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Determinants of Growth Monitoring and Promotion Service Utilization Among Children Less Than Two Years in Legambo District, South Wollo Zone, Northern Ethiopia, 2020

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DETERMINANTS OF GROWTH MONITORING AND PROMOTION SERVICE UTILIZATION AMONG CHILDREN LESS THAN TWO YEARS IN LEGAMBO DISTRICT, SOUTH WOLLO ZONE, NORTHERN ETHIOPIA, 2020.

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TITLE	DETERMINANTS OF GROWTH MONITORING AND PROMOTION SERVICE UTILIZATION AMONG CHILDREN LESS THAN TWO YEARS IN LEGAMBO DISTRICT, SOUTH WOLLO ZONE, NORTHERN ETHIOPIA.

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Approval of Thesis for Defense

I hereby certify that I have supervised, read, and evaluated this thesis titled "determinants of growth monitoring and promotion service utilization among children less than two years in Legambo district, South Wollo Zone, Northern Ethiopia" by Jemal Aleyu prepared under my guidance. I recommend the thesis be submitted for oral defense.

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Declaration

This is to certify that the thesis entitled “determinants of growth monitoring and promotion service utilization among children less than two years in Legambo district, South Wollo Zone, Northern Ethiopia”, submitted to department of nutrition and dietetics, school of public health, college of medicine and health sciences, Bahir Dar university in partial fulfillment of the requirements for degree of master’s in public health nutrition is a record of original work carried out by me and has never been submitted to this or any other institution to get any other degree or certificates. The assistance and help I received during the course of this investigation have been duly acknowledged.

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Approval of thesis for defense result

As members of the board of examiners**,** we examined **t**his thesis entitled "determinants of growth monitoring and promotion service utilization among children less than two years in Legambo district" by Jemal Aleyu. We hereby certify that the thesis is accepted for fulfilling the requirements for the award of the degree of "master's in public health nutrition".

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ABSTRACT

Back ground: Malnutrition is one of the world's public health problem and more than half of all infant and child deaths were due to malnutrition directly or indirectly. One of the strategies to promote child health is growth monitoring and promotion services. But, there is limited information on determinants of Growth Monitoring and Promotion service utilization.

Objective: To identify determinants of growth monitoring and promotion service utilization among children 0-23 months of age in Legambo district, South Wollo zone, Northern Ethiopia, 2020.

Methods: community based un-matched case control study was conducted from March 01-25, 2020 among 363(91 cases and 272 controls) study participants. Samples were selected by using Multi-stage sampling technique. Data were collected by using face to face interviewer administered questionnaire and entered in to Epi data and exported to SPSS version 23 for analysis. Bivariate and multivariable regressions were performed and adjusted odds ratio with its 95% confidence intervals was estimated to identify determinants of growth monitoring and promotion service utilization.

Results: Good maternal knowledge (AOR) = 2.42; 95% CI: 1.23, 4.75), mother with favorable attitude (AOR = 2.45, 95% CI; 1.20–4.98), getting nutritional counseling (AOR = 2.34, 95% CI; 1.19–4.56), four and above ANC visits (AOR = 2.46, (95% CI; 1.18–5.16) mothers who have children age 12-17 months(AOR = 3.45, 95% CI; 1.26–9.41) and 18-23 months age (AOR = 4.38, 95% CI; 1.53–12.49), and time to reach the nearest health facility within one hour (AOR = 4.53, (95% CI; 1.99–10.28) were determinants of growth monitoring and promotion service utilization.

Conclusion and recommendation: Index child age, good knowledge, favorable attitude, four and above ANC visits, getting nutritional counseling and time to reach the nearest health facility within one hour were determinants of GMP service utilization. Nutritional interventions should give emphasis on nutritional counseling, ANC follow up and accessibility of growth monitoring and promotion.

Key Words: Growth monitoring and promotion, less than two years child, Legambo District, Northern Ethiopia.

ABBREVIATIONS/ACRONYMS

ANC	Ante Natal Care
AOR	Adjusted Odd Ratio
CSA	Central Statistics Agency
CI	Confidence Interval
DSS	Demographic Surveillance System
EDHS	Ethiopian Demographic Health Survey
ETB	Ethiopian Birr
GC	Growth Chart
GM	Growth Monitoring
GMP	Growth Monitoring and Promotion
HEW	Health Extension Worker
MUAC	Mid Upper Arm Circumference
PNC	Post Natal Care
UNICEF	United Nations International Children Emergency Fund
WHO	World Health Organization

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1. INTRODUCTION

1.1 Background

Growth monitoring (GM) is the process of following the growth rate of a child in comparison to a standard by periodic anthropometric measurements for assessing the growth status of children to identify flattering at early stage and often also to determine whether to deliver additional interventions. Another term Growth Monitoring and Promotion (GMP) is a preventive activity that includes GM that is measuring and interpreting growth, to facilitate communication and interaction with caregiver and to generate adequate action to promote child growth. [1] .

The World Health Organization (WHO) defines GMP as nutrition interventions that measure chart weight of children and use this information on physical growth to counsel parents in order to motivate actions that improve growth [2].

Since early 1980s growth monitoring was one of the components of nutrition programs. In areas where growth monitoring and promotion was implemented as part of a package of community nutrition programs, good health outcomes on child growth have been reported. the main aims of GM are to provide a diagnostic tool for health and nutrition surveillance of individual children and to investigate effective action in response to growth flattering, teach mothers, families and health workers how diet and illness can affect child growth and there by stimulate individual initiative and improved practices and provide regular contact with primary health care services and so facilitate their utilization [3, 4] .

Measuring growth has multiple beneficial purposes. It can inform caregivers of their children's growth and detect growth faltering, which can lead to timely decision-making to address the problem. Furthermore, the visual representation of child growth can help mothers/caregivers know their child's development and can act as an entry point for program staff to discuss and promote changes in behavior to improve child growth. [5].

Growth monitoring is expected to be done for all under two children periodically to check their nutritional status and provide age appropriate service. The measurement begins at birth and should be done monthly, recorded on a growth chart, and interpreted correctly. Additionally, the health workers give information through counseling, facilitating communication, and interacting with mothers in a way that helps to generate adequate maternal action to promote child growth [6].

The Ethiopian government has been implementing GMP services at community level through health extension programs to improve child nutritional status; it is implemented by using growth charts, which are seen as monitoring and educational tools that help both health professionals and mothers to visualize child growth and to take further action [7].

1.2 Statement of the problem

Malnutrition is one of the world's public health problem and the single biggest contributor to child mortality. More than half of all infant and child deaths were due to malnutrition directly or indirectly [8]. Worldwide, 151 million under-five years of age children were stunted, 51 million were wasted, and 52 million were overweight [9].In African, about 39 % children were stunted, 24.9% underweight and 10.3% wasted [10].According to the 2019 Ethiopian mini Demographic and Health Survey (EDHS) report, the prevalence of stunting was 37%, underweight 21%, and wasting 7%[11].Ethiopia could reduce losses by ETB 148 billion by 2025 if underweight rates were reduced to 5% and stunting to 10% in children less than five years. To prevent this, the National Nutritional Program of Ethiopia is considering GM as one of the strategies for improving the nutritional status of the children [12]. Promoting and improving child health during the window of opportunity period starting from conception to a child's second birthday, is crucial for survival [13].

Even though GMP would appear to be a prerequisite for good child health, a recent systematic review questions the effectiveness and relevance of GMP programmes and several studies showed that there is a big difference between the purpose and the practice of GMP. The high prevalence of malnutrition in many developing countries supports this fact [14]. participation in growth monitoring remains relatively low in the country, the percentage of under-two children participating in monthly growth monitoring and promotion sessions increased from a baseline of zero (under project interventions) to 42 percent in 2014 progress in growth monitoring, with a national average performance of 44 percent in 2018[15]. research showed that the coverage of growth monitoring is Southern Ethiopia, Mareka district was 16.9% [16], and Butajira was 11%[17].

studies showed that factors affecting GMP service utilization includes institutional place of delivery, wealth index, family size, regular growth monitoring and promotion, mother educational status, mother occupation, availability of weight measurement service, knowledge,

professions, educational status, work experience, attitude of Health professionals and the availability of logistics [16-18].

Low coverage of growth monitoring and promotion contributes an early warning of a health or nutrition problem and the child further develop under nutrition and under nutrition in the early stages of life can increase risk infections, morbidity, and mortality together with decreased mental and cognitive development.[19]

Even though Ethiopian government has been implementing GMP services at community level through health extension programs by using growth charts but the available data indicated that malnutrition is still high and Participation in growth monitoring remains relatively low in Ethiopia. This high prevalence malnutrition and low coverage of GMP service utilization might be due to a lack of evidence on determinants of GMP service utilization and the lack of evidence-based interventions.

Improvement on GMP program and service utilization by mothers can only be successfully undertaken if the determinants of low coverage of GMP service utilization were identified, so that appropriate actions will be taken but there is limited information on determinants of Growth Monitoring and Promotion service utilization on previous studies in Ethiopia. Most of the previous studies focused on the coverage of GMP service utilization and association of maternal attitude towards growth monitoring and promotion service were not studied under quantitative study. Therefore the aim of this study was to identify determinants of GMP utilization among children less than two years in Legambo District, South Wollo zone, Northern Ethiopia.

1.3 Significance of the study

This study intends to identify the determinants of Growth Monitoring and Promotion service utilization among mothers with under two years' old children. The study will generate information that may be useful to the Ministry of Health and other organizations working in the child survival programs to design interventions to improve the activities of GMP.

Appropriate recommendations will be made based on the result in which supervisors from federal ministry of health and non-governmental organization working on GMP, program managers (public health and nutrition), health care providers including the health extension workers can use for improving ways of service provision and quality of the service. It is planned that the study findings will be communicated to the community and may influence them to taking their children for GMP services. The study has also contributed to the body of knowledge on GMP and helps base line information for the researcher.

2. LITERATURE REVIEW

Literature reviewed utilization of GMP globally, regionally in Africa and also in Ethiopia scrutinizing demographic, economic, mothers or care givers characteristics, and health care factors that are likely to influence utilization of the service.

2.1 Determinants of GMP service utilization

2.1.1 Socio –demographic and economic Characteristics

A study done in Kenya showed that Mothers of higher socio-economic status were more likely to continue with GM [20]. and other study stated that high and medium wealth index were factors associated with GMP service utilization [16].

Study showed college levels of education were likely to take their children for continued GM than those who had primary level of education and other study also revealed that education was associated with utilization of GMP services [16, 20].

Study in Southern Ethiopia, Mareka district revealed that Child in the age group of 12–23 were factors associated with GMP service utilization [16]. Similarly, study in Butajira Showed age group of 12–23 months found that more likely to utilize the GMP services as compared to infants. Regarding in occupation of the mother, framers were more likely to utilize GMP than house wives. and family sizes were inversely related to utilization of GMP services [17].

2.1.2 Attitudes

Studies on Areka town, southern Ethiopia stated that most of respondents participated in the study said GM is important and most of them think GM can contribute to the growth of their child. The perception is that, GM is for screening children for food aid was one of the attitudes observed. In the study mothers expressed their feelings most mothers were happy to bring their child to the GM visits [21].

Qualitative study conducted in Ethiopia showed that all mothers were aware of immunization services, something that they also mentioned first when they were talking about public health services for children. However, mothers rarely mentioned GMP as a separate weight-monitoring programme for their children; they often mentioned it as a part of other child health or maternal health services or in combination. Some mothers, GMP was only linked to measuring mid-upper arm-circumference (MUAC) of the child and receiving information about the measurement outcome [22].

