	68	14.4
22-24.99	168	35.7
≥25	235	49.9
Child MUAC(CM)		
<11	2	0.4
11-11.9	26	5.5
12-12.4	49	10.4
≥12.5	394	83.7

5.7 Factors associated vitamin A supplementation

5.7.1 Factors associated to vitamin A supplementation among overall participants

In the bivariable analysis child age, residence, monthly family income, number of under five children, ANC visit, birth interval, number of ANC visit, birth place, PNC, nutritional counseling, advise from peers/family about VAS, husbands disapproval about VAS, maternal knowledge about VAS, information about VAS, child weight, height and MUAC measurement and history of diarrhea within the last two weeks were included to multivariable analysis at p value of ≤0.2. After adjustment of these independent variables: monthly family income, postnatal care, advice from peers/family about VAS, husbands disapproval about VAS, information about VAS and maternal knowledge about VAS were significantly associated to vitamin A supplementation at p value ≤0.05. Families monthly income greater than 2000 ETB were 2.44[AOR=2.44, 95%CI(1.441,4.135)] times more likely received vitamin A supplementation than those mothers who had less than 2000 ETB monthly income. Mothers who had postnatal care were [AOR=2.052, 95% CI (1.227, 3.430)] times more likely received vitamin A supplementation than those mothers who had not postnatal care visits. Mothers who had advice from peers/ families 1.158[(AOR=1.158, 95% CI, 0.288,3.646] times more likely received vitamin A supplementation than those mothers who did not get advised from their peers/family. Mothers who had information about vitamin A supplementation 2.060 (AOR=2.060, 95% CI (1.075, 3.947) times more likely receipt VAS than those mothers who did not had history of information about VAS. Mothers which disapproved by their husbands 0.303 [(AOR=0.303, 95% CI(0.116,0.795)] times less likely received vitamin A supplementation than those mothers who did not disapproved by their husbands. Mothers who had good knowledge [AOR=0.589, 95% CI(0.376,0.923)] times less likely received vitamin A supplementation than those mothers who had poor knowledge, as **shows Table 8**

Table 8; Multivariable analysis of vitamin A supplementation among children aged 6-59 months in West Azernet Berber Woreda, South West, Ethiopia, 2021

Variables	Vitamin A supplementation		COR(95%CI)	AOR(95%CI)	P-value
	Yes	No			
Information about VAS					
Yes	185	63	4.505(3.043,6.668)	**2.060(1.075,3.947)**	0.029
No	88	135	1	1	
Monthly family income					
≥2000	148	122	3.664(2.457,5.493)	**2.44(1.441,4.135)**	0.001
<2000	50	151	1	**1**	
Postnatal care					
yes	156	63	2.857(1.948,4.192)	**2.052(1.227,3.430)**	0.006
no	117	135	1	1	
Advice from peers/family					
yes	160	93	1.599(1.106,2.311)	**1.158(0.288,3.646)**	0.011
no	113	105	1	1	
Husband disapproval					

yes	10	24	0.276(0.129,0.591)	**0.303(0.116,0.795)**	0.015
No	263	174	1	1	
Maternal knowledge about VAS					
Good	124	125	0.486(0.334,0.707)	**0.589(0.376,0.923)**	0.021
Poor	149	73	1	**1**	

Footnote; Hosmer-Lemeshow goodness of-fit =0.717 Omnibus test of model coefficient=<0.001

6. DISCUSSION

This study assessed vitamin A supplementation coverage and associated factors among caregivers having children aged 6-59 months, due to its several benefits for the child world health organization (WHO) recommended vitamin A supplementation two times a year(2). Family monthly income, postnatal care, maternal advice from peers/family about vitamin A supplementation, husband's disapproval about vitamin A supplementation, information about VAS and maternal knowledge about VAS are independent factors of this study.

