A Report on Community Diagnosis and Mobilization Carried Out Between 10th and 22nd, March 2023 in Baringo North Sub-County, Baringo County, Kenya

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ABBREVIATIONS
CDX- *Community Diagnosis and Mobilization*
CHEWs- *Community Health Extension Workers*
CHVs- *Community Health Volunteers*
CU- *Community Unit*
KMTC- *Kenya Medical Training College*
SCCHSFP- *Sub-County Community Health Strategy Focal Person*
SCHSC- *Sub-County Health Services Coordinator*

ABSTRACT
Introduction: *The CDX exercise was conducted between* 10th *and* 22nd, *March 2023in Baringo North Sub-County, Baringo County, Kenya by the September 2021 Certificate and Upgrading Diploma Nutrition and Dietetics students from Kenya Medical Training College, Kabarnet Campus. It was majorly intended to equip the students with skills and knowledge on community mobilization and diagnosis, as well as empower the community understand the health and nutrition issues it faces, and solve them using its resources.*
Methodology: *there were three phases during this activity; pre-field, actual field work activities and post- field activities. The CDX used the cross-sectional design. children under the age of five years, pregnant and lactating women, and the elderly were targeted. Community mapping was done using a transect walk in Kasisit and Tiriondonin CUs. A Google Form structured questionnaire helped with data collection in* Barwessa(Kapluk and Keturwo CU) *and* Bartabwa (Kinyach and Kaboskei CU), *while the tools and instruments were pre-tested in* Poi, Kapkiamo *and* Bartolimo CUs. *Analysis was done using the Google Form. Logistical and ethical considerations were made during the activity.*
Results and Conclusion: *18% of the adults either had moderate or severe malnutrition. There was a 7.1% and 19.2% prevalence of severe and moderate malnutrition respectively among young children. Slightly over half of the population (52.3%) had attained secondary school education. Almost three quarters of the respondents were farmers (74%). Due to unreliable rainfall patterns, the harvest was limited. 64.8% of the population used family*

planning. Poor eating habits were established among the residents of Baringo North Sub-County. 67.3% of the respondents obtained their water from the river. 46.3% of the population never treated the water before using it. 5.7% of the population lacked latrines. 21.4% of the respondents used more than 60 minutes to reach the health facilities. 25.9% of the respondent were not satisfied with the health services provided.

Recommendations: *There is a need to strengthen interventions for managing moderate and severe malnutrition among adults and children under the age of five years, with regular mass screenings. Initiate irrigation schemes so as to promote farming throughout the year. Awareness on the benefits of breastfeeding should be created to promote the practice. Easy accessibility to clean water should also be ensured. More healthcare facilities should be constructed so that the residents can easily access them. The Public Health Officers in the county should also ensure that all the residents have latrines.*

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I. INTRODUCTION

BACKGROUND INFORMATION

Community diagnosis is defined as an appraisal of health status of the community in relation to its social physical and biological determinants of health. There is also mobilization of resources within the community as to address the identified health challenges. therefore, there is an evidence-based approach to the community. CDX plays a crucial role in strengthening the linkages between communities and healthcare teams for better healthcare.

Baringo North has a population of 104,87 according to the 2019 Kenya National Bureau of Statistics census. It covers 1,629 KM², with a population density of 64.37/ KM². according to the Baringo County SMART survey Report in July 2019, Baringo North was reported to have different income sources as follows: casual labor (34.8%), selling crops (31.9%), and permanent job (11.2%).1.5% of the pregnant and lactating women in Baringo North had MUAC< 210MM, according to the survey findings. Baringo North faces food insecurity due to unpredictable weather patterns. Water access is also an issue. Based on the terrain, access to some areas of the sub-county is difficult. Some members of the community still practice open defecation.

PURPOSE

Assess the health and nutrition status of children less than 5 years, pregnant and lactating women and elderly in Baringo North sub-county.

OBJECTIVES

   i. Todetermine the nutritional status of the children less than 5 years, pregnant and lactating women and elderly in Baringo North sub-county
  ii. To assess the food security status
 iii. To establish the water supply
 iv. To assess the utilization of health care services
  v. To determine the immunization status of the children
 vi. To assess the hygiene and sanitisation
 vii. To access the availability, accessibility and utilization of infrastructure
viii. To determine the health status
 ix. To assess the social-cultural status of the community

PROCESS OBJECTIVES

   i. Conduct a community entry.
  ii. Conduct data collection as well as analysis
 iii. Evaluate the sub-county's health care services.
 iv. Give feedback to the key stakeholders.

II. METHODOLOGY AND ORGANIZATION

ORGANIZATION

The CDX commenced with the stakeholders' engagement, with the intention of creating rapport, as well as creating awareness about the purpose, objectives, and methods of the CDX. The SCCHSFP was the lead person in this, also responsible for trickling the information downward, even to the community units involved. Second, field work activities were also part of the CDX, which started with training the students so that they could be familiar with what CDX is all about. This took three days. The data collection tool was constructed after a transect walk in Tiriondonin and

Kasisit CUs to observe and listen to the people's view on resources available and their way of living. The data collection instruments were pretested in Poi, Kapkiamoand BartolimoCUsduring this stage.Actual data collection was also part of this stage. Third, post-field activities consisted of cleaning the data and its entry, analysis, report writing and information dissemination.

Disseminating the feedback was done through a baraza that was organized by the SCCHSFP in Bartolimo CU and Barwessa CU (Mother to Mother Support Group), involving all the relevant stakeholders. There was the representation of SCHSC, SCCHSFP, CHEWs, CHVs, chiefs, and nutritionists. There was also a representation from the different wards. The health indicators of concern during the data collection were highlighted and discussed comprehensively, as a foundation for all the needed changes.

Students undertaking nutrition and dietetics from Kabarnet KMTC were the key participants in the CDX, which is a pertinent component of their course' fulfilment. They were actively involved in examining and suggesting solutions to the identified health concerns by proposing effective interventions. Through this exercise, the health care difficulties of this community were visualized in a much better way. The students were not familiar with the marginalized communities, and reaching the households were very difficult based on poor road networks and the terrain. This exercise enabled the students to familiarize themselves with dissemination, communication, report writing, data collection and data analysis skills.