Study showed that the main reasons given by study participants for missing of the GMP sessions were absence of supplementary feeding program, child was not sick to attend sessions, health extension workers did not tell the exact time of GMP session to mothers/caregivers, workloads of mothers/caregivers and child ages not reached to be weighed were also mentioned as reasons [16].

Qualitative study conducted Loko Abaya District; southern Ethiopia showed that Mothers mentioned that they understood GMP as being used only for unhealthy (especially wasted) children. If their children are healthy and well-fed, they did not want to attend the GMP program. In addition, if the mother perceived that she knew appropriate feeding practice, there was no need to attend the program and also Cultural beliefs such as "evil eye" for well-nourished children and children with "red color" skin and feeling of shame by mothers if the child is wasted were indicated for lower attendance by the mothers [23].

2.1.3 Maternal knowledge

A study done in Indonesia showed that Maternal exposure to nutrition and health information, along with growth monitoring programs in rural areas, contribute to the prevalence of underweight and stunting among rural children who are under five years old [24].

Recent analysis of trends reveals significant reductions in malnutrition assessed by underweight or stunted linear growth except in sub-Saharan Africa and Central America. Increase education of women contributed for 43% of the reduction in child malnutrition between 1970 and 1995, while improvements in food availability contributed for about 26 % [25].

A study done in rural community of Ghana stated that there was no discernible association between maternal childcare knowledge scale and child's nutritional indicators among children below six months. However, among children aged 6-36 months, there was significant association between nutritional status and maternal childcare knowledge [26].

A study showed that maternal knowledge was positively associated with continued growth monitoring. The study findings revealed that the mothers who had knowledge on the importance of taking children for GM, importance of taking children for GM after immunization and information displayed on the child health card were more likely to continue with continued GM [20].

Other intervention suggested that intervention (nutrition education) could help mothers to read and understand growth chart and this motivates mother to improve their daily child care activity [27].

Understanding of child growth status by caregivers is a major issue in community-based GM Although literacy is a strong factor in the ability to understand growth charts, some programs have demonstrated that through training and counseling activities, mothers do come to understand growth charts to a certain degree, and success is possible in transferring the concept of growth faltering to caregivers [28].

A study done in Lawra District Ghana revealed that educational status of Caregivers was associated with knowledge in GMP and child relation with care givers were significantly associated with practices in GMP [29].

A study done in Southern Ethiopia, Mareka district revealed that utilization of GMP services had no significant association with workloads of mother, mothers'/ caregivers' knowledge about growth monitoring and promotion chart [16].Contrary studies in Butajira stated mother who had adequate knowledge were more likely utilized GMP services those mothers who had inadequate knowledge [17].

A study on Areka town showed that Formal education, counseling and education from health professionals and a formal occupation had a positive impact on knowledge and attitude towards growth monitoring [21].

The study done in Nigeria on health professionals showed that that high level of awareness and positive attitude towards GMP and growth chart (GC) of majority of respondents were poor with their level of knowledge of the GMP procedures and the interpretation of the GC. [30]

The study done in Tigray region stated that work burden , lack of training on how to counsel, shortage of time to the health extension workers is one of the factor affecting effective utilization of GMP [31].

A study done in Southern Ethiopia, Mareka district showed that poor knowledge of mothers/caregivers on GMP chart suggesting that the health professionals' focus weighing and identifying children's nutritional status instead of discussing with mothers and communities [16].

2.1.4 Health care factors

A few studies have explored the issues behind lack of effectiveness of GMP programs. Qualitative study conducted among an international panel of district medical officers stated that the low effectiveness of GMP was mainly due to lack of participation of care-givers and restrictive interpretation of the concept of growth monitoring by District Medical Officers [32].

In growth-monitoring clinics in Lusaka, Zambia, the mean contact time was 30 seconds while in three child health programme in rural Zaire, 64% of mothers attending growth-monitoring sessions received less than 2 minutes consultation time, and 43% received no advice at all [4].

A study conducted in Ghana stated that distance between care givers home and the child welfare clinic is a determining factor in child welfare clinic (CWC) attendance [33].

Study findings in Kenya showed availability of health facilities (distance from respondent's home to the facility 5 km; return journey) were significantly associated with continued GM). Equally the respondents who received nutrition advice and vitamin A supplementation alongside GM services were more likely to participate in continued [20].

A study on Mareka District, Southern Ethiopia Showed Women who delivered in health institution was more likely to utilize the GMP services as compared to home delivery. And Regular attendant mothers/caregivers/ had more likely to utilize GMP services as compared to irregular one but family health card utilization, antenatal care utilization, counseling and postnatal care utilization were not associated with GMP service utilization The main reasons given by study participants for missing of the GMP sessions were absence of supplementary feeding program, child was not sick to attend sessions. Health extension workers did not tell the exact time of GMP session to mothers/caregivers, workloads of mothers/caregivers and child ages not reached to be weighed [16].

The study showed regarding health service characteristic availability of weight measurement service for child in the health facility was significantly associated with utilization of GMP. Mothers who mentioned the availability of weight measurement service in the health facility more likely utilize GMP than those mothers' who mentioned unavailability of weight measurement service in health facility. mothers gave birth in health facility were more likely to be utilize GMP services than mother gave birth at home where as those mothers traveled less than an hour get to the nearest health facility from their home were more likely to utilize GMP services those travel more than one hour to get to the nearest health facility [17].

3. CONCEPTUAL FRAME WORK

In order to identify the determinants of growth monitoring and promotion service utilization in the context of this study area, by adapt different literature this conceptual framework will be developed and this study focuses on socio demographic and economic factors, maternal characteristics and Health care factors. [16], [17], [20]. [21] , [29]. [31].

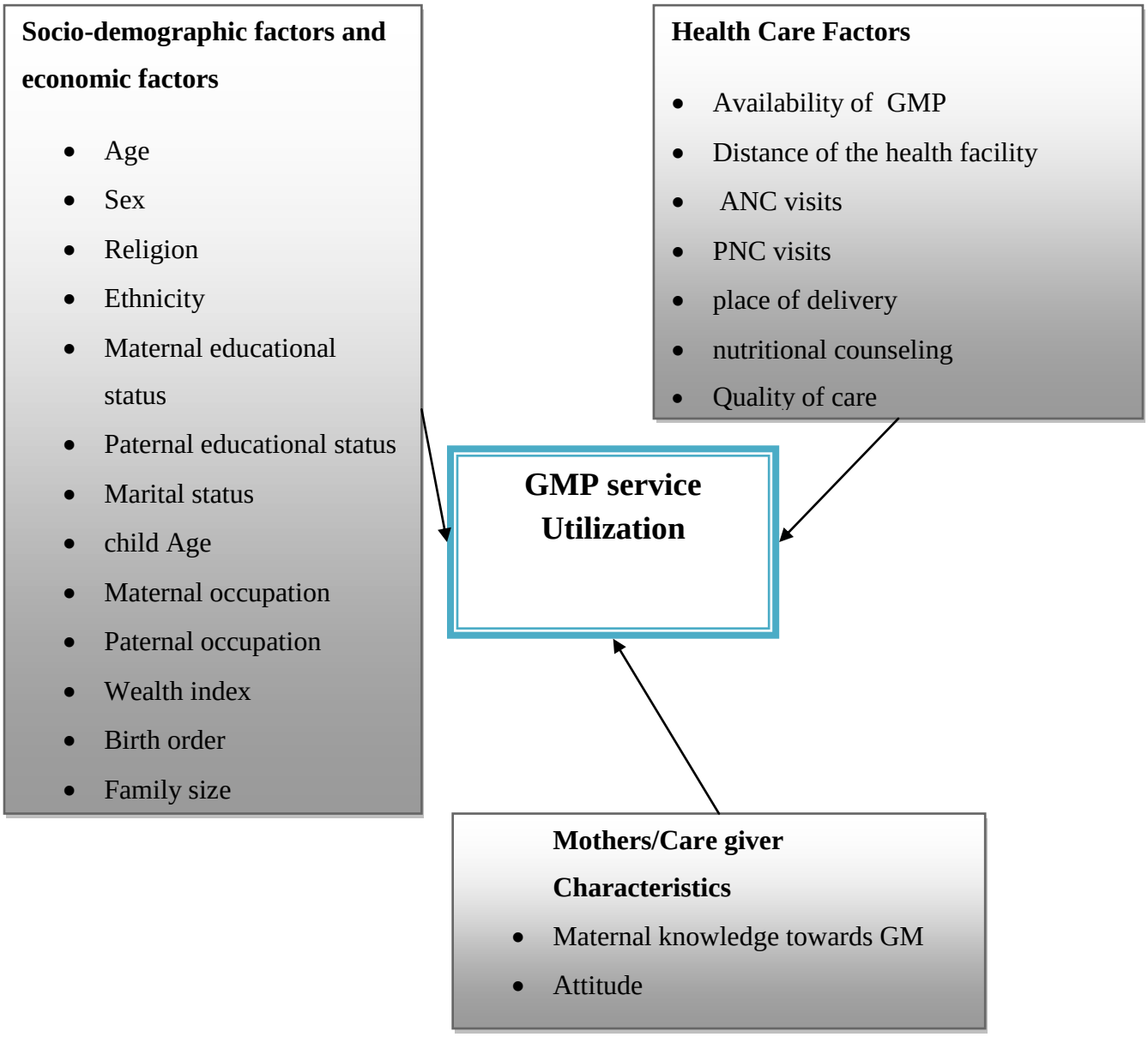

Figure 1-Conceptual frame work to identify determinants of GMP service utilization in Legambo district, South Wollo zone, Northern Ethiopia, 2020.

4. OBJECTIVE

- To identify the determinants of GMP service utilization among children 0-23 months of age in Legambo district, South Wollo zone, Northern Ethiopia, 2020.

5. METHODS AND MATERIALS

5.1 Study area and period

This study was conducted from March 01- 25, 2020 in Legambo District, South Wollo zone, Northern Ethiopia. Legambo Woreda is found in South Wollo zone, Amhara region. Legambo woreda is situated on the beautiful highlands of south Wollo at an altitude of about 3000 meters above sea level and it is bordered on the south by Legihida and Kelala, on the west by Debre sina, on the north by Tenta, on northeast by Dessie Zuria, and the southeast by Wereilu and is located 100 kilometers to Dessie (the capital city of South Wollo zone), 360 kilometers from Bahirdar (the Capital city of Amhara region) and 501 kilometers far from Addis Ababa (the Capital city of Ethiopia).

It organizes by 33 health Posts, 9 health centers, 1 hospital, 78 Health extension workers. The total population of the district was 281,974 with 147,160 males and 134,748 females while the total number of children with age of 0 month to 23 months was 10,172 in the year 2017 which was projected from the Woreda Administration office.

5.2 Study design

A Community based un-matched Case - Control study design was employed.

5.3 Population

5.3.1 Source population

All mother-child pairs with 0–23 months residing in Legambo district were the source population.

5.3.2 Study population

Mother-child pairs with 0–23 months from randomly selected kebele of Legambo district were the study population.

5.4 Eligibility criteria

5.4.1 Inclusion criteria

Only mothers with children 0 to 23 months old were recruited into the study. The mothers/care givers were also residents of Legambo district for at least 6 months before the study.