The coverage of vitamin A supplementation in this study was lower than the global recommended minimal coverage level and indicators a need for policy makers and public health practices in the region to scale up vitamin A supplementation among children aged 6-59 months. It is only 58% [95% CI (53.7, 62.0)] of mothers reported to receive VAS their children up to five years, which is comparable in twenty three Sub-Saharan African countries 59.4%(10), Gawadabawa district Sokoto State, Nigeria 61% (25). The study conducted in Wonago district Southern Ethiopia 59.3% (19). Even though there is a difference in the study period and study setting, the comparability of the study might be due to the study setting of some of the abovementioned studies are nearer to this study setting; those studies also were done in recent years. This implicates nearly consistent, and updated information might disseminate to the target population regardless of the study period and study area difference.

However the coverage of vitamin A supplementation in this study setting is higher than vitamin A supplementation in semi-urban area of Kwazulu-Natal Province, South Africa (34.9%) (32). In Ethiopia studies it is also higher than in study of EDHS 2016(45%) (33), mini EDHS 2019(47%) (34). Public Hospital Jimma Zone South West Ethiopia 26.1 %,(17), and Aleta Chuko woreda, Sidama zone southern Ethiopia36.2 % (35).The potential justification might be due to increase in maternal and child health service accessibility and increases maternal awareness of vitamin A supplementation. Furthermore, there is variation in socio-demographic and maternal health care characteristics of the study participants with the referenced study such as family monthly income and postnatal care respectively. There are studies shows children with rich wealth family and mothers postnatal care at health facility or home are more likely receipt VAS their children than others(5, 24) .

On the other hand vitamin A supplementation in this study is lower than the study conducted in Hegarmanah Village, Jatinangar (92.27%(10), Federal Territory, Abuja, Nigeria 67% (11), and Humbo district 75% (3). Hegarmanah Village, Jatinangar (8), study might be due to variations mothers understanding about VAS was good through media exposure and getting information before camping day (8). In Federal Territory, Abuja, Nigeria (11), study might be due to variations of caregivers who had heard about vitamin A, heard from town announcers, had working radios and lived less than 10 minute away from health facility (11), the study in Humbo district (3), study might be due to variations better knowledge about the impact of VAS enhanced awareness creation and improving socio-economic status of the community and mothers obtained information on vitamin A supplementation from health extinction workers and health development armies (3).

Children from the rich wealth family had 2.44 times more likely receipt vitamin A supplementation compared than the poorest family. This is better comparing with the study done in Humbo district (3) and Nigeria(37). The possible justification for this factor might be the richest families easily arrive to health facility or immunization sight by transportation and getting information through mass media.

According to this study result mothers who had history of postnatal care 2.052 times more likely received VAS their children than mothers who didn't get postnatal service at health facility or home. This is nearest to National vitamin A supplementation in Ethiopia (4).The possible explanation could be providing effective and efficient postnatal care services by health care providers delay the introduction of important and consequence of VAS counseling. Therefore effective counseling at PNC could increase maternal knowledge and understanding of VAS for the children.

Mothers who had good knowledge about VAS 0.589 times liss likely recived VAS their child than those mothers who had poor knowledge. This study is not supported in Humbo distric (3).The potantial difference might be due to the fact that mothers who had knowledge they think that preventing VAD by other olternatives like VA sourec foods, others had misse information about important and toxicity of VAS.

In this study Husbands disapproval about vitamin A supplementation was 0.303 times less likely received VAS their children than those mothers who did not disapproved by their husbands. This comparable with the study conducted in Sokoto State, Nigeria (25). The possible explanation could be indeterminate reasons from mothers, fear of toxicity and childhood illness.

Maternal advice from peers/families 1.158 times more likely received VAS their child than those mothers who did not share advice from family/peers. This is not supported a study conducted in Sokoto, State, Nigeria (25). The potential difference might be through awareness creation to the community and media exposure is enhancing information sharing about important of VAS.