STUDY DESIGN
The community diagnosis and mobilization adopted a cross-sectional descriptive study design. This enabled an overview of the community at the particular point in time.

STUDY AREA
The area of the study was Baringo North Sub-County in Baringo County. The wards included during the survey, and community units selected were as follows:
   a) Kabartonjo:**Tiriondonin CU**
   b) SaimoKipsaraman: **Kasisit and Bartolimo CU**
   c) Kipsaraman: **Poi and KapkiamoCU**
   d) Barwessa: **Kapluk and Keturwo CU**
   e) Bartabwa: **Kinyach and Kaboskei CU**

STUDY POPULATION
The study population entailed of the pregnant and lactating women, children under 5 years of age, and the elderly.

SAMPLING PROCEDURE
Baringo North Sub-County was purposively selected based on health indicators. Simple random sampling was used when selecting the households for participation in the CDX.

DATA COLLECTION INSTRUMENTS AND TOOLS
A semi-structured, content-validated questionnaire was used for data collection through a Google Form. Observation was majorly used during the pretesting phase. The data collection tool used during the CDX entailed of the following sections:
   a) Anthropometric measurements.
   b) Social economic and demographic.
   c) Maternal and child care practices.
   d) Food security and feeding practices
   e) Health and environmental sanitation.
There was also use of the height board, weighing scale and MUAC tape.

PRETESTING OF THE INSTRUMENTS AND TOOLS' CALIBRATION
Poi, Kapkiamo and Bartolimo CUs were used when pretesting the CDX instruments and tools. This aimed at ensuring their reliability and accuracy.

DATA COLLECTION PROCEDURE
A semi-structured, content validated questionnaire was used for data collection. The sections of the questionnaire were: Anthropometric measurements, Social economic and demographic, Maternal and child care practices, Food security and feeding practices, and Health and environmental sanitation.
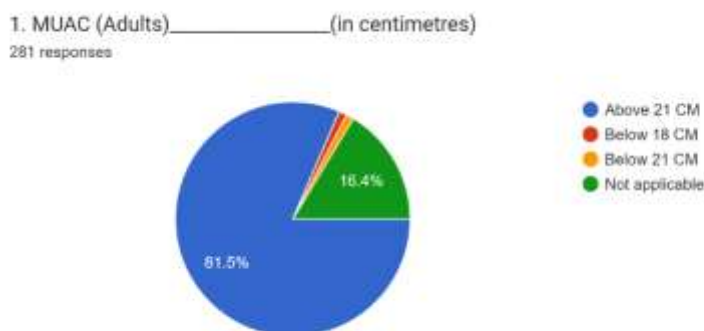
DATA MANAGEMENT AND ANALYSIS

The Google Form, through which the data was collected, was relied on for data analysis.

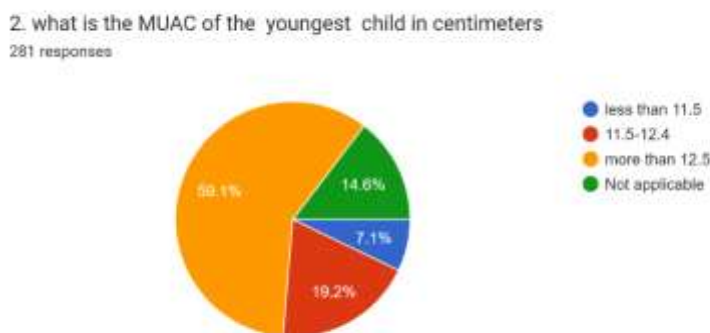## LOGISTICAL AND ETHICAL CONSIDERATIONS

Community entry started with the SCHSC, who then made logistical arrangements with the SCCHSFP. The local authorities were also informed adequately about the CDX. The respondents gave their verbal consent before the data collection process. There was voluntary participation. Confidentiality was upheld during the entire CDX process. The feedback was disseminated to the community for their action.

III. FINDINGS

ANTHROPOMETRIC MEASUREMENTS

1. MUAC (Adults)_____(in centimetres)
281 responses

- Above 21 CM
- Below 18 CM
- Below 21 CM
- Not applicable

81.5% 16.4%

The findings collected from the respondents showed that the MUAC for adults above 21cm was 82% of the population. The MUAC for the young children more than 12.5cm was 59%, those ranging between 11.5 - 12.4 cm was 19.2% (moderately acute malnutrition (MAM), and those less than 11.5 was 7.1%.

2. what is the MUAC of the youngest child in centimeters
281 responses

- less than 11.5
- 11.5-12.4
- more than 12.5
- Not applicable

59.1% 14.6% 7.1% 19.2%

The gender of the youngest child was recorded as follows male 50.6% and 34.2 % female.

3. What is the gender of the youngest child?
281 responses

- Male
- Female
- Not applicable

34.2% 9.3% 56.6%
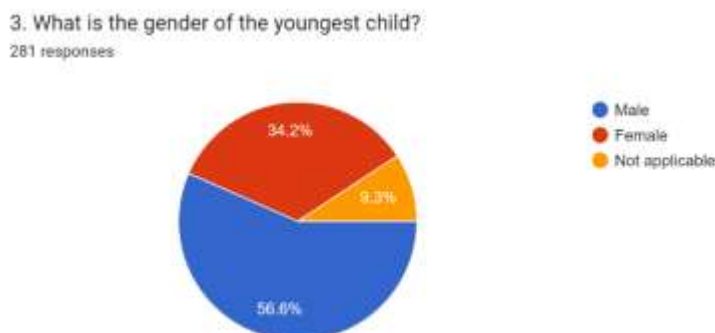
SOCIAL – DEMOGRAPHIC INFORMATION
Age

Age of the respondents was recorded as follows 44.8% (15-25) years, followed by age group of 26-35 years (41.3%), 36-50 (13.5%) and less than 15 years (0.4%)

7. How old are you?
281 responses

- 15-25
- 26-35
- less than 15
- 36-50
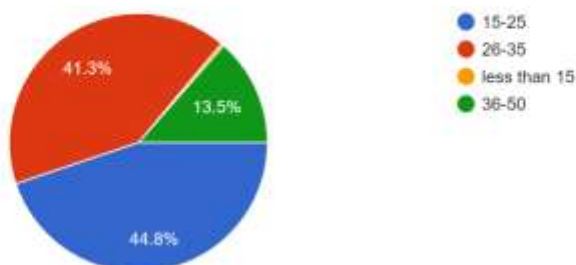
Marital status
Majority (82.69%) of the population in Baringo North Sub-County were married while 14.9% were single, 0.27% were separated and less than 0.2% were divorced and widowed.