5.5 Sample size and sampling procedure

5.5.1 Sample size determination

The sample size were computed by Kelsey formula in Epi Info version7 StatCalc for un-matched case control study by the following assumption:-5% type I error, 80% power and 1:3 ratio of

cases to controls was used and proportion of rich wealth status who utilized GMP service was 19.5% among controls exposed and 5% among cases exposed in Southern Ethiopia. table-1 below **[16].** The stat Calc uses the following formula to calculate the sample size.

$$n_1 = \frac{\left[z_{\alpha/2}\sqrt{(r+1)\bar{p}\bar{q}} + z_{1-\beta}\sqrt{rp_1q_1 + p_2q_2} \right]^2}{r(p_1 - p_2)^2}$$

Where

n1= number of cases

n2= number of controls

α = Level of significance to be 5 % (α=0.05),

Zα/2 = z-score for two-tailed test based on α level $Z_{\alpha/2} = 1.96$

Z1-β= z-score for one-tailed test based on β level=0.84 value of the standard normal distribution corresponding to the desired level of power (0.84 for a power of 80%)

r = Ratio of cases to controls

p_1 = proportion of exposure among cases

p_2 = proportion of exposure among controls

$q_1 = 1 - p_1$

$q_2 = 1 - p_2$

n_2=n1 x r

Table 1- Sample size for Determinant s of GMP service utilization from previous studies.

SN	Determinants of GMP service utilization	% controls exposed	Odds Ratio	% cases exposed	sample size		Ratio of cases to controls	Total sample size
					Cases	Controls		
1.	Wealth index	5	4.60	19.5	55	165	1:3	220
2.	Place of delivery	10.5	4.25	33.3	37	109	1:3	146
3.	GMP frequency	5.4	6.16	26	34	102	1:3	136

By multiplying design effect 1.5 and by adding 10 % non-response the final sample size for the study was 363(91 cases and 272 controls).

5.5.2 Sampling procedures

Multi-stage sampling technique was used to select study participants. After the list of mothers with children 0-23 months of age and their house numbers was obtained from the health extension workers of each Kebele, a house to house census were made to identify Cases and controls in 7 randomly selected kebele from the total 34 kebeles.

Totally 1921 children aged 0-23 months were identified and registered sequentially and got identification number, 292 were enrolled as cases and 1629 as controls.

Study subjects were taken from randomly selected each kebele proportional to the number of sample size allocated for the study. A total of 363 study participants were selected. From this 91 were cases and 272 were controls. Finally, mother-child pairs from each selected kebele were enrolled using simple random sampling method and were followed. Moreover, kebeles were also selected using the following Formula.

1. ni = (n*Ni)/N where ni = sample size of each selected kebeles
2. n = total sample size
3. Ni = total number of children in each selected kebeles
4. N = total number of children in all selected kebeles

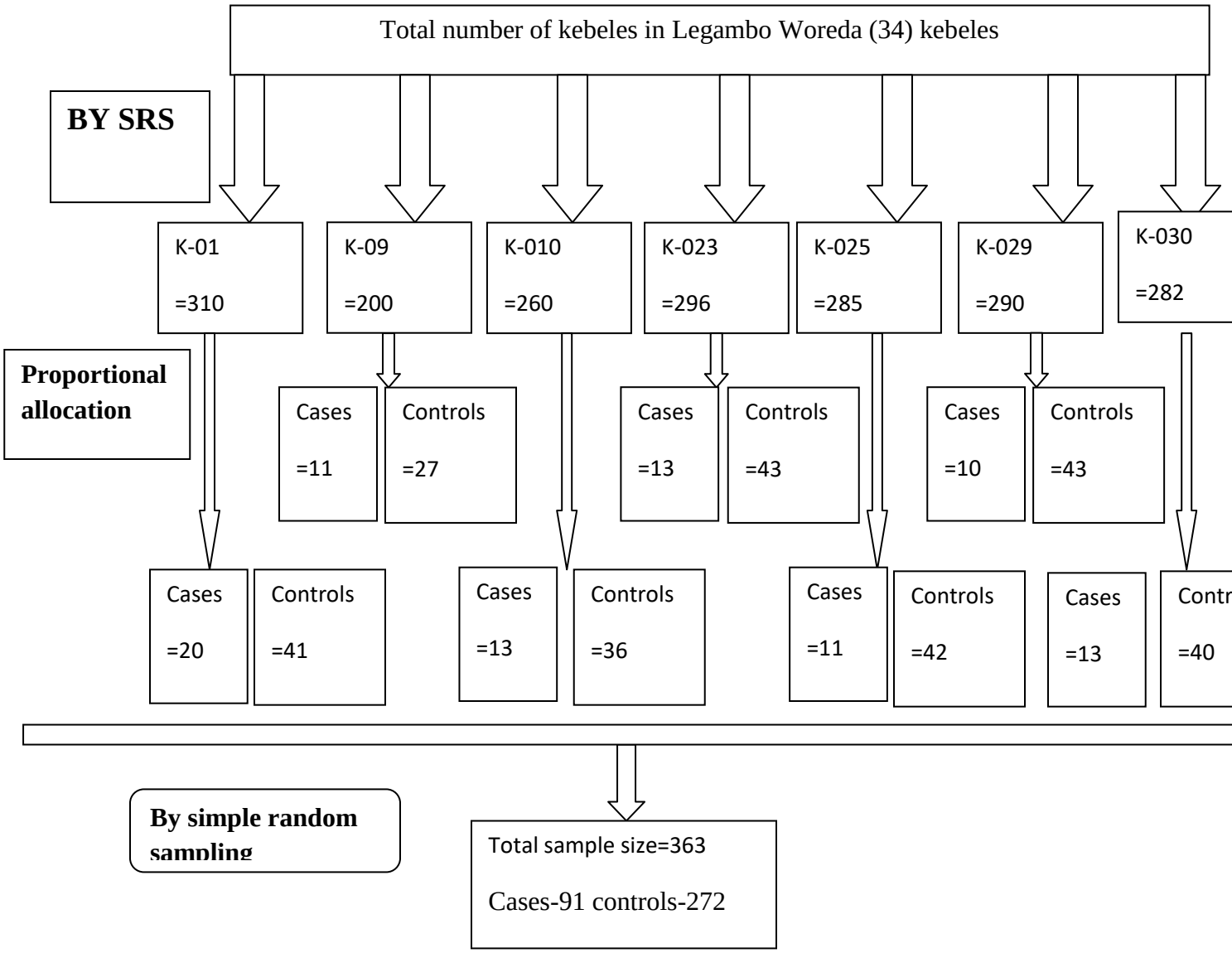

Figure 2-Schematic presentation of sampling procedure to identify determinants of GMP service utilization in Legambo district, South Wollo zone, Northern Ethiopia, 2020.

5.6 Variables

5.6.1 Dependent variables

- Growth monitoring and promotion service utilization (yes/No).

5.6.2 Independent variables

- Socio demographic and economic factors such as Age, Sex, Religion, Ethnicity, Maternal educational status, Paternal educational status, occupation of the parents, Marital status, children Age, Birth order, Family size and wealth index.
- Maternal Characteristics includes maternal knowledge towards GM and attitude of mothers.

- Health care factors included Availability of GMP, Distance of the health facility, ANC visit, and PNC visits, place of delivery, nutritional counseling and quality of care.

5.7 Operational definition and definition of terms

- **Case:** Participation of a child for GMP services at least once for 0 month, at least two times for 1–3 months, at least five times for 4–11 months and at least four times per year for 12–23 months.[34]
- **Control**: a child who had not participated GMP services at least once for 0 month, at least two times for 1–3 months, at least five times for 4–11 months and at least four times per year for 12–23 months [34]
- **Good knowledge:** From total knowledge score 10 mothers who scored above 7 from the total score were considered as having good knowledge. [21] .
- **Poor knowledge:** other scored below 7 were considered as having poor knowledge. [21] .
- **Unfavorable attitude:** is defined as a score of <75 %.
- **Favorable attitude:** is defined as a score of ≥75 %. Attitude questionnaires score range from 12 to 60 score [21].
- **Availability of Health Services:** referred to the physical presence of the delivery of the services (GM) which encompasses health infrastructures, personnel and service utilization (GM). [20].
- **Growth monitoring site:** is a place health extension workers give and child mother get the growth monitoring and promotion session.
- **Growth chart (GC):** is a diagram used to follow child growth (weight) over time.
- **Distance to health facility:** determined by the distance (time taken to reach the health facility from mothers' home to the nearest health facility). Distance to health facility was classified as less than one hour and more than one hour to reach the nearest health facility [17].
- **Service quality:** was assessed by using 3 questions. Each questions has two response (yes or no) and answered yes for all 3 questions categorized as good quality and answered no for at least one question categorized as poor quality [20].

5.8 Data collection tools and procedures

Data were collected by using face-to-face interviewer administered questionnaire. Questionnaires were adapted from previous similar literature**.** [16], [17], [20]. [21] , [29]. [31]. WHO 2006 GMP

chart was used**.** The questionnaire were designed to enable to acquire information concerning Socio demographic, economic, Health care factors and maternal/caregiver's characteristics**.** Data were collected by two trained clinical nurses and three trained diploma midwifes and supervised by three trained Health officers. Data was collected after two days of training about the objective, definitions of terms that are in the questionnaire and on issues of confidentiality and privacy by long term experienced data collectors and supervisors.

ANC visit was assessed based on the basis of the minimum recommended visits yes; for having four or more visits and no; for less than four visits. And, PNC was also assessed by on the basis of the minimum recommended visits yes; for having at least one visit in the post partum period and no; for not visits at all.

Wealth index was computed by owner ship of different asset, house characteristic and type of latrine and water source. The resulting wealth index was categorized into three as low, medium and high.

Knowledge of mothers towards GMP service utilization was assessed using 10 knowledge questions. Each questions has two response (yes=1 or 0=no).the total score was added and was 10. Score above 7 was categorized as good knowledge and below 7 was categorized as poor knowledge.

Vaccination status of children was checked by observing immunization card and if not available mothers /caregivers/ were asked to recall it. BCG vaccination was checked by observing scar on right (also left) arm.

5.9 Data quality assurance

The questionnaires were prepared in English and then translated to the local language (Amharic). It was translated back to English to ensure consistency. Before the actual data collection, the questionnaires were pre-tested in 5% of the sampled population in non-selected kebeles. Data collectors and supervisors were trained for two days to have a common understanding of the questionnaire, objective of the study, how to interview. There were strict supervision on the data collection process, consistency and completeness of questionnaires on a daily basis. The overall data collection processes were controlled by the principal investigator. Filled questionnaires were checked and cleaned.

To ensure validity the questions were phrased and the responding options developed appropriately. Test-retest reliability of the research instrument was established during pretesting.

Pretesting was done on two occasions but on the same respondents. Test re-test reliability was established by examining the consistency of pre-test responses.

5.10 Data processing and analysis

Data were checked for completeness, edited, coded and entered using Epi data version 3.1.2.7 and exported to SPSS version 23 software for analysis. Outcome variable was dichotomized into cases = 1 and controls = 0. After cleaning data for inconsistencies and missing values, descriptive statistics were done. Bivariate logistic regression was performed and variables with a p-value < 0.25 were transferred to multivariable logistic regression to identify determinants of GMP service utilization. In the multivariable logistic regression analysis, variables with p-value < 0.05 were taken as statistically significant factors. Adjusted odds ratios with its 95% confidence intervals were considered to identify determinants of GMP service utilization. Model goodness of fitness was assessed by using Hosmer and Lemeshow test. Multi Collinearity between independent variables was checked.