Mothers who had information about VAS 2.060 times more likely received VAS their child than those mothers who had no history of information. This study supported by Humbo district southern Ethiopia (3). The possible Explanation might be mother's better knowledge about important of VAS enhanced to attendant of their child receive VAS properly.

7. STRENGTH AND LIMITATION OF THE STUDY

7.1 STRENGTH OF THE STUDY

The study is representative due to community based cross-sectional study. The study had high response rate. A standard questionnaire developed by addressing published literatures was used with only slight adaptation to the local context. It also provides recent update information related to vitamin A supplementation and associated factors.

7.2 LIMITATION OF THE STUDY

In this study, the age of children for initiation of first dose of vitamin A supplementation was between 6 and 11 months. Since, this period may lead to caregiver's memory lapse during data collection due to interaction of other vaccination like measles and lack of awareness with vaccination, since, the study used birth recall and immunization cared to measure vitamin A supplementation. This study only assessed quantitative aspect, note address qualitative aspect, so, it didn't include the attitude of caregivers related to vitamin A supplementation trained.

8. CONCLUSION AND RECOMMENDATION

8.1 CONCLUSION

Vitamin A supplementation is found lowered to compared to the global recommendation and national targeted. There is a high difference with other findings and national recommendation. The study found that monthly family income, ownership of agricultural land, postnatal care, maternal advice from peers/family about vitamin A supplementation, husband's disapproval about vitamin A supplementation, information about vitamin A supplementation and maternal knowledge about vitamin A supplementation were significantly associated to vitamin A supplementation among overall study participants. Among those, family monthly income, ownership of agricultural land, advice from peers/family and husbands disapproval are positively associated to vitamin A supplementation. Knowledge about vitamin A supplementation is negatively associated to vitamin A supplementation.

8.2 RECOMMENDATION

Health care workers should enhance counseling and advice on vitamin A supplementation, initiation time, interval and important. It is also apply door to door vitamin A supplementation strategy rather than camping supplementation. HEW and HDA crate awareness for caregivers for continuation of full immunization. In campaign and fixed sight VAS program health workers announce information, create awareness for caregivers and making appropriate arrangement to attain the nearest health facility or outreach sight with their eligible children. Vitamin A fortification and dietary diversification should also be setup to enhance vitamin A intake.

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10. Annexes

10.1. ANNEX 1. Informed consent agreement form

Hello, My Name is…….. From Wolkite University College of medicine and health sciences, and now I am conducting a survey on utilization of vitamin A supplementation practices among mothers of children 6-59 months old.

TITLES: Coverage of vitamin A supplementation practices among children aged 6-59 months in west Azernet Berber woreda, 2021

OBJECTIVES/PURPOSE: To assess utilization of vitamin A supplementation and associated factors among children aged 6-59 months in West Azernet Berber woreda

PARTICPATION: You have been selected by chance among the participants.

POTENTIAL RISK: During the participation of the study, you may west about 10-20 minutes, otherwise there will no injections, drawing blood or anybody fluid involved. In general, participating in this study has no potential risk.

POTENTIAL BENEFIT; Participating in this study had no direct financial benefits are there related the study, but you will acquire or increase knowledge related to the use of vitamin A supplementation.

COFIDENTIALITY AND PRIVACY: Participation in this study is voluntary and you can choose not to take part. All information you give will be included in the report and there will be no way to identify you as one of the people who gave information. If you have any questions about the survey, fell free to ask me. For detailed information you can contact the investigator through:

Cell phone: 0912340471 B.B and Email,yibinaberihun@gmail.com

Declaration

I have obtained adequate information about the process and the objective of the study and I have understood the purpose, advantage and disadvantage of the study titled vitamin A supplementation and its associated factors among preschool children aged 6-59 months in Western District, Silte Zone.

I also understood that the research imposes no risk on me and my family. I have been told that if I feel discomfort to respond to any of the question, it is free to withdraw at any time as I wish to do so. I have understood the information given and the participation is completely voluntary based. I have been told that my answers to the questions will not be given to anyone. Now I am giving my written consent to participate in the study voluntarily. Could I have your permission to continue?