8. What is your marital status?
281 responses

- Married
- Single
- Separated
- Divorced
- Widow
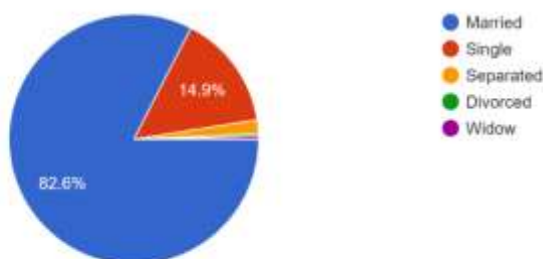
Education
Majority of the people in Baringo North Sub-County (52.3%)had attained secondary education level, 34.5% had attained primary level and 13.8% had attained tertiary level while less than 0.4% having never attended school.

9. What is your level of education?
281 responses

- Primary
- Secondary
- Tertiary
- None
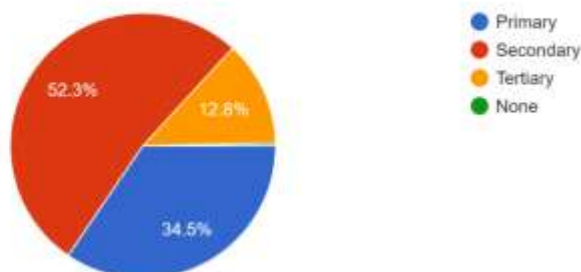
Religion
Majority of the people (99.3 %) of the population were Christians while non-Christians and pagans were 0.7%.

10. What is your religion?

281 responses
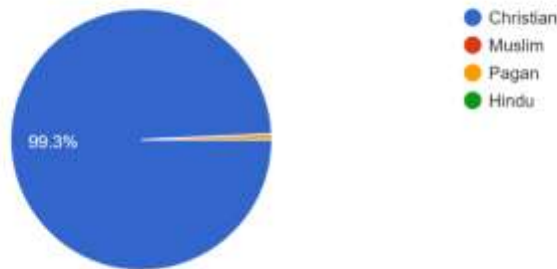
Family size

34.5% of the respondents had 4-5 people in the household, 30.67% had 2-3 persons, 27.4% has 6-8 persons, and 7.5% has 9+ number of persons in the household.

11. What is the size of your family?

281 responses
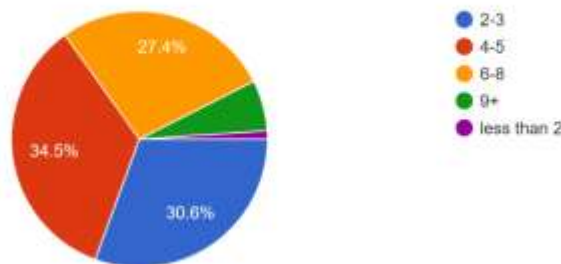
Economic Activity

Almost three quarters of the respondents were farmers (74%), 14.6% were business people, 13.2% were in livestock keeping, 12.5% were in casual employment and the employed were 15 (5.3%). Therefore, majority of the population were farmers producing their own food but the food was not enough for their households.

9

12. What is your economic activity?

281 responses
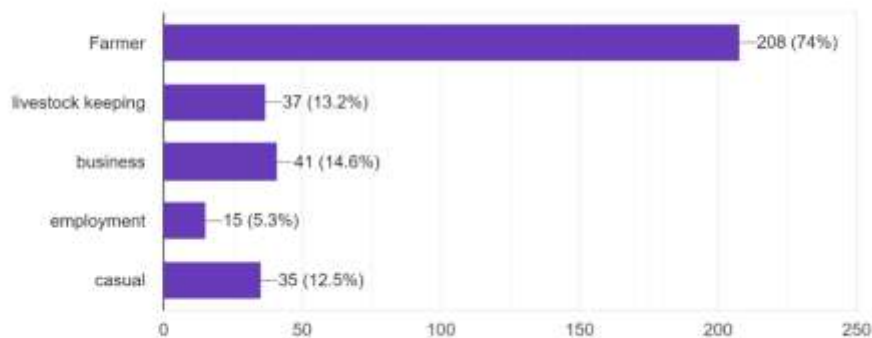
Majority of the elderly were farmers (63.1%). 46.2% received help from children, 23.1% had retirement benefits, 7.7% were on pension and 3.1% were being assisted by doners.
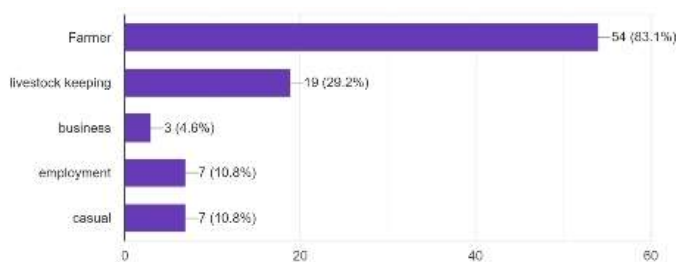
ELDERLY CARE PRACTICE
More than half of the elderly were living with the children (64.6%). 53.8% lived with the grandchildren, 36.9% with spouses, 7.7% were living alone, and 6.2% lived with relatives.
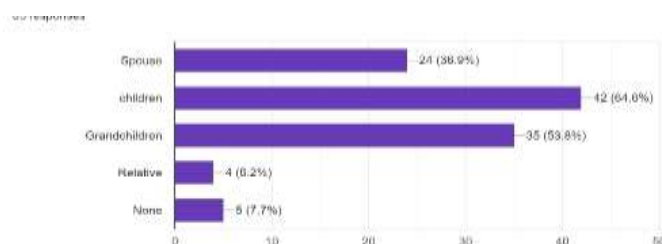
Most of the elderly in Baringo North Sub-County had social support challenges (47.7%), 44.6% had health access challenges, 40% had nutrition challenges, and only 16.9% quoted no challenges.the elderly commented the following regarding healthcare services: 7.7% commented on practice of proper health, 7.7% supplements of micronutrients, 6.2% supply of drugs, and provision of mosquito net was mentioned by 4.6%. 4.6% desired improvement of infrastructure, while 3.2% wished for construction of a borehole.