5.11 Ethical considerations

Ethical clearance was obtained from the Institutional Review Board of Bahir dar University College of medicine and Health science school of public health. Written permission was obtained from Woreda administration. Written consent was obtained from the mothers/caregivers after informing all the purpose, benefits, and risks of the study. These consent procedures were approved by Bahir Dar University Institutional Review Board ethical committee.

5.12 Dissemination of finding

The finding of this study will be disseminated to school of public health science college website, BDU library; Amhara regional state health bureau, South Wollo Health office and Legambo woreda Health office and it might also be provided to health care providers, health extension workers and community leaders of any place in the form of formal research result. The final report of the study will be presented and discussed in public health department as an important research which brings changes on utilization of Growth monitoring and associated Factors. It also serves as a source for other concerned bodies that need it.

6. RESULTS

6.1 Description of Socio-demographic and economic characteristics of study participants

A total of 358 mothers (89 cases and 269 controls) with 98.6 % (97.8% cases and 98.9% controls) response rate were included in the study. About one-third (36% from cases and 34% from the controls) were in the age range of 25-29 years. More than half of children (55.1% from the cases and 53.2% from controls) were female. A majority of the mothers (86.5% cases) and (92.6% of controls) were Muslim. Around half of (49.1%) of mothers in controls group and 29.2%, mothers in cases group were not able to read and write. (Table 2)

Table 2-Sociodemographic and economic characteristics of mothers in Legambo district, South Wollo zone, Northern Ethiopia, 2020.

Variable		Case = 89 Number (%)	Control = 267 Number (%)
Maternal age	15-19	3	3
	20-24	23(25.8)	86(32)
	25-29	32(36)	91(33.8)
	30-34	23(25.8)	65(24.2)
	35-39	7(7.9)	21(7.8)
	>40	1	3
Marital status	Married	89	263(97.8)
	Divorced	0	3
	Widowed	0	3
Educational status of mother	Cannot read and write	26(29.2)	132(49.1)
	Can read and write	2	5(1.9)
	Primary	31(34.8)	94(34.9)
	Secondary and above	30(33.7)	38(14.1)
Educational status of partner	Cannot read and write	25(28.1)	133(49.4)
	Can read and write	5(5.6)	22(8.2)
	Primary	26(29.2)	75(27.9)
	Secondary and above	33(37.1)	39(14.5)
Occupation of mother	House wife	22(24.7)	99(36.8)
	Farmer	45(50.6)	150(55.8)
	Merchant	11(12.4)	12(4.5)
	Government employee	10(11.2)	3
	Private employee	1	5(1.9)
Occupation of partner	Farmer	55(61.8)	216(80.3)
	Merchant	8(9)	28(10.4)
	Government employee	21(23.6)	7(2.6)
	Private employee	5(5.6)	10(3.7)
	Daily laborer	0	7(2.6)

	Student	0	1
Wealth index	High	37(41.6)	84(31.2)
	Medium	27(30.3)	95(35.3)
	Low	25(28.1)	90(33.5)
Family size	<4	60(67.4)	162(60.2)
	4-5	13(14.6)	38(14.1)
	> 5	16(18)	69(25.7)
Birth order	1	37(41.6)	94(34.9)
	2-3	36(40.4)	106(39.4)
	>3	16(18)	69(25.7)

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In the cases group, 35 (33.9%) children were in the age of 12-17 months while in the controls group, 74 (27.5%) children were in the same age group.

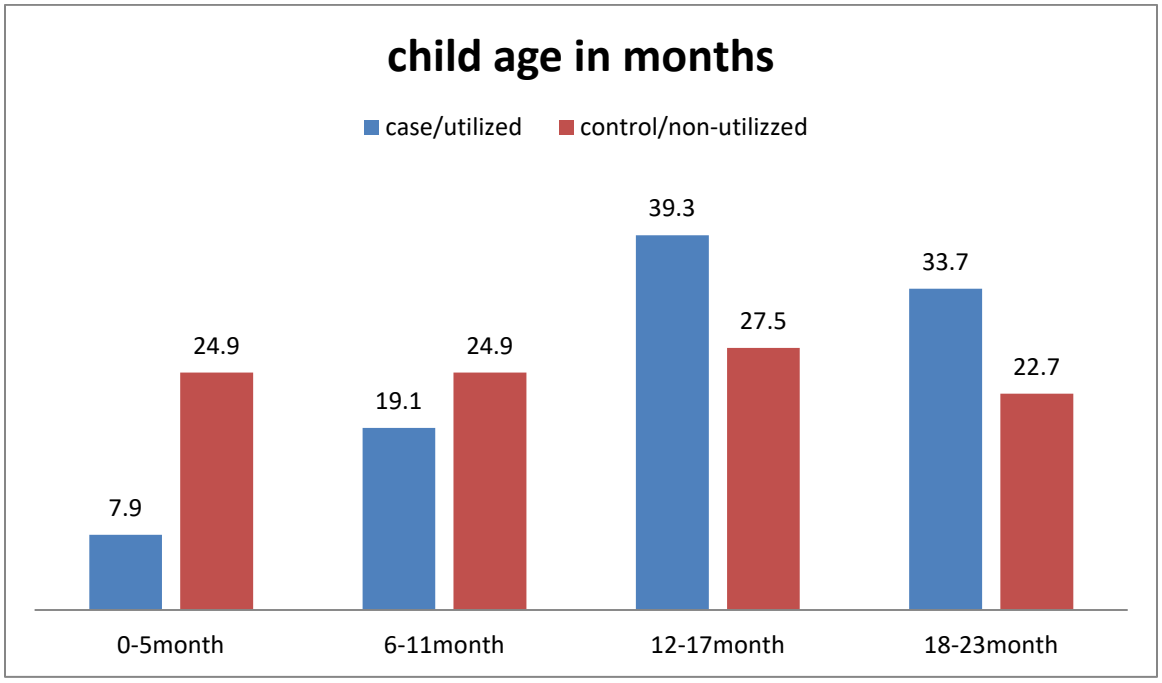

Figure 3:- proportion of cases and controls by age group among children in Legambo district, South Wollo zone, Northern Ethiopia, 2020.

6.2 Knowledge and Attitude related characteristics

Around 72(80.9%) of cases and 133(49.4%) of controls group had good knowledge. Regarding the attitude; (83.1% of cases and 48% of controls) had favorable attitude. Sixteen (18%) of cases and 32% of controls participated in this study don't know when the growth monitoring service is started. Majority of mothers from case group (82%) and 65.1% from control group responded that, GM service is provided every month. Majority of both the cases (98.9%) and control (82.5%) know the benefit of Growth monitoring. (Table 3)

Table 3- knowledge and attitude of mothers towards GMP service utilization in Legambo district, South Wollo zone, Northern Ethiopia, 2020.

Variable		Case = 89 Number (%)	Control = 267 Number (%)
Attitude	Favorable	74(83.1)	129(48)
	Unfavorable	15(16.9)	140(52)
Knowledge	Good	72(80.9)	133(49.4)
	Poor	17(19.1)	136(30.6)
heard about GM	Yes	87(97.8)	194(72.1)
	No	2	75(20.9)
Knowing the age groups for GM	Yes	77(86.5)	193(75.4)
	No	12(3.4)	76(21.2)
Knowing the starting time for GM	Yes	73(82)	183(68)
	No	16(18)	86(32)
Knowing interval b/n GM	Yes	82(92.1)	175(65.1)
	No	7(7.9)	94(34.9)
Knowing who to perform GM	Yes	84(94.4)	182(67.7)
	No	5(5.6)	87(32.3)
Knowing place of GM services	Yes	85(95.5)	191(71)
	No	4(4.5)	78(29)
Taking your baby has benefit for the child	Yes	88(98.9)	222(82.5)
	No	1	47(17.5)
Knowing when the growth chart is flattening	Yes	70(78.7)	135(50.2)
	No	19(21.3)	134(49.8)
Knowing when the growth chart is rising	Yes	70(78.7)	134(49.8)
	No	19(21.3)	135(50.2)
Knowing when the growth chart is falling	Yes	70(78.7)	133(49.4)
	No	19(21.3)	136(50.6)

6.3 Health service related characteristics

About 74(83.1%) mothers in cases group (utilized) and 132(49.1%) mothers in the controls group (Non- utilized) had 4 and above antenatal care (ANC) visits. Majority of mothers in both cases group (67.4%) and controls group (71%) gave birth (for this baby) in health institutions. Eighty eight (98.9%) in the cases group and 32(11.9%) in the controls group of mothers mentioned that weight measurement were available. (Table 4)

Table 4-health service related characteristics of mothers in Legambo district, South Wollo zone, Northern Ethiopia, 2020.

Variable		Case = 89 Number (%)	Control = 267 Number (%)
Place of delivery	Home	29(32.6)	78(29)
	Health institution	60(67.4)	191(71)
Immunization	Fully immunized	86(96.6)	262(97.4)
	Not immunized	3(3.4)	7(2.6)
ANC visits	Yes	74(83.1)	132(49.1)
	No	15(16.9)	137(50.9)
PNC visits	Yes	68(76.4)	117(43.5)
	No	21(23.6)	152(56.5)
Nutritional Counseling	Yes	70(78.7)	123(45.7)
	No	19(21.3)	146(54.3)
Service quality	Good	51(57.3)	127(47.2)
	Poor	38(42.7)	142(52.8)
Distance to reach the health facility	< one hour	79(88.8)	154(57.2)
	>one hour	10(11.2)	115(42.8)
Access to media	yes	52(58.4)	114(42.6)
	no	37(41.6)	155(57.6)
Mode of delivery	SVD	85(95.5%)	257(95.5%)
	instrumental	0	5(2.6)
	C/section	4(1.9)	7(4.5)
Weighing	yes	88(98.9)	32(11.9)
	no	1	237(88.1)

6.4 Determinants of Growth monitoring and promotion service utilization

In the Bivariate regression analysis, Child age, paternal education, maternal education, antenatal care visit, nutritional counseling, postnatal care utilization, knowledge, attitude, service quality, access to media and distance to health facility were associated with the dependent variable. variables with a p-value < 0.25 were transferred to multivariable logistic regression and in the Multivariable analysis, Child age, knowledge, attitude, nutritional counseling, ANC visit and distance to health facility were independent predictors of growth monitoring and promotion service utilization at p-value<0.05.

Mothers who had good Knowledge were 2 times more likely utilize growth monitoring and promotion compared with mothers/caregivers who had poor Knowledge (AOR) = 2.42; 95% CI: 1.23, 4.75).

According to this study, mothers who had receive nutritional counseling were 2 times more likely to utilize GMP service as compared to mothers who had not receive nutritional counseling (AOR = 2.34, 95% CI; 1.19–4.56).

Mothers who reached near by the health facility less than one hour were 4 times more likely to utilize GMP service as compared to mothers who reached greater than one hour (AOR = 4.53, (95% CI; 1.99–10.28).

This study demonstrated that, ANC visit was showed statistically significant association with GMP service utilization. Mothers who had ANC follow up were 2.46 times more likely to utilize GMP services as compared to mothers who had not ANC visit (AOR = 2.46, (95% CI; 1.18–5.16).

Maternal attitude was statistically significant association with growth monitoring and promotion service utilization. Mothers who had favorable attitude were 2.45 times more likely to utilize GMP services as compared to unfavorable attitude (AOR = 2.45, 95% CI; 1.20–4.98).