1. Yes

2. No, Stop

Data collector: Name_____ Signature_____ Date_____

Result

1. Questionnaire completed _____

2. Questionnaire partially completed _____

3. Participant refused _____

4. Others (please Specify) _____

Checked by Supervisor:

Name _____ Supervisor's Signature _____ Date _____

10.2. Annexs.2: Questioners

No	Part I:- Socio-demographic and socioeconomic characteristics		
001	What is the age of the index child (in complete months)	_____	
002	Sex of the child	0.male 1.female	
003	What is your age (The mother, In complete years)	_____	
004	Status of the mother	0. Biological 1. Foster	
005	Residence?	0. Rural 1. Urban	
006	What is your ethnicity?	0. Silte 1. Gurage 2. Oromo 3. Amara 4. Hadiya 5. Other (specify)_____	
007	What is your religion?	0. Orthodox 1. Muslim 2. Protestant 3. Others	
008	What is your highest educational status (maternal)?	0. Unable to write & read 1. Primary and secondary 2. Tertiary	

		3. Religious education	
009	What is your current occupation (maternal)?	0. Student 1. Housewife 2. Government employee 3. Non-government employee 4. Merchant 5. Daily laborer 6. Other(Specify)_____	
010	What is your current marital status (maternal)?	0. Single 1. Married 2. Divorced 3. widowed 4. Other (specify)_____	If other than ' married' skip to "Q013 ''
011	What is your husband's highest educational status?	0. Unable to write & read 1. Primary and secondary 2. Tertiary 3. Religious education	
012	What is your husband's current occupation?	0. Student 1. Government employee 2. Non-government employee	

		3. Merchant 4. Daily laborer 5. Other(Specify)_____ _	
013	Net family monthly income (In ETB)	_____	
014	Who is the decision maker of the household?	0. Husband 1. Wife 2. Jointly 3. Other	
015	How many are family members living together (family size)?	_____	
016	How many numbers of under-five children are living in the household (including non-biological offspring)?(in number)	_____	
017	What time it takes to reach to the near-by health institutions? (In Minute)	_____	
018	Ownership of livestock's	0.Yes 1.No	
019	Ownership of agricultural land	0.yes 1.No	
Part II: Maternal health care related factors			

200	How many pregnancies have you had in your life (including the index child)?	----------	
201	How many of them are alive?	----------	
202	What was your age at marriage?	----------	
203	What was your age at first pregnancy?		
204	Did you have ANC follow up for this child?	0. Yes 1. No	If No, skip to; Q206
205	If yes how many times do you have ANC follow-up? (frequency)	_____	
206	Where did you give birth (the index child)?	0. At health institution 1. At home 2. Others (specify)____	
207	Did you have PNC follow up for this child?	0. Yes 1. No	If no skip Q9

208	How long is your preceding birth interval (in month)	_____(in Month)	
209	What is the estimated distance of the nearby health institution from household (in KM)	……..	
210	Did you receive nutrition related counseling?	0. Yes 1. No	
211	Did you get an advice from peer/ family members regarding VAS to your child	0. Yes 1. No	
212	Did your husband disapprove your idea to give your child VAS ?	0. Yes 1. No	
213	Do you believe that you have work load (maternal Judgment)	0.yes 1.no	
Part III: Maternal knowledge regarding Vitamin-A and VAS			
	Questions to be asked to assess maternal knowledge		
300	Item	Scoring	
301	Have you ever heard of vitamin-A source foods?	0. yes 1. no	
302	List at least two food sources of vitamin-A	0. Not mention 1. Vegetable and fruit 2. Egg, milk	
303	List at least two medical consequences of vitamin-A deficiency	0. Not mention 1. Night blindness 2. Growth failure and skin dryness	
	Maternal knowledge towards VAS		