MATERNAL AND CHILD CARE
Family Planning
Most of the people (64.8%) used family planning while (35.2%) did not use. This remains a challenge due to cultural beliefs and ignorance. Majority of the people used family planning since it was easy to access.

13. Do you use family planning?
281 responses
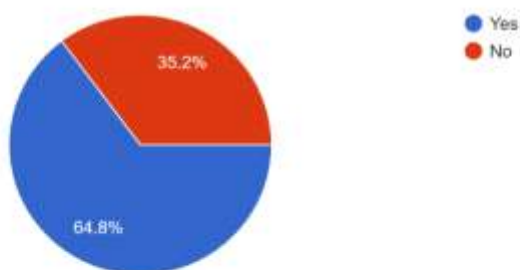
Knowledge on modern methods of contraceptives:

14. If yes, Which method of family planning are you using?
281 responses

- Pills
- injectables-debo
- implants
- IUCD
- Not applicable
- Natural
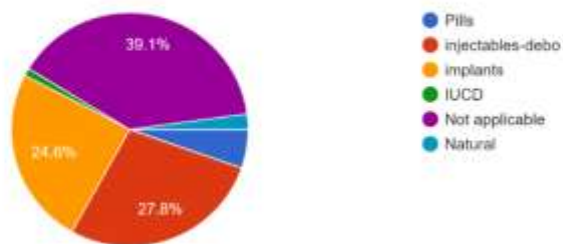
Contraceptives	Percentage
Injectable debo	27.8
Implant	24.6
Pills	5.6
Iucds	0.2
Natural	3.7
Pregnant and not using FP	39.1
TOTAL	100

Antenatal care

Most of the pregnant women (97.5%)visited antenatal clinics. 47.7% had visited the antenatal clinics more than three times. This shows that they had high level of awareness concerning antenatal clinics.

16. Did you visit ANC while pregnant?
281 responses

- Yes
- No

17. If yes, how many times did you visit ANC while pregnant?
281 responses
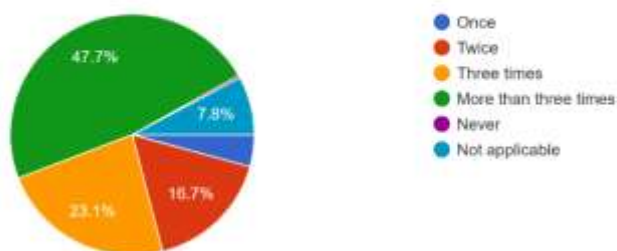
Post-natal Care
The highest percentage of the women (81.5%) visited post-natal clinics while 8.9%did not visit.

18. Did you visit post-natal care after delivery?
281 responses
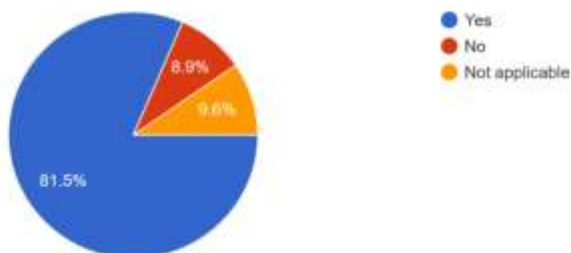
Immunization
    85.8% of the children had been immunized as per the KEPI schedule while 2.8% had not received immunizationdue to vaccines being out of stock,long distance to health facilities and cultural hindrances such as use of herbal medicine.

19. Did your child get all the immunization as per the KEPI schedule?
281 responses
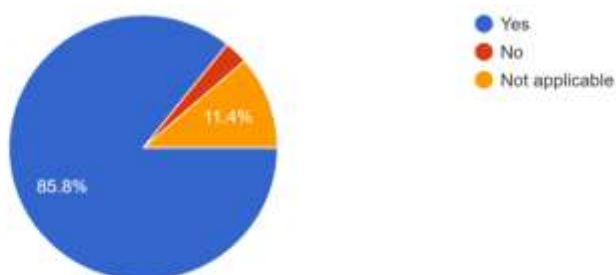
Child Care Practices
Most children in the community ranged between 13-24 months (24.6%) while 37-59 months took the least number of children in the community (8.9%)

21. How old is your youngest child ?(in months)
281 responses

- 0-6
- 7-12
- 13-24
- 25-36
- 37-59
- Not aplicable
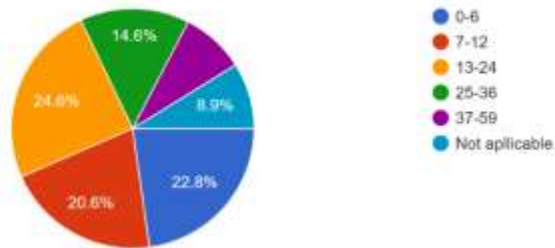
Only 15.7% of the population had stopped breastfeeding the youngest child after two years. 12.5% of the respondents had stopped as early as between 0-6 months.