This study showed that, child age was significantly associated with GMP service utilization. Mothers who have Children in the age group of 12-17 months age groups were 3 times and 18-23 months age groups were 4 times more likely to utilize GMP services as compared to who have Children with 0-5 age groups(AOR = 3.45, 95% CI; 1.26–9.41) and (AOR = 4.38, 95% CI; 1.53–12.49), respectively.(Table 5)

The model of fitness was checked by using the Hosmer-Lemeshow goodness of fitness test if $p>0.05$.This model satisfies the criteria of model fitness of the equation because its value was 0.473 which is greater than p-value 0.05.

Table 5- Predictors of GMP services utilization among children 0–23 months of age in Legambo district, South Wollo zone, Northern Ethiopia, 2020.

Variable		Case Number (%)	Control Number (%)	95% confidence interval	
				COR	AOR
Educational status of mother	Illiterate	26(29.2)	132(49.1)	1	1
	read and write	2(2.2)	5(1.9)	2.03(0.37-11.04)	1.32(0.19-9.17)
	Primary	31(34.8)	94(34.9)	1.67(0.93-3.00)	1.29(0.52-3.22)
	Secondary and above	30(33.7)	38(14.1)	4.01(2.12-7.58)	1.96(0.68-5.69)
Educational status of partner	Illiterate	25(28.1)	133(49.4)	1	1
	read and write	5(5.6)	22(8.2)	1.21(0.42-3.49)	0.89(0.23-3.50)
	Primary	26(29.2)	75(27.9)	1.84(0.99-3.42)	1.25(0.49-3.19)
	Secondary and above	33(37.1)	39(14.5)	4.5(2.39-8.46)	1.87(0.68-5.13)
Child age in months	0-5	7(7.9)	67(24.9)	1	1
	6-11	17(19.1)	67(24.9)	2.43(0.95-6.24)	2.67-(0.91-7.85)
	12-17	**35(39.3)**	**74(27.5)**	**4.53(1.89-10.87)**	**3.45(1.26-9.41) ***
	18-23	**30(33.7)**	**61(22.7)**	**4.70(1.93-11.49)**	**4.38(1.53-12.49)***
Knowledge	**Good**	**72(80.9)**	**133(49.4)**	**4.33(2.42-7.73)**	**2.42(1.23-4.75) ***
	Poor	17(19.1)	136(30.6)	1	1
Attitude	**Favorable**	**74(83.1)**	**129(48)**	**5.35(2.92-9.79)**	**2.45(1.20-4.98) ***
	Unfavorable	15(16.9)	140(52)	1	1
Nutritional Counseling	**Yes**	**70(78.7)**	**123(45.7)**	**4.37(2.49-7.66)**	**2.34(1.19-4.56) ***
	No	19(21.3)	146(54.3)	1	1
Access to media	Yes	52(58.4)	114(42.4)	1.91(1.18-3.11)	0.92(0.48-1.77)
	No	37(41.6)	155(57.6)		
Distance to health facility	**< 1 hour**	**79(88.8)**	**154(57.2)**	**5.89(2.93-11.89)**	**4.53(1.99-10.28)***
	>1 hour	10(11.2)	115(42.8)	1	1
Service quality	Good	51(57.3)	127(47.2)	1.50(0.93-2.43)	1.12(0.60-2.07)
	Poor	38(42.7)	142(52.8)	1	1
ANC	**Yes**	**74(83.1)**	**132(49.1)**	**5.12(2.79-9.37)**	**2.46(1.18-5.16) ***
	No	15(16.9)	137(50.9)	1	1
PNC	Yes	68(76.4)	117(43.5)	4.20(2.44-7.26)	1.89(0.95-3.62)
	No	21(23.6)	152(56.5)	1	1

7. DISCUSSION

This study aimed to identify determinants of Growth monitoring and promotion service utilization using unmatched case - control study among less than two years children and the study will generate information to the Ministry of Health and other organizations working in the child survival programs to design interventions to improve the activities of GMP.

The study pointed out that determinants of growth monitoring and promotion service utilization were index child age, maternal knowledge, maternal Attitude, ANC visits, getting nutritional counseling and distance to reach the nearest health facility.

Mother who had good knowledge of growth monitoring was more likely utilizes GMP than mother who had poor knowledge. Similar finding was reported from the study done in Butajira, Areka town, Kenya, and Ghana [17] [21] [20] and [27]. This can be explained by mother with good knowledge may able to understand the information displayed on the growth chart and that motivates to utilize GMP session.

In this study, child in the age group of 6-11 months and 12–23 months found that more likely to utilize GMP services as compared to infants in the age group of 0-5 months. This finding is similar with study done in Southern Ethiopia Mareka district [16] and Butajira [17].

This study showed that mothers who had favorable attitude were more likely to utilize than those who had unfavorable attitude. This finding was supported by Study on Areka town, southern Ethiopia [21].The reason for this might be good attitude of mother's leads to happy to bring their child to the GM visits and this helps to utilize GMP session and for unfavorable attitude, one qualitative study conducted Loko Abaya District, Southern Ethiopia showed that Mothers mentioned that they understood GMP as being used only for unhealthy (especially wasted) children. If their children are healthy and well-fed, they did not want to attend the GMP program [23].

According to this study mothers who had ANC visits were more likely to utilize GMP services than those who had not ANC visits. The possible justification for this may be during Ante natal care nutritional advice is given and this motivates mothers to attend GMP session. This result is different from study done in Mareka district [16] showed that there is no significant association between ANC visits and GMP service utilization. This difference is may be due to study design; the previous study was used cross-sectional while this study was used case-control study design and time difference, at this time the coverage of ANC is increased.

This study identified that mothers who had received nutritional counseling were more likely to utilize GMP services than who had not received nutritional counseling. This study is in line with study in Kenya [20] which showed mothers who received nutrition advice alongside GM services were more likely to participate in continued. The reason for this may be counseling has greater impact on motivating mothers to attend GMP sessions.

In this study, mothers traveled less than an hour get to the nearest health facility from their home were more likely to utilize GMP services those travel more than one hour to get to the nearest health facility. This finding is similar with study in Southern Ethiopian, Mareka district [16] and also supported by the study in Kenya[20] showed that distance from respondent's home to the facility 5 km; return journey were significantly associated with continued GM and similarly in Ghana [33] stated that distance between care givers home and the child welfare clinic is a determining factor in child welfare clinic (CWC) attendance. The possible justification for this may be due to Long distances to the health facilities may be a hindrance to the mothers to continue with growth monitoring especially if the children are looking well.

Socio-economic variables included in this study (marital status, occupation of mother, family size of the house hold and wealth index) were not significantly associated with GMP service utilization. This might be due to similar nature or living standard of mother was included in the study. Majority of mothers were farmers, married and lived in similar setting.

LIMITATION OF THE STUDY

There is a limitation that to this study that may be a recall bias while assessing the growth chart knowledge of the mothers, ANC visits and PNC visits.

8. CONCLUSION

Child age, good knowledge towards growth monitoring, favorable attitude towards growth monitoring and promotion, four and above ANC visits, getting nutritional counseling and time to reach the nearest health facility within one hour were determinants of GMP service utilization.

9. RECOMMENDATIONS

The following recommendations are forwarded for the concerned bodies based on the findings of this study;

For Zonal and Woreda Health Office:

- Accessibility of GMP services for mothers who has traveled more than an hour get to the nearest health facility is necessary.

For non-governmental organization and supervisors:

- Give training to Health extension workers to give effective counseling for mothers to improve the quality of growth monitoring and promotion.

For health extension workers:

- Health extension workers should be more engaged in counseling mothers on the importance of attending Growth monitoring and promotion service utilization.
- Health Extension workers should be increases the knowledge/awareness of mothers and raise positive attitude of mothers towards growth monitoring and promotion services by educating mothers about the benefits of getting the service of growth monitoring.
- Encourage mothers to attend four and above ANC visits.
- Give emphasis on children below six months to attend GMP services.

For researchers:

- Further studies should be done on study that could assess growth monitoring and promotion utilization among Health extension workers.

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11. APPENDIXES

Appendix 1: Informed Consent and/or Ascent Form (English version)

Bahir Dar University, School of public health, Department of Nutrition and Dietetics, my name is …….. I am here on behalf of Jemal Aleyu student of Bahir Dar University School of public health. He is conducting a research on' determinants of growth monitoring and promotion service utilization for under two children'. In Legambo woreda, for the partial fulfillment of master's in public health in Bahir Dar University school of public health department of Nutrition and dietetics. He received permission from Bahir Dar university school of public health and department of Nutrition and dietetics and the district health office administrators to conduct this study. The aim of this study is to identify determinants of growth monitoring and promotion service utilization.

The study will help in providing a base line data for policy makers and other researchers on issues regarding growth monitoring and promotion. It can also have a role in helping you to follow your children health status. You are selected randomly to participate in this study because you are a mother with a child age less than two years old. Your participation is purely based on your willingness. You have full right either to participate or decline to be a participant in this study.

If you choose to take part in the study you may respond to all the questions or you may not answer questions you don't want to, and have the right to stop the interview at any time. You also have the right to choose not to take part in this study. Participating in this study will not have any risk or harm. Whether you are willing to participate, refuse or decide to withdraw later, you will not be subjected to any ill treatment.

If you agree to participate in the study, you will be asked to answer some questions about yourself, knowledge and attitude towards growth monitoring and promotion service utilization and health care service. The interview lasts with you will take about 20 minutes. Any information that you provide will be kept confidential, names will not be written or specified and all the questionnaires will be coded for anonymity. No one will have access to the non-coded data except the principal investigator. Only the principal investigator will know the details and He will discard it after completing analysis. The data will not be used for purposes other than the study. Your willingness and active participation is very important for the success

of this study. Contact details of principal investigator and the person to whom to contact at any time for further explanation.

Name of principal investigator: Jemal Aleyu

Cell phone No - 0914661346

E-mail: jemalaleyu11@gmail.com

Informed consent

The above information regarding my participation in the study is clear to me. I have been given a chance to ask questions and my questions have been answered to my satisfaction. My participation in this study is entirely voluntary. I understand that my records will be kept private and that I can leave the study at any time. I understand that I will still get the same medical care whether I decide to leave the study or not and my decision will not change the care I will receive from medical centers.

Respondent agree to participate? YES NO

1. If yes, continue the interview ☐ ☐
2. If no, skip to the next participant by writing reasons for her refusal.

Informed consent Certified by

Relation of the respondent to the child_____

Respondent's signature/thumb print_____ Date _____

Interviewer: Name _____ Signature_____

Questionnaire ID number _____

Date of interview _____ Time started _____ Time completed_____

Result of interview:

1. Completed
2. Respondent not available
3. Refused
4. Partially completed

Checked by: Supervisor: Name _____ Signature_____

Appendix 2: questionnaire (English version)

Survey questionnaire to identify determinants of growth monitoring and promotion service utilization.