	Items	Scoring	
304	Have you ever heard vitamin-A supplementation	0. No 1. Yes	
305	If yes where did you heard?	0.not mention 1.health workers 2.Media 3.Books,magazine	
306	What is the importance of vitamin A supplementation	0. If didn't know 1. If the mother answer to prevent VAD	
307	At what age of the child the first dose should be given	0. If didn't know 1. It the mother reply between 6-11 months	
308	At what interval VAS should be given	0. If didn't know 1. If the mother reply at 4-6 month interval	
309	Until what age of the child should VAS given	0. Didn't know 1. If the mother reply at until 5 year	

ÎÏÏ	**Questions to assess VAS status of children**		
308	Did your child receive VAS like this? Show VA capsule	0. Yes 1. No	
309	If the reply for Q308 is No", why your child did not take VAS?	0. Not aware whether VAS is given or not 1. Fear of toxicity or cause the child to be sick 2. Forgetfulness 3. Need of other incentives 4. Paternal/parents disapproval 5. Other (Specify)_____	
310	Where your child took this last dose?	0. On routine visit to health facility 1. On campaign 2. Door to door 3. Sick child visit at health facility	
311	How many food types take your child the last 24 hours?	1. less than four food 2. ≥ 4 food group	
Part IV: Child health care related characteristics			
400	Did your child get history of Height, Wight and MUAC measurement?	0.Yes 1. No	

401	Did your child history of diarrhea the last two weeks?	0. Yes 1. No	
402	Did your child history illness, cough, and difficulty of breathing?	0.Yes 1.No	
403	Did your child history of measles the last two weeks?	0. Yes 1. No	
Part V: Anthropometric measurements			
500	Mothers MUAC (in cm)		
501	Child MUAC (in Cm)		

10.3.የስምምነት መግለጫፎርም - አማርኛ

ወልቂጤ ዩኒቨርሲቲ

ህክምናና ጤና ሳይንስ ኮሌጅ

የስርዓተ-ምግብ ትምህርት ክፍል

የድህረ-ምረቃ ፕሮግራም

እንደምንዋላቹ! ስሜ……እባላለው።በአሁኑ ሰኣት የቫይታሚን ሁኔታ በተመለከተ እድሚአቸው ከ6 ወር እስከ 59 ወር ድረስ ባላቸው እናቶች እና ህፃናት ላይ ጥናት እያካሄድኩ ነው።እርስዎ ከሌሎች የጥናቱ ተሳታፊዎች ውስጥ በእድል ነው የተመረጡት፤ስለዚህ ከጥናቱ ጋር የተያያዙ ጥያቄዎችን እጠይቀዎታልሁ። በጥናቱ ለመሳተፍ የርእስዎ ፈቃደኝነት ነው፤ካለተመቸዎ መጠይቁን ማቋረጥ ይችላሉ።በዚህ ጥናት መሳተፍ ምንም አይነት ገንዘብ አያስገኝም።ነገር ግን በዚህ ጥናት መሳተፍ ስለ ጡት ብቻ ማጥባት እውቀት ያገኛሉ ወይም ያለዎትን እውቀት ያዳብራሉ።በዚህ ጥናት መርፌ መውጋት የለም፣ደምም ሆነ ማንኛውም የሰውት ፈሳሽ አይወሰድም።ከርስዎ የሚወሰደው ማንኛውም መረጃ ምስጢራዊ እና ለሌሎች ማህበረሰብም ማጠቃለያ ሪፖርትነው።ሪፖርት ሲደረግ ስም አይፃፍም፤እንዲሁም እርስዎ መረጃውን እንደሰጡ አይገለፅም።ጥያቄ ካለዎት ያለምንም ፍርሃት በግልፀኝነት መጠየቅ ይችላሉ።

ለተጨማሪ መረጃ በዚህ ማግኘት ይችላሉ።

ስ.ቁ 0912340471 ኢሜልyibenaberihungmail.com

ብቀጥልምንይመስለዎታል?