24. At what age did you stop breastfeeding your youngest child?
281 responses

- 0-6
- 7-12
- 13-24
- After 2 years
- Not applicable
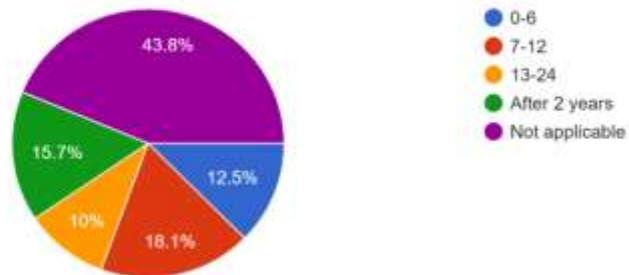
33.1% of the respondents had introduced complementary feeding after six months.14.9% introduced complementary feeding before six months because most of them spent more time in farming,in addition to ignorance.

23. How long did you breastfed your youngest child before introducing complementary feeding? (exclusive breastfeeding)
281 responses

- at six months
- after six months
- below six months
- not applicable
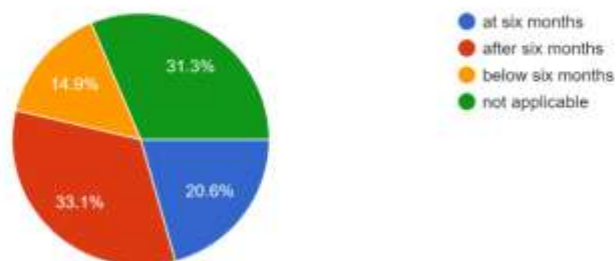
Most of the lactating mothers did not experience complications during breastfeeding (77.9%) while 13.9% experienced complications, for example, breast engorgement, mastitis,sore nipples and cracked nipples.

25. Have you ever experienced any complication when breastfeeding your youngest child?
281 responses
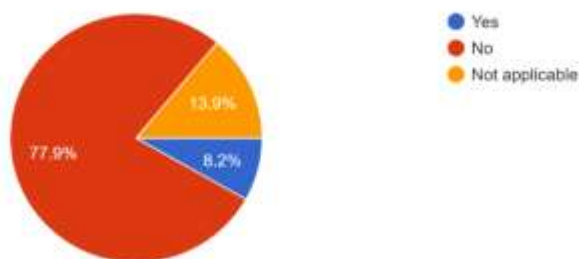
FOOD SECURITY AND FEEDING PRACTICES
85.1% of people had adequate access to agricultural land for cultivation while 14.9% had no access to land.
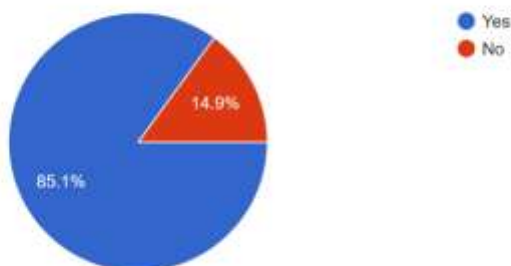
A larger population obtained 2-5 food sacks annually, accounting to 54.4% of the population. 12.8% of the population obtained less than a sack annually.
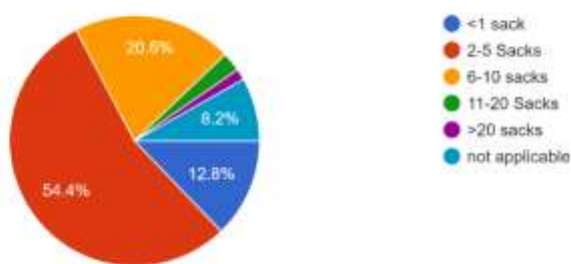