Questionnaire No_____ Kebele name _____House number_____

Growth Monitoring and Promotion service given based on the Guideline

1. Yes
2. No

Part 1-child bio data			
S.no	Questions	Response	Skip
101	Sex of the child	1. Male 2. female	
102	Date of birth of the child	_____	
103	Child age in month	_____	
104	Place of delivery	1.home 2.health center 3.Hospital 4.other	
105	Mode of delivery	1.Viginal delivery 2.Cesarean section 3.Instrumental delivery 4.other	
106	How many times had the child received the basic immunization? (NB-see at the immunization card if available if not ask the mother recall)	_____	
107	Is GMP is given for the child	1.yes 2.no	
108	If yes how many times		

Part 2-Socio demographic and economy factors			
S.no	Questions	Response	Skip

201	Age of the mother in completed year?	_____	
202	What is your religion?	1. Orthodox 2. Muslim 3. Catholic 4. Protestant 5.Others(specify)_____	
203	What is your ethnicity?	1. Amhara 2. Oromo 3. Tigre 4. Guragie 5.Others(specify)_____	
204	Level of education	1. cannot read and write 2. can read and write 3. Primary 4. Secondary 5.college and above 6.Other(specify)_____	
205	What is your occupational status? NB. more than one answer is possible	1. House wife 2. Farmer 3. Merchant 4. Government employee 5. Private employee 6.Student 7.Others(specify)_____	
206	What is your current marital status?	1.Married 2.single 2. Divorced 3. Widowed	
207	What is the occupation of your husband?	1. Farmer 2. Merchant	

		3. Government employee 4. Private employee 5. Daily laborer 6. Student 7. Others(specify)__	
208	What is the educational status of your husband?	1. cannot read and write 2. can read and write 3. Primary 4. Secondary 5.college and above 6. other(specify)_____	
209	household family size	_____	
210	Birth order	_____	
211	household average monthly income	_____birr	
212	Source of water supply	1. Piped water 2. Protected spring 3. other (specify _____	
213	How long does it take to go there, get water and comeback?	_____hour	
214	Do you have toilet your own toilet?	1.yes 2.no	
215	Source of energy to cook	1. Electric 2. Kerosene and wood 3. other (specify _____	
216	Main material of the roof?	1. Grass and wood 2. Corrugated iron/metal 3. Other(specify_____	

217	Main material of the floor?	1. Sand 2.Cement and marble 3 Other (specify_____	
218	Main material of the walls?	1. Wood with mud 2.Cement with stone 3.Other(specify_____	
219	Which one of the following found in your house? Electricity? A watch/ clock? A radio? A television? A mobile telephone? A refrigerator? A table? A chair? A bed with cotton/sponge/spring mattress? An electric mitad? Kerosene lamp/pressure lamp?	Yes No Electricity?.....1 2 A watch/ clock ?.....1 2 A radio?.....1 2 A television?.....1 2 A mobile telephone?.....1 2 A refrigerator ?.....1 2 A table ?.....1 2 A chair ?.....1 2 Abed with cotton/sponge/spring mattress?.....1 2 An electric mitad.....1 2 A kerosene lamp/pressure lamp?.....1 2	
220	Does your house have window?	1. Yes 2. No	
221	Does any member of this household own any agricultural land?	1.Yes 2.No	
222	How many (local units) of agricultural land do members of this household own?	_____local unit (Hectares, T imad)	

223	Which of the following your family own Milk cows or oxen? Horses, donkeys or mules? Goats or sheep? Chickens? Beehives?	Yes No Milk cows or oxen……1 2 Horses or donkeys……1 2 Goats or sheep……1 2 Chickens……..… 1 2 Beehives……...1 2	224
224	If yes how many of them are your own?	Quantity Milk cows_____ oxen _____ Horses _____donkeys_____ mules _____ Goats_____ sheep_____ Chickens_____ Beehives_____	
225	Do you have access to media?	1. Yes 2. No	226
226	Which one of the following media does your family use?	1. Radio 2. Television 3. Newspaper 4. internet 5. Others (specify_____	
Part 3-Maternal growth Chart Knowledge			
301	Do you heard about growth monitoring?	1.Yes 2. N0	302
302	Do you know for what age groups growth monitoring service is given?	1.less than two years 2. other 3.don,t know	
303	What is the Starting time for Growth monitoring?	1.at birth 2. other 3.don,t know	
304	Interval Between GM visits?	1.monthly 2. other 3.don,t know	

305	Do you know who to perform Growth monitoring?	1.Health extension worker 2.other 3.don,t know	
306	Do you know where Growth monitoring service provision is performed?	1.Health post 2.other 3.don,t know	
307	Do you know that taking your baby weigh regularly has benefit for your child?	1.yes ⟶ 2. no 3.don,t know	309
308	What does it mean for a child when the curve on the growth chart is flattening? By using sample Growth chart	1. Child is not growing well/has not gained enough weight 2. other 3. Don't know	
309	What does it mean for a child when the curve on the growth chart is rising? By using sample Growth chart	1.Child is growing well/has gained enough weight 2. other 3 .Don't know	
310	What does it mean for a child when the curve on the growth chart is falling? By using sample Growth chart	1.Child is not gaining weight from the previous growth monitoring and promotion session 2. other 3. Don't know	

Part 4- Attitude Questions

Fill the boxes with "√"marks corresponding to your best choice based on the following Likert scale meas

1= Strongly disagree (SD) 2= Disagree (D) 3= Neutral (N) 4= Agree (A) 5= Strongly agree (SA)

S.N	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
401	When I go growth monitoring and promotion service I feel good about my child					
402	When I go growth monitoring and					

	promotion service I feel my child is healthy					
403	When I go growth monitoring and promotion service I fell my child develop good academic performance					
404	Do you think measuring your child weight is important?					
405	Is bring their child to the growth monitoring and promotion service visits make you happy					
406	Do you believe growth monitoring and promotion service is important to prevent malnutrition					
407	Taking my child to growth monitoring and promotion service will take too much time					
408	Taking my child to growth monitoring and promotion service doesn't add any value to my child					
409	Do you think growth monitoring and promotion is only for wasted children					
410	Do you think growth monitoring and promotion is only for sick children					
411	Taking my child to growth monitoring and promotion service will expose to evil eye					
412	Do you think Growth monitoring is for screening children for food aid					
Part 5: health system service factors						
501	Is there health facilities available around your home	1. Yes 2. No				
402	How far is the nearby health institution from your house? (In	……hour ……minutes				

	terms of hours it takes to reach on foot)		
503	For what services do you usually take your children to the health facility? (more than one response is possible)	1. weighting 2. nutrition advice 3. Immunization 4. Treatment of diseases 5. Vitamin A supplementation 6. Others(specify_____	
504	Where do you get health service for your child usually?	1.health center 2.health post 3.private clinic 4.other (specify_____	
505	Is growth monitoring and promotion service available for your child?	1.yes → 2. no	506
506	What type of service offered in health facility?	Yes No Weighing…….1 2 Nutrition advice……..1 2 Immunization …….1 2 Treatment of diseases……..1 2 vitamin A supplementation…..1 2	
507	utilization of ANC services	1.yes → 2.No	508
508	If yes how often do you get the service?	1. >=4 2.<4	
509	utilization of PNC services	1.yes 2.No	
510	counseling by health professionals about Growth monitoring	1.yes → 2.No	511
511	If yes by what providers did you get counseling	1.Health Extension workers 2.Nurses 3.Midwives	

		4.Doctors 5.Teachers	
512	How do you rate the services offered in the facility?	1. Good ⟶ 2. Poor ⟶	513 514
513	If the answer is good, what is the reason?	1. Serving time less than 30 minutes,) 2. Services are regular 3. Services are always available 4. Others (specify_____)	
514	If the answer is poor, why?	1. Time taken is more than 1 hour, 2. Services are irregular, 3. Some services are not available 4. Others (specify_____)	
515	How do you rate the staffs' performance?	1. Committed ⟶ 2. Not committed ⟶	516 517
516	If the answer is committed, why?	1. Staffs always available to offer services 2. Staffs are very friendly 3.Others(specify _____)	
517	If the answer is not committed, why?	1. Sometimes staffs are not available 2. Staffs are not very friendly 3. Others (specify _____)	
518	Do you face any challenges when you take your child for weighing?	1. Yes ⟶ 2. No	519
519	If yes, What Challenges do you face in taking your child for weighing? (Probe for all the challenges) The healthy facility is far It takes long to be served Healthy workers are not always available Inadequate time to take the child for GMP	Yes No The healthy facility is far……1 2 It takes long to be served ……1 2 Healthy workers are not always available ……..1 2 Inadequate time to take the child For GMP……..…….....1 2	

Appendix3: Informed Consent and/or Ascent form (Amharic version)

ባህርዳር ዩኒቨርስቲ ጤና ሣይንስ ፋኩልቲ የህብረተሰብ ጤና አጠባበቅ ትምህርት የስነ-ምግብ ክፍል

የተጠያቂው / መላሾች የመረጃ ቅፅ

ጤና ይስጥልኝ እንደምን ነዎት

ስሜ.....**ይባላል፡፡የመጣሁት በባህርዳር ዩኒቨርስቲ የህብረተሰብ ጤና አጠባበቅ ትምህርት የ ስነ-ምግብ ክፍል ተማሪ የሆነውን ጀማል አልዩን ወክዬ ነው፡፡ከሁለት አመት በታች ያሉ ህፃናት ክብደት አለካክ (የህፃናት ዕድገት ክትትል እና የማጎልበት) አገልግሎት አጠቃቀም አናሳ በመሆኑ በአጠቃቀሙ ዙሪያ በለጋምቦ ወረዳ በሚገኙ እናቶች ላይ ጥናት እያደረገ ሲሆን ከባህርዳር ዩኒቨርስቲ፣ ከለጋምቦ ወረዳ ጤና ጥበቃ ጽ/ቤት ፈቃድ አግኝቷል፡፡ የጥናቱ ዓላማ እናቶች ከሁለት ዓመት በታች ለሆኑ ህፃናት በየወሩ ስለሚደረገው የክብደት(የህፃናት ዕድገት ክትትል እና የማጎልበት) አገልግሎት አጠቃቀም ዙሪያ ፖሊሲ አውጪዎችና የሚመለከታቸው አካላት ሕፃናት አገልግሎቱ ተጠቃሚ እንድሆኑ እና በምግብ እጥረት እንዳይጎዱ የመከላከያና መቆጣጠርያ መንገዶችን እንዲቀርፁና እንዲተገብሩ እንደ መነሻ ሀሳብ ይሆናል የሚል ፅኑ እምነት አለን፡፡**

እርስዎ በዚህ ጥናት ላይ እንዲሳተፉ የተመረጡት በዘፈቀደ/በአጋጣሚ የናሙና አወሳሰድ ስልት መሰረት ነው። የእርስዎ ተሳትፎ ሙሉ በሙሉ በእርስዎ ሙሉ ፍቃደኝነት ላይ የተመሰረተ ነው፡፡በጥናቱ ላይ ያለመሳተፍ ሙሉ መብት አለዎት፡፡ ለመሳተፍ ፈቃደኛ ከሆኑ በኋላም በፈለጉት ጊዜ ማቆም ወይም ማቋረጥ ይችላሉ፡፡ በጥናቱ ባለመሳተፎ የሚደርስቦት ምንም አይነት ችግር አይኖርም፡፡ በጥናቱ ለመሳተፍ ከተስማሙ የተወሰኑ ጥያቄዎችን እንጠይቆታለን፡፡ በዚህ መጠይቅ ሕፃናት ስለ የእድገት ሠንጠረዥ 2 ዓመት በታች ለሆኑ ሕፃናት እድገት ክትትልና ማጎልበት አገልግሎት ግንዛቤ፣አመለካከት እና አጠቃቀም ሁኔታዎች እንድሁም ስለ ጤና አገልግሎት አጠቃቀም የተመለከቱ ጥያቄዎች እጠይቅዎታለሁ፡፡ በመጠይቁ ጊዜ ጥሩ ስሜት ካልተሰማዎት በማንኛውም ጊዜ አቋርጠው መሄድ ይችላሉ፡፡ መጠይቁ 20 ደቂቃ ያህል ይፈጃል። በመጨረሻም ከእርስዎ የምንሰበስበው መረጃ ከስምዎ ጋር አይያያዝም፡፡ ስምዎት እንደማይጠቀስና ለማንም አካል አልፎ እንደማይሰጥ ልናረጋግጥ እንወዳለን፡፡ የዚህ ጥናት ውጤት ግን ተጠርዞ እና ተዘጋጅቶ ለሚመለከታቸው የጤና ድርጅቶች ወይም ለሌሎች አካላት ሊሰጥ ይችላል፡፡ ለተጨማሪ ማብራሪያ የዋና አጥኚውን አድራሻ ይጠቀሙ፡፡

ስም፡ ጀማል አልዩ

ኢሜይል: jemalaleyu11@gmail.com **ስልክ**: 0914661346

የስምምነት መጠየቂያ/ማረጋገጫ ቅፅ

ከላይ በሰጠዎት መረጃ መሰረት በጥናቱ ላይ ለመሳተፍ ፍቃደኛ ነዎት?

