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**REPUBLIC OF MALAWI**

**MINISTRY OF GENDER, COMMUNITY DEVELOPMENT AND SOCIAL WELFARE**

**INVESTING IN EARLY YEARS PROJECT**

**CONTRACT REFERENCE NO: MW-MGCDSW-251578-CS-CQS**

**ANNUAL SURVEY**

**DRAFT REPORT**

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**ACRONYMS**

ANC : Antenatal Care

CAPI : Computer Assisted Personal Interview

CBCC : Community Based Childcare Center

CERC : Contingent Emergency Response Component

DIP : District Investment Plan

DLI : Disbursement Linked Indicator

DNHA : Department of Nutrition, HIV and AIDS

DPD : Director of Planning and Development

DPT : District Project Team

ECD : Early Childhood Development

EFF : Egg and/or Flesh Food

GEMS : Geostationary Enabling Monitoring System

GFF : Global Financing Facility

GIS : Geographical Information System

GoM : Government of Malawi

HH : Household

HIV : Human Immunodeficiency Syndrome

IDA : International Development Association

IEYP : Investing in Early Years Project

IFA : Iron and Folic Acid

IHF : Integrated Homestead Farming

IYCF : Infant and Young Child Feeding

LAPE : LAPE Consultants Ltd

MAD : Minimum Acceptable Diet

MCBN : Malawi Community Based Nutrition

MDAT : Malawi Developmental Assessment Tool

MDD : Minimum Dietary Diversity

MELQO : Measuring Early Learning Quality Outcomes

MGCDSW : Ministry of Gender, Community Development and Social Welfare

MMF : Minimum Meal Frequency

MNP : Micronutrient Powders

NNIS : National Nutrition Information System

PFT : Project Facilitation Team

RA : Research Assistant

RF : Results Framework

SPSS : Statistical Package for Social Sciences

TA : Traditional Authority

ToR : Terms of Reference

VSL : Village Savings and Loans

**EXECUTIVE SUMMARY**

The Investing in Early Years Project (