A large number of people(76.2%) stored their farm produce using traditional storage methods as it is affordable while 10% of the population used special bags of storage. In the survey, no one used modern storage methods.
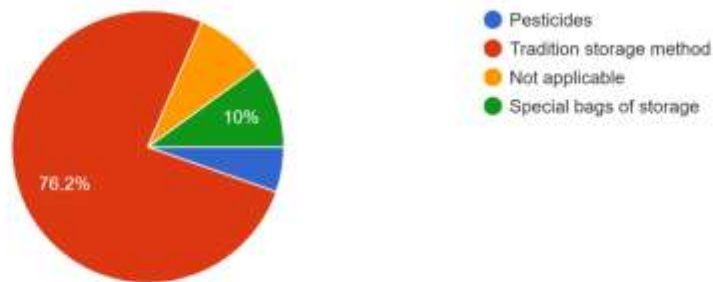
According to the research carried out, a percentage of 49.8%were affected by poor rainfall pattern which interfered with their harvest as the crops usually withered. 22.4% of the population were affected by pest which have adverse and damaging impacts on agricultural production which can be a nuisance and bring health hazards to humans. 14.6% lacked seeds and fertilizers which hindered their cultivation, forcing them to save some seeds which they had harvested for their daily consumption. Some lacked funds and water, and 8.9% lacked land for cultivation for production.
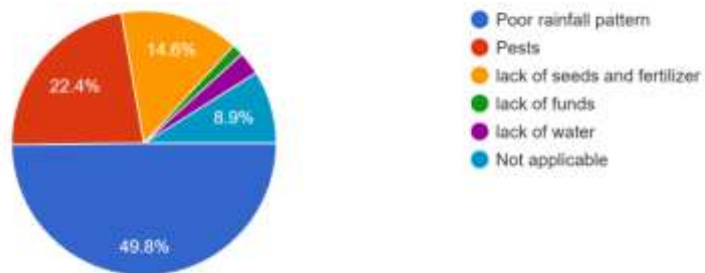
53% of population in Baringo North Sub-County used boiling as a cooking method because it is cheap and easy while 21.7% used frying because this type of cooking method is effective to them. There was lack of awareness on diverse cooking methods.
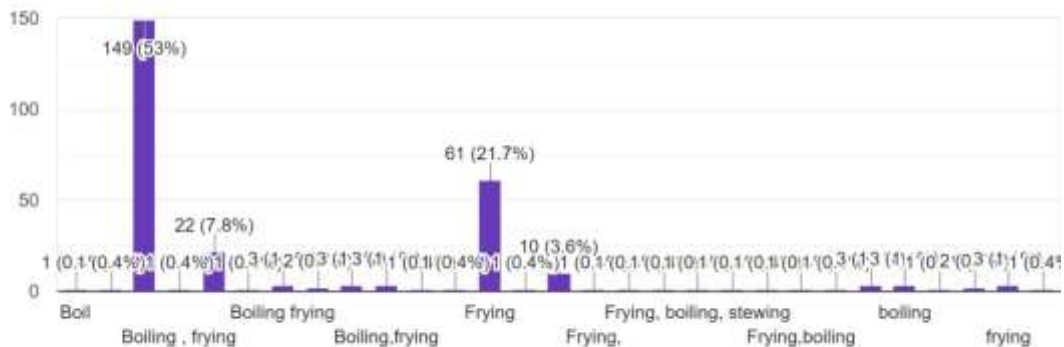
A large number of people took at most 3 meals a day (breakfast, lunch and breakfast) which is equivalent to 64.4% of the population, while 20% of the people took two meals a day.
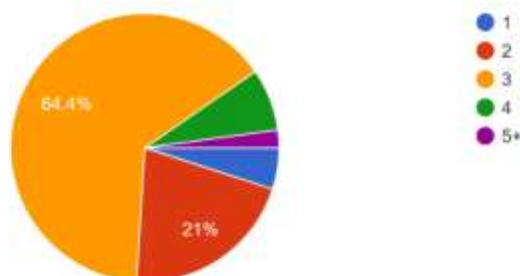
Most schools in Baringo North Sub-County (63.8%) have school feeding program while 35.2% of schools did not have the school feeding program.
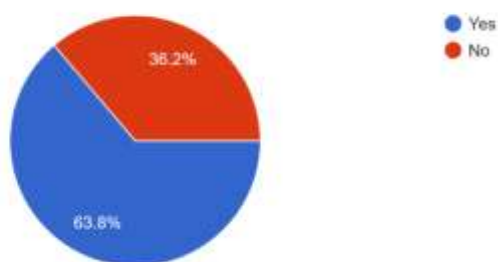
HEALTH AND ENVIRONMENTAL SANITATION
Source of Water
The respondents were asked what their source of water was, and majority (67.3%)responded it was the river, followed by 24.6% from tap,borehole 17.8%, rainwater 5% and least from the springs.
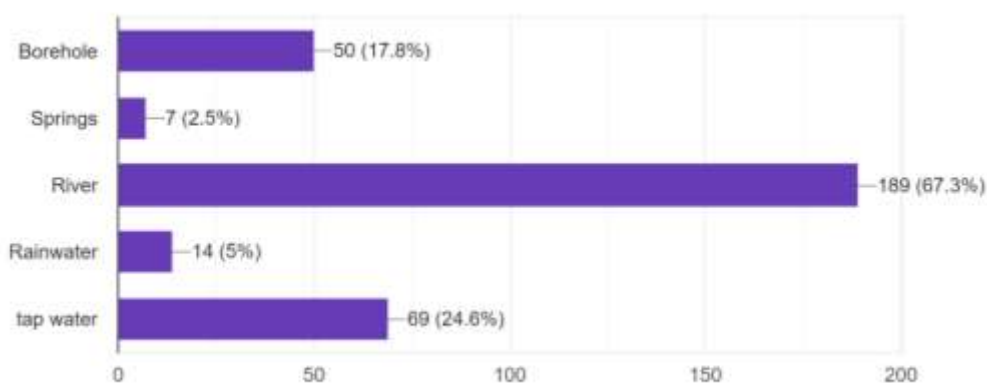
Time Taken to the Water Source
The findings showed that most the respondents (44.5%) took 30-60minutes to access water to and from. 32.4% took more than 60 minutes, while 23.1% took less than 30 minutes.
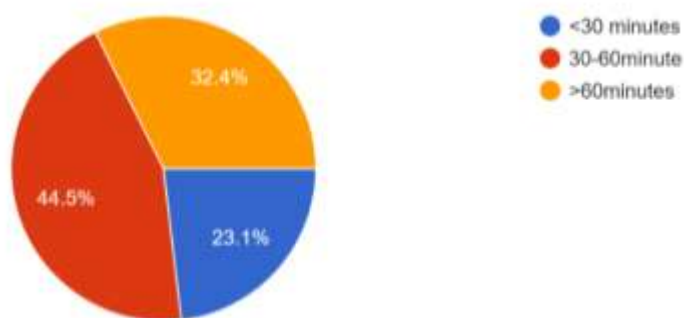
Treatments of Water

According to the findings, 53.7% of the population treated water before drinking while 46.3% did not treat the water.
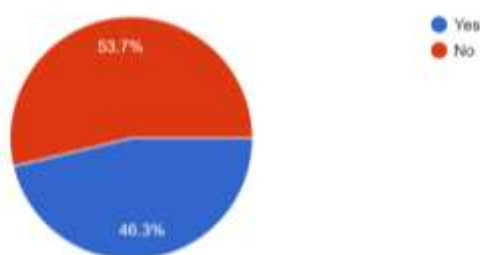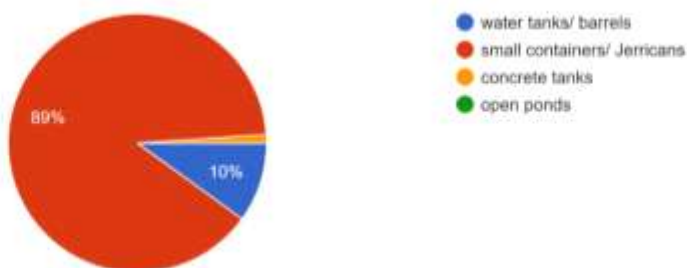