1. **አዎ**
2. **አይደለሁም**

ፍቃደኛ ካልሆኑ ምክኒያቱን ፅፈው ወደሚቀጥለው ተሳታፊ እለፉ

…… ……

የተሳታፊውዝምድና ለህጻኑ_____

የተሳታፊዉ ፊርማ_____

የመረጃ ሰብሳቢ

ስም…… **ፊርማ**…….

የመጠይቁ ቁጥር……..

መጠይቁ የተካሄደበት ቀን……**የተጀመረበት ሰአት**……**ያለቀበት ሰአት**…….

የቃለ መጠይቁ ውጤት

1. **ሙሉ በሙሉ የተሞላ**
2. **በከፊል የተሞላ**
3. **ምንም ያልተሞላ**

በተቆጣጣሪዎች ተረጋግጧል፡

ስም……..**ፊርማ**……..

Appendix 4፡ Survey questionnaires (Amharic version)

በባህርዳር ዩኒቨርስቲ ህክምና ፋክልቲ የህብረተሰብ ጤና አጠባበቅ ትምህርት የስነ-ምግብ ትምህርት ክፍል ከሁለት አመት በታች ያሉ ህፃናት ክብደት አለካክ አገልግሎት ተጠቃሚነት በተመለከተ (የህፃናት ዕድገት ክትትል ና የማጎልበት) አገልግሎት አጠቃቀም በተመለከተ

የጥናታዊ መረጃ መሰብሰቢያ መጠይቅ

የመጠይቁ ቁጥር_____ቀበሌ_____ የቤት ቁጥር_____

የህፃናት እድገት ክትትል እና ማጎልበት አገልግሎት በመመሪው መሰረት አግኝተዋል

1.አዎ

2.**የለም**

ክፍል1-ሕፃኑን በተመለከተ መረጃ			
ተ.ቁ	**ጥያቄ**	**መልስ**	**ይዝለሉ**
101	**የሕፃኑ ፆታ**	1. ወንድ 2. ሴት	
102	**ሕፃኑ የተወለደበት ቀን**		
103	**የህጻኑ እድሜ**		
104	**ሕፃኑ የተወለደበት ቦታ**	1.በቤት ዉስጥ 2.በጤና ጣቢያ 3.ሆስፒታል 4. ሌላ(ይጠቀስ_____	
105	**በምን አይነት ሁኔታ**	1. በምጥ 2. በቀዶ (ጥገና) ህክምና 3. በ መሳሪያ በመታገዝ 4. ሌላ(ይጠቀስ_____	
106	**ለምን ያህል ጊዜ ተከተበ/ች ?**		
107	**ህፃኑ የህፃናት እድገት ክትትል እና ማጎልበት አገልግሎት አግኝቷል/ለች**	1.አዎ 2.አይደለም	
108	**መልሰው አዎ ከሆነ ስንት ጊዜአግኝቷል/ለች?**		
ክፍል2- የሕፃኑን እናት በተመለከተ አጠቃላይ መረጃ			
ተ.ቁ	**ጥያቄ**	**መልስ**	**ይዝለሉ**
201	**የእናትየዉ ዕድሜ**	_____	
202	**ሐይማኖትህ/ሽ ምንድነው?**	1. **ሙስሊም** 2. **ኦርቶዶክስ** 3. **ፕሮቴስታንት** 4. **ካቶሊክ** 5.ሌላካለ(ይጠቀስ_____	
203	**ብሔርሽ ምንድን ነው?**	1.**አማራ** 2. **ኦሮሞ** 3.**ትግሬ**	

		4.ጉራጌ 5.ሌላ(ይጠቀስ_____	
204	የትምህርት ደረጃሽ?	1. ማንበብና መፃፍ የማይችል 2. መጻፍ ና ማንበብ 3. 1ኛ ደረጃ 4. 2ኛ ደረጃ 5. ኮሌጅ እና ከዚያ በላይ 6. ሌላ(ይጠቀሰ)_____	
205	ሥራሽ ምንድን ነው?	1. የቤት ዕመቤት 2. ገበሬ 3. ነጋዴ 4. የመንግስት ስራ 5. የግል ስራ 6. ተማሪ 7. ሌላ(ይጠቀስ_____	
206	የጋብቻ ሁኔታ	1. ያላገባ 2. ያገባ 3. የተፋታች 4. ባሏ የሞተባት	
207	ባለቤትዎ ሥራው ምንድን ነው?	1. ገበሬ 2. ነጋዴ 3. የመንግሥት ስራ 4. የግል ስራ 5. ቀን ሠራተኛ 6. ተማሪ 7. ሌላ(ይጠቀስ_____	
208	የባለቤትዎ የትምህርት ደረጃ?	1. ያልተማረ(ማንበብና መፃፍ የማይችል) 2. መጻፍ ና ማንበብ 3. 1ኛ ደረጃ 4. 2ኛ ደረጃ 5. ኮሌጅ እና ከዚያ በላይ 6.ሌላ(ይጠቀሰ)_____	
209	የ ቤተሰብ ብዛት	_____	
210	ይህ ስንተኛ ልጅ ነው?		
211	የወር ገቢዎ ምን ያህል ነው?(በብር)	_____ብር	
212	የውሃ አቅርቦት ምንጩ	1. የቧንቧ ውሃ 2. የምንጭ ውሃ 3. የወንዝ ውሃ 4. ሌላ(ካለ ይጠቀስ_____	

213	ዚሃ ቀድተሸ ለመመለስ ምን ያህል ሰአት/ደቂቃ ይወስድብሻል?	_____	
214	ቤተሰብዎ የራሱ የሆነ መጸዳጃ ቤት አለዉ?	1.አለ 2.የለም	
215	ምግብ ለማብሰል የምትጠቀሙት የኃይል ምንጭ	1 ኤሌክትሪክ 2 ቢጋዝ 3. እንጨት 4. ሌላ ካለ(ይጠቀስ_____	
216	የሚኖሩበት ቤት ጣሪያ የተሰራዉ ከምንድነው?	1. የተፈጥሮ ቁስ (ለምሳሌ ሳር ወይም እንጨት) 2. ቆርቆሮ 3. ሌላ ካለ ይገለፅ _____	
217	የሚኖሩበት ቤት ወለል የተሰራዉ ከምንድነው?	1. አፈር 2. ከሲሚንቶ 3. ከእምነበረድ 4. ሌላ(ይገለፅ _____	
218	የሚኖሩበት ቤት ግድግዳ የተሰራዉ ከምንድነው?	1. ከጭቃ ና ከእንጨት 2. ከብሎኬት 3. ከድንጋይ ና ከሲሚንቶ 4. ሌላ ካለ ይገለፅ _____	
219	ከሚከተሉት የትኛው በቤትዎ ይገኛል? ኤሌክትሪክ? ቴሌቪዥን ? ራዲዮ/ቴፕ? ሞባይል/ተንቀሳቃሽ ስልክ? የቤት (የመስመር) ስልክ? ማቀዝቀዣ (ፍሪጅ) ? ጠረጴዛ? ወንበር? የስፖንጅ ፍራሽ? የኤሌክትሪክ ምድጃ (ስቶቭ)? ቡታ ጋዝ?	አለ የለም ኤሌክትሪክ.....1 2 ቴሌቪዥን.....1 2 ራዲዮ/ቴፕ.....1 2 ሞባይል/ተንቀሳቃሽ ስልክ ...1 2 የቤት (የመስመር) ስልክ.....1 2 ማቀዝቀዣ (ፍሪጅ).....1 2 ጠረጴዛ.....1 2 ወንበር.....1 2 የስፖንጅ ፍራሽ.....1 2 የኤሌክትሪክ ምድጃ (ስቶቭ)..1 2 ቡታ ጋዝ.....1 2	
220	ቤትዎ መስኮት አለው?	1. አለ 2. የለም	
221	የእርሻ መሬት አላቹ?	1. አለ → 2. የለም	222
222	የእርሻ መሬታቹ ስፋቱ ምን ያህላል?	_____ጥማድ	
223	ቤተሰብዎ ከሚከተሉት ዉስጥ የየትኛዉ የቤት እንስሳት ባለቤት ነዉ? ላም ወይም በሬ	አለ የለ ም → ላም ወይም በሬ.....1 2	224

	ፈረስ፣ አ ህ ያ ወይም በቅሎ በግ ወይም ፍየል ዶሮ ወይም ጫጩት የንብ ቀፎ	ፈረስ፣አህያ ወይም በቅሎ.1 2 በግ ወይም ፍየል .....1 2 ዶሮ ወይም ጫጩት.....1 2 የንብ ቀፎ 1 2	
224	መልሰው አለ ከሆነ	ብዛት ላም _____በሬ_____ ፈረስ_____ አህያ_____ በቅሎ_____ በግ _____ ፍየል_____ ዶሮ _____ ጫጩት_____ የንብ ቀፎ _____	
225	በቤት ውስጥ የሚድያ(መገናኛ ብዙሃን) አለ?	1. አለ → 226 2. የለም	226
226	በቤት ውስጥ እንደ መረጃ ምንጭነት የምትጠቀሙት የቱን ነው?	1. ሬድዮ 2. ቴሌቪዥን 3. ጋዜጣ 4. ኢንተርኔት 5.ሌላ(ካለይጠቀስ_____	
ክፍል 3 - ስለ ሕፃናት ክብደት መለካት ና አመጋገብ(እድገት ክትትልና ማጎልበት) ግንዛቤ			
ተ.ቁ	ጥያቄ	መልስ	ይዝለሉ
301	ስለ ህፃን ክብደት መለካት(እድገት ክትትልና ማጎልበት) ምንነት ያውቃሉ?	1.አው → 302 2.አላውቅም	
302	መልሰው አወ ከሆነ ምን ማለት ነው?(ከ አንድ በላይ መልስ መመለስ ይቻላል)	1. የ ህፃናትን እድገት መከታተል 2. በ ምግብ የተጎዱ ህፃናትን የምንለይበት ፕሮግራም ነው 3. የህፃናትን ምግብ እና ንፅህና አገልግሎት የምንሰጥበት ነው 4.ሌላ ካለ ይግለፁ	
303	የህፃናት እድገት ክትትል እና ማጎልበት አገልግሎት የሚሰጠው ለማን ነው?	1.ከ ሁለት አመት በታች 2.ሌላ 3.አላውቅም	
304	ለህፃኑ አገልግሎት መስጠት የሚጀመረው መቸ ነው?	1. ህፃኑ እንደተወለደ 2. ሌላ 3. አላውቅም	
305	የህፃናት እድገት ክትትል እና ማጎልበት አገልግሎት የሚሰጠው በየ ስንት ጊዜ ልዩነት ነው?	1.በየወሩ 2.ሌላ 3.አላውቅም	
306	አገልግሎቱን የሚሰጠው ባለሙያ ማን ነው?	1.የጤና ኤክስቴንሽን ባለሙያ 2.ሌላ 3.አላውቅም	