1. ይቻላል 2. አይቻልም

የተጠያቂ ፊርማ…… ቀን……

ቃለ-መጠይቅ አድራጊ ስም……ፊርማ……..

የተቆጣጣሪ ስም……..……..ፊርማ……

መጠይቁ የተረጋገጠበት ቀን……..…-

II: መጠይቅ - አማርኛ ቅጽ

	ክፍል አንድ፡- ሥነ- ህዝብ፤ማህበራዊ እና ኢኮኖሚያዊ ጉዳዮችን በተመለከተ የተዘጋጁ ጥያቄዎ		
001	የህፃኑ እድሜ(በወር)	አማራጭ መልሶች	ይለፉ
002	የህፃኑ ጾታ	0.ወንድ 1. ሴት	
003	የእናትየዋ እድሜ(በአመት)		
005	ብሔር	0. ስልጤ 1. ጉራጌ 2. ኦሮሞ 3. አማራ 4. ሀድያ	
006	እምነት	0. ኦርቶዶክስ 1. ሙስሊም 2. ፕሮቴስታንት 3. ሌላ	
007	የአሳዳጊ (እናት) የትምህርት ደረጃ	0. ማንበብና መፃፍ የማይችል 1. 1ኛ እና 2ኛ ደረጃ 2. 3ኛ ደረጃ 3. የሐይማኖት አስተማሪ	

008	የእናትየዋ የትምህርት ደረጃ	0. ተማሪ 1. የቤት እመቤት 2. የመንግስት ሰራተኛ 3. የግል ሰራተኛ 4. ነጋዴ 5. የቀን ሰራተኛ 6. ሌላ	
009	የጋብቻ ሁኔታዎ?	0. ያላገባ 1. ያገባ 2. የተፋታ 3. የሞተባት 4. የተለያየ	ያላገባች ከሆነ ወደ ጥያቄ 14 ይለፍ
010	የባለቤትዎ የትምህርት ደረጃ	0. ማንበብና መፃፍ የማይችል 1. 1ኛ እና 2ኛ ደረጃ 2. 3ኛ ደረጃ 3. የሐይማኖት አስተማሪ	
011	የባለቤትዎ የስራ ሁኔታ	0. ተማሪ 1. የመንግስት ሰራተኛ 2. የግል ሰራተኛ 3. ነጋዴ 4. የቀን ሰራተኛ 5. ገበረ	

012	የቤተሰብ ወራሀዊ ገቢ	----------	
013	የቤተሰብ ዉሳኔ ማነዉ የሚወስነዉ?	1. ባል 2. ሚስት 3. ሁለቱም በጋራ 4. ሌላ	
014	የቤተሰብ አባላት ብዛት	----------	
015	ከ5 አመት በታች ስንት ልጆች አሉት?	----------	
016	በአቅራቢያ ያሉ ጤና ተቋማት ስንት ሰዓት ይፈጃል(በደቂቃ)	----------	
017	ቤት ዉስጥ እንስሳቶች አ ሉ	0.አዉ 1. የለም	
018	በማሳ ዉስጥ ምን አላችሁ?	0.አዉ 631. የለም	
ክፍል ሁለት፡- የእናቶች ጤና አገልግሎትን በተመለከተ የተዘጋጁ ጥያቄዎች			
200	ስንት እርግዝና ነበረሽ (በአሁኑን ጨምሮ)	----------	
201	ስንቶቹ በህይወት አሉ	----------	
202	ሰታገቢ ስንት አመትሽ ነበር	----------	