44.8% of respondents treated the water using boiling, with smaller proportions of the population using water guards, chlorine and filtration.
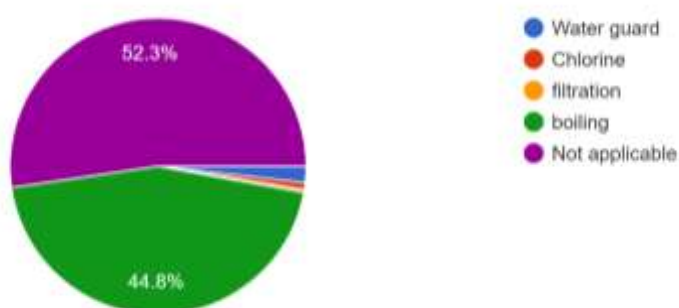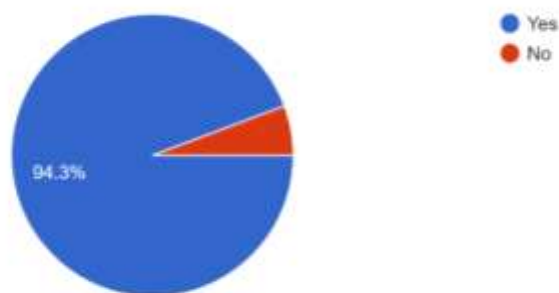

Storage of Water

The findings obtained showed that most of the respondents (89%) stored their water in the jerricans, 10% stored in water tanks/barrels, and the least was concrete tanks (1%).
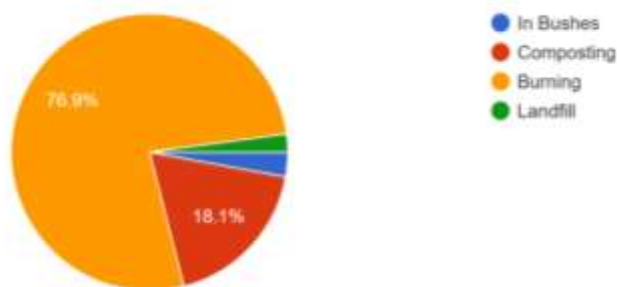

Presence of Latrines

Majority of respondents had latrines (94.3%) while the rest didnot have (5.7%).

Household Waste Disposal

76.9% of respondents burnt their household waste, 18.1% used acompost pit, and the rest (5%) disposed in bushes and landfills.


Handwashing

Majority of the respondents (56.9%) washed their hands occasionally, 41.3% before eating,32% after visiting the latrine, 19.2% before preparing the food,11.7% after changing the baby's diaper and 1.4% did not wash their hands.
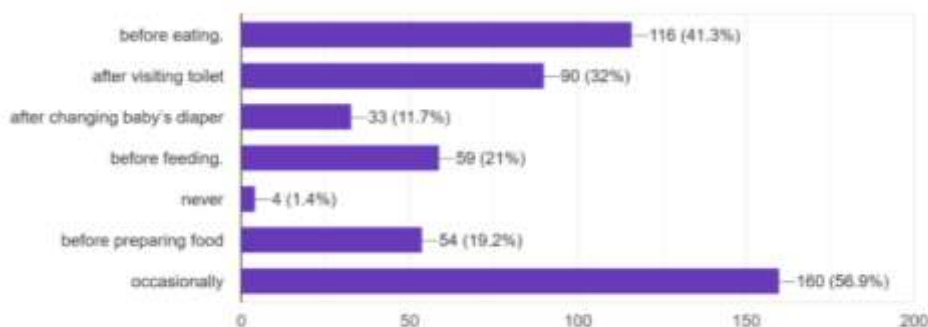

Time Taken to the Health Facility

The findings obtained showed that 39.5% used less than 30minutes,39.1% used 30-60minutes and the rest (21.4%) used more than 60minutes to reach the health facility.

- ● <30 minutes
- ● 30-60minute
- ● >60minutes
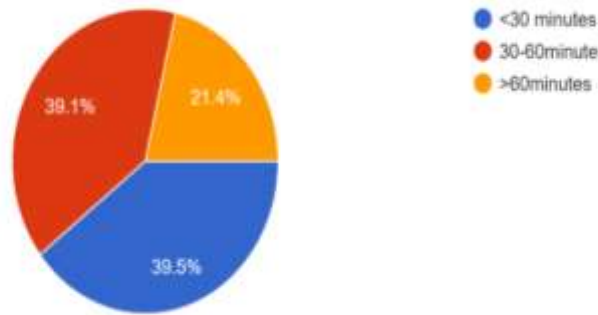
Frequency of Visiting the Health Facility Within the Last Three Months
Data obtained showed that 28.8% had visited the health facility twice,24.2% more than three times,19.6% three times,17.8% once and 9.6% had not visited.

- ● None
- ● Once
- ● Twice
- ● three times
- ● more than three times
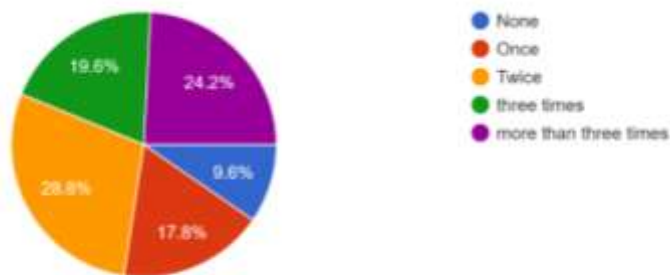
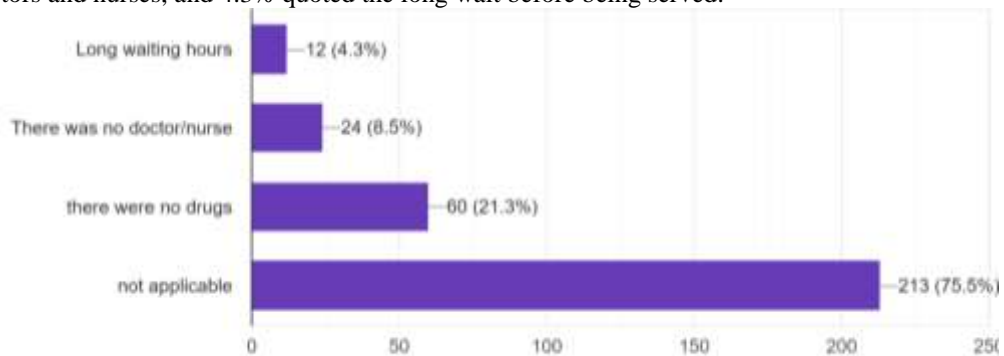**Satisfaction with Health Services Offered**
The findings obtained showed most of them (74.1%)were satisfied and therefore had no complains, while 25.9% were not satisfied.
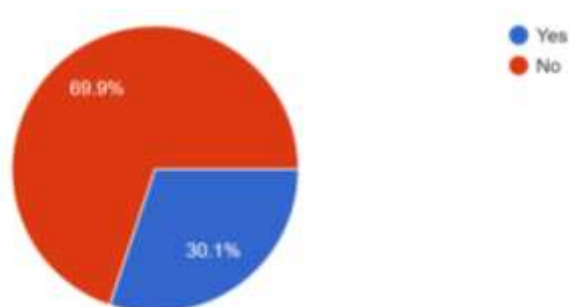