307	የህፃናት እድገት ክትትል እና ማጎልበት አገልግሎት የሚሰጠው በማን ነው?	1.ጤና ኬላ 2.የለም 3.አላውቅም	
308	ልጅሽ በየወሩ በቋሚነት ክብደቱ መለካቱ ጠቃሚ እንደሆነ ታዉቂለሽ ?	1.አዎ ⟶ 309 2.አላውቅም	
309	አዎ ካሉ ጥቅሙ ምን ነበር? (ከ አንድ በላይ መልስ መመለስ ይቻላል)	1.የልጁን ክብደት እና እድገት ሁኔታ ለመቆጣጠር 2.ልጄ ጤነኛ መሆኑን ለማወቅ 3.አስፈላጊውን የህክምና ዕርዳታ ለማግኘት 4.ልጄ ጤነኛ መሆኑንና አለመሆኑን ለማወቅ 5.ሌላ(ይጠቀስ_____	
310	የእድገት ሠንጠረዡ ላይ ያለው መስመር ዝቅ እያለ ከመጣ ምን ያሳያል? (የእድገት ሰንጠረዡን ቻርት ይጠቀሙ).	1. በቂ የሆነ ክብደት እንደሌለ 2. ሌላ 3. አላውቅም	
311	የእድገት ሠንጠረዡ ላይ ያለው መስመር ተመሳሳይ እያለ ከመ ጣ ምን ያሳያል?	1. ክብደት እየጨመረ እንደሆነ 2. ሌላ 3. አላውቅም	
312	የእድገት ሠንጠረዡ ላይ ያለው መስመር ከፍ ከሆነ ምን ያሳያል?	1. ክብደት አለመጨመሩን 2. ሌላ 3. አላውቅም	

ክፍል 3-የእናቶች አመለካከት በተመለከተ-እባከዎ ትክክለኛውን መልስ በሚመልሱበት ቦታ የ"√" ምልክት ያስቀምጡ፡፡ 1-በጣም አልስማማም 2.አልስማማም 3.መካከለኛ 4.እስማማለሁ 5.በጣም እስማማለሁ

ተ.ቁ	ጥያቄ	በጣም አልስማማም	አልስማማም	መካከለኛ	እስማማለሁ	በጣም እስማማለሁ
401	ወደ ህፃናት እድገት ክትትል እና ማጎልበት አገልግሎት ክፍል ስሄድ ለህፃኑ ጥሩ ነገር እንዳረኩ ይሰመኛል					
402	ወደ ህፃናት እድገት ክትትል እና ማጎልበት አገልግሎት ክፍል በመሄደ ህፃኑ ጤነኛ እንደሚሆን አስባለሁ					
403	ወደ ህፃናት እድገት ክትትል እና ማጎልበት አገልግሎት ክፍል በመሄደ ህፃኑ በትምህርት ውጤታማ እንድሆን ያስችለዋል					
404	የህፃኑን ክብደት ማስለካት ጠቃሚ ነው ብየ					

	አስባለሁ					
405	ህፃኑን ወደ ህፃናት እድገት ክትትል እና ማጎልበት አገልግሎት ክፍል ይገፎ በመምጣቴ ደስተኛ አድርጎኛል					
406	የህፃናት እድገት ክትትል እና ማጎልበት አገልግሎት ማግኘት ህፃኑን ከመቀጨጭ፣መቀንጨር እና ካላስፈላጊ ውፍረት ይከላከላል ብየ አስባለሁ					
407	ህፃኑን ወደ ህፃናት እድገት ክትትል እና ማጎልበት አገልግሎት ክፍል ይዞ ለመሄድ አገልግሎቱ ብዙ ሰአት ይወስዳል ብየ አስባለሁ					
408	ህፃኑን ወደ ህፃናት እድገት ክትትል እና ማጎልበት አገልግሎት ክፍል ይዞ መሄድ ለህፃኑ ምንም ፋይዳ የለውም					
409	የህፃናት እድገት ክትትል እና ማጎልበት አገልግሎት የሚጠቅመው ለቀጨጩ ህጻናት ብቻ ነው ብየ አስባለሁ					
410	የህፃናት እድገት ክትትል እና ማጎልበት አገልግሎት የሚጠቅመው ለታመሙ ህጻናት ብቻ ነው ብየ አስባለሁ					
411	ህፃኑን ወደ ህፃናት እድገት ክትትል እና ማጎልበት አገልግሎት ክፍል ይዞ መሄድ ለሰው እይታ በመጋለጡ ይታመማል ብየ አስባለሁ					
412	የህፃናት እድገት ክትትል እና ማጎልበት አገልግሎት የሚሰጠው ለምግብ እርዳታ ልየታ ነው ብየ አስባለሁ					

ክፍል 5- የጤና አገልግሎት ሁኔታ በተመለከተ

ተ.ቁ	ጥያቄ	መልስ	ይዝለሉ
501	በመኖሪያ ቤት በአቅራቢያችሁ የጤና ተቋም አለ?	1. አዎ 2. የለም	
502	በእግር ምን ያህል ያስኬዳል?	.....ሰአት .....ደቂቃ	
503	አብዛኛውን ጊዜ ልጅሽን ለምንድነው ወደ ጤና ተቋም የምትወስጂው? (ከ አንድ በላይ መልስ መመለስ ይቻላል)	1. ክብደት ለማስለካት 2. ከጤና ባለሙያ የህፃናት አመጋገብን በተመለከተ ምክር ለማግኘት 3. ለክትባት 4. ሲታመም ለማሳከም 5. ቫይታሚን ኤ (ጠብታ) ለማግኘት 6. ሌላ(ይገለፅ_____	
504	አብዛኛዉን ጊዜ ለህጻኑ የጤና	1. ጤናጣቢያ	

	አገልግሎት የምታገኚዉ የት ነዉ?	2. ጤና ኬላ 3. የግል ክሊኒክ 4.ሌላ(ይጠቀስ_____	
505	የሕፃናት እድገት ክትትልና ማነልበት አገልለገሎቱ ታገኛላሽ ለህጻኑ?	1. አዎ → 506 2. የለም	
506	በጤና ተቋም ዉስጥ የሚገኙ አገለግሎቶች ክብደት መለካት የልጅሽ እንዴት መመገብ እንዳለብሽ ምክር/ ትምህርት ክትባት የህክምና አገልግሎት ፕለንፒነት/ዱቄት/ወተት ቫይታሚን ኤ (ጠብታ) ክትባት (በየ6 ወር የሚሰጥ ክትባት)	አዎ የለም ክብደትመለካት.....1 2 የልጅሽ እንዴት መመገብ እንዳለብሽ ምክር/ትምህርት.....1 2 ክትባት.....1 2 የህክምና አገልግሎት.....1 2 ፕለንፒነት/ዱቄት/ወተት..1 2 ቫይታሚን ኤ (ጠብታ) ክትባት (በየ6 ወር የሚሰጥ ክትባት).1 2	
507	በ እርግዝናዉ ጊዜ የ ነፍሰጡር ክትትል አግኝተው ነበር?	1. አዎ → 508 2. የለም	
508	መልሰዉ አዎ ከሆነ ስንት ጊዜ አግኝተዋል?	1. >=4 2. <4	
509	የ ድህረ ወሊድ አገልግሎት ተጠቃሚ ነወት?	1. አዎ 2. የለም	
510	ስለ ህጻናት እድገት ክትትልና ማነልበት አገልለገሎት ምክር ያገኛሉ?	1. አዎ → 511 2. የለም	
511	መልሰዉ አዎ ከሆነ የምክር አገልግሎት የሚሰጠዉት ማን ነው?	1. የ ጤና ኤክስቴንሽን ባለሙያ 2. ነርስ 3. አዋላጅ ነርስ 4. ዶክተር 5. መምህር	
512	የጤና ድርጅቱ አገልግሎት አሰጣጥ ምን ይመስላል	1.ጥሩ ነው → 513 2.ጥሩ አይደለም → 514	
513	መልሰዉ ጥሩ ነው ከሆነ ለምን	1. በ ፍጥነት(በ30 ደቂቃ) ውስጥ ያስተናግዳሉ 2. አገልግሎቱ ሁልጊዜ ይሰጣል 3. የሚሰጠው አገልግሎት ሙሉ ነው 4.ሌላ ካለ ይግለፁ_____	
514	መልሰዉ ጥሩ አይደለም ከሆነ ለምን	1. ለማስተናገድ ከ 1 ሰአት በላይ ይፈጃል 2. አገልግሎቱ ሁል ጊዜ አይሰጥም	

		3. የሚሰጠው አገልግሎት ሙሉ አይደለም 4. ሌላ ካለ ይግለፁ_____	
515	የባለሙያወች የስራ ዝግጁነት ምን ይመስላል	1.ዝግጁ ናቸው→ 2.ዝግጁ አይደሉም→	518 519
516	መልሰው ዝግጁ ናቸው ከሆነ ምክናየቱ ምንድን ነው	1.ባለሙወቹ ሁል ጊዜ በስራ ቦታ ይገኛሉ 2.ባለሙያወች ተገልጋዮችን እንደጓደኞቻቸው በማቅረብ አገልግሎት ይሰጣሉ 3. ሌላ ካለ ይግለፁ_____	
517	መልሰው ዝግጁ አይደለም ከሆነ ምክናየቱ ምንድን ነው	1.ባለሙወቹ ሁል ጊዜ በስራ ቦታ አይገኙም 2.ባለሙያወች ተገልጋዮችን እንደጓደኞቻቸው በማቅረብ አገልግሎት አይሰጡም 3. ሌላ ካለ ይግለፁ_____	
518	ህፃኑን ወደ ህፃናት እድገት ክትትል እና ማጎልበት አገልግሎት ክፍል ይዞ ሲሄዱ ያጋጠመወት ችግር አለ	1.አወ→ 2.አይደለም	519
519	መልሰው አወ ከሆነ ምን አይነት ችግር አጋጠመወት አገልግሎቱ የሚሰጥበት ቦታ ሩቅ ነው አገልግሎቱን ለማግኘት ብዙ ጊዜ ይወስዳል ባለሙወቹ ሁል ጊዜ በስራ ቦታ አይገኙም ህፃኑን ወደ ህፃናት እድገት ክትትል እና ማጎልበት አገልግሎት ለመውሰድ በቂ ጊዜ የለኝም	አወ የለም አገልግሎቱ የሚሰጥበት ቦታ ሩቅ ነው.....1 2 አገልግሎቱን ለማግኘት ብዙ ጊዜ ይወስዳል.....1 2 ባለሙወቹ ሁል ጊዜ በስራ ቦታ አይገኙም.....1 2 ህፃኑን ወደ ህፃናት እድገት ክትትል እና ማጎልበት አገልግሎት ለመውሰድ በቂ ጊዜ የለኝም.....1 2	