203	የመጀመሪያዉ እርግዝናሽ ጊዜ ስንት አመትሽ ነበር	----------	
204	የእርግዝና ክትትል ነበረሽ?	0.አዉ 1.አይደለም	የለም ከሆነ ወደ ጥያቄ 206 ይለፍ
205	አወ ከሆነ ስንት ጊዜ ተከታተልሽ?	----------	
206	ይህንን ልጅ የት ነዉ የወለድሽዉ?	1. ጤና ተቋም 2. ቤት	
207	የድህረ ወሊድ ክትትል ለዚህ ልጅ ነበረሽ ?	0. አዉ 1. የለም	የለም ከሆነ ወደ ጥያቄ 209ይለፍ
208	የድህረ ወሊድ ክትትል የት ነዉ ያደረግሽዉ	0. ቤት 1. ተቋም	
209	በስንት አመት ልዩነት ወለድሽ(ወር)	----------	
210	ከቤት ጤና ተቋም ለመድረስ ስንት ኪ.ሜ ይሆናል	----------	
211	ስለአመጋገብ የምክር አገልግሎት አግኝተሽል?	0. አዉ 1. የለም	
212	ከጓደኛ /ቤተሰብ ስለ ጎይተምን ኤ የምክር አገልግሎት አግኝተሽል?	0. አዉ 1. የለም	
213	የስራ ጤና አለብኝ ብለሽ ታሰቢያለሽ?	2. አዉ 2. የለም	

	ክፍልሶስት: የእናቶች እዉቀት መለኪያ		
300	ቫይታሜን ኤ ያላቸዉ ምግቦች ሲባል ስምተሸ ታቅያለሽ?	0. አዉ 1. አይደለም	
301	ሁለት የምግብ አይነቶች ጥቀሽልኝ?	0. አላቅም 1. ካሮት 2. አትክልት እንቁላል	
302	የቫይታሚን ኤ እጥረት የሚያመጣዉ ተፅኖ ግለፁልኝ	0. አላቅም 1. አይነ ሰዉርነት 2. የእድገት ጠቀሜታ በቆዳ ድርቀት	
303	ቫይታሜን ኤ ክትባት ሲባል ሰምተሸ ታቅያለሽ	0. አዉ 1. አላቅም	
304	የቫይታሚን ኤ ክትባት ጥቅም ምንድ ነዉ	0. አላቅም 1. የቫይታሚን ኤ እጥረት ለመከላከል	
305	ለመጀመሪያ ጊዜ ስንት እድሜ ነዉ ለህፃን የሚሰጠዉ	0. አላቅም 1. ከ6-11 ወር	

306	በስንት ጊዜ ልዩነት ቫይታሜን ኤ የሚሰጠዉ?	0. አላቅም 1. ከ4-6 ወር መካከል	

307	እስከ አመት ነዉ ቫጥታሚን ኤ የሚሰጠዉ	0. አላቅም 1. እስከ5 አመት	
308	ልጅሽ ቫጥታሚን ኤ ወስዱየል? በማሳየታ ክትባቱን	0. አዉ 1. የለም	
309	የለም ከሆነ ለምንድ ነዉ ያለወሰደዉ?	0. እዉቀት የለኝም 1. ይመርዛል ብየ 2. .እርሳቸዉ 3. ሌላ ለመፈለግ 4. ቤተሰብ አይፈልግም	
310	ልጁ የመጨረሻ ክትባት የት ወሰዶ?	1.ጤና ጣቢያ 1.ካምፓየን 2 ቤት ለበት 3.ታሞ ጤና ጣቢያ ሒጃ	

311	ከትናንት ጨምሮ እስካሁን ስንት አይነት ምግብ ተመግበሻል	0. ከ1-3 ምግብ 1. ከ4 በላይ	
ክፍልሶስት የህፃናት ጤና በተመለከተ			
400	የልጀሽ ክብደት ቁመት እና የግንድ መለከታ ተደርጎለት ያቃል?	0. አዉ 1. የለም	
401	ባለፉት 2 ሳምንት ልጁ በትንፋሽ ማተር የመተንፈስ ችግር ነበረዉ?	0. አዉ 1. የለም	
Part v	Anthropometric measurements		

500	የእናትየዋ (MUAC) በሴ.ማ		
501	የልጁ (MUAC) በሴ.ሜ		