- ● Yes
- ● No
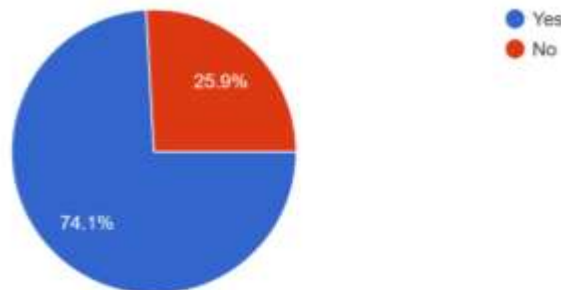
Reasons for dissatisfaction included lack of drugs that was quoted by 21.3% of the population, 8.5% said there were no doctors and nurses, and 4.3% quoted the long wait before being served.
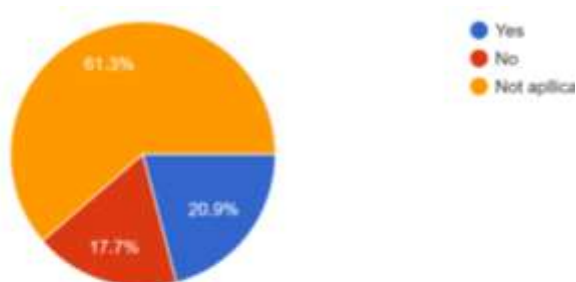

Visits by the Health Care Workers
Majority (69.9%) responded that no health care workers ever visited their homes while 30.1% said that the health care workers visit them.

20.9% of the respondents had received nutritional assessments and education during the visits while 17.7% had not.

IV. CONCLUSION AND RECOMMENDATIONS

Conclusion

18% of the adults either had moderate or severe malnutrition. There was a 7.1% and 19.2% prevalence of severe and moderate malnutrition respectively among young children. 44.8% and 41.3% of the respondents were aged 15-25 and 26- 35 years respectively, constituting the highest proportions of the population. Slightly over half of the population (52.3%) had attained secondary school education.

Almost three quarters of the respondents were farmers (74%) and 13.2% engaged in livestock keeping. However, due to unreliable rainfall patterns, the harvest was limited, and this affected 49.8% of the population. Moreover, not all the respondents had agricultural land (14.9%). Slightly over half of the respondents (54.4%), obtained 2-5 sacks of food annually after the harvests. Traditional storage methods were used by majority of the respondents (76.2%). For those that had cultivation land, farming was often hindered by lack of seeds and fertilizer, funds and water, and pests.

64.8% of the population used family planning. 7.5% of the households had over 9 family members. Cultural beliefs and ignorance were the core causes of failure to use family. There was a high uptake of antenatal care among pregnant women at 97.5%, and post-natal care at 81.5%. moreover, there was a high immunization rate among children at 85.8%. Only 15.7% of the population had stopped breastfeeding the youngest child after two years.

Poor eating habits were established among the residents of Baringo North Sub-County, where 35.6% of the population consumed less than the recommended three main meals in a day. 67.3% of the respondents obtained their water from the river, and this consumed time a lot of the respondents' time, where only 23.1% of the respondents took less than 30 minutes to and from the river. Again, 46.3% of the population never treated the water before using it. 5.7% of the population lacked latrines. While majority of the respondents had the practice of washing their hands before preparing food, after visiting the toilet, or before eating, 1.4% of the population never washed their hands.

21.4% of the respondents used more than 60 minutes to reach the health facilities, while only 39.5% of the residents used less than 30 minutes. 9.6% of the residents had not attended the health facilities within the previous three months. 25.9% of the respondent were not satisfied with the health services provided, and because of lack of drugs, inadequate healthcare professionals, and long wait time before being served. 20.9% of the respondents had received nutrition assessments and education.

Recommendations

1. Strengthen interventions for managing moderate and severe malnutrition among adults and children under the age of five years, with regular mass screenings.
2. Initiate health care programs targeting the early and middle adulthood.
3. Initiate irrigation schemes and create awareness to residents to ensure that the available agricultural land is utilized effectively for adequate produce despite the irregular rainfall patterns. Moreover, efforts should be made to ensure that farmers are provides with seeds so that farming can be more effective. The people should also adopt modern farming technology and this would improve on their production for example kitchen gardening technique and this would solve and address the issue of food insecurity.
4. Collaboration between stakeholders to create awareness campaigns on the need for family planning
5. We would recommend for a technical training collage which will help the people of Baringo north sub-county to attain a tertiary level education which will boost their economic status.
6. Create awareness on the benefits of breastfeeding, to ensure that mother exclusively breastfeed for six months and up to 2 years. Mother to mother support groups should also be initiated and supported.
7. The government, together with other stakeholders should unite efforts to ensure that all the residents in Baringo North Sub-County have easy accessibility to clean water. In addition, more awareness should be created on the need of treating water before consuming it.
8. More awareness creation is necessary for 100% handwashing practice amongst the residents of Baringo North Sub-County.
9. More healthcare facilities should be constructed so that the residents can easily access them. Moreover, the management at the healthcare facilities should ensure that there are adequate staff, drugs, and that patients are served within shorter periods of time. More nutrition education and counselling was also required among the residents.
10. The Public Health Officers in the county should also ensure that all the residents have latrines for human waste disposal, since open defecation might cause pollution of rivers and other water sources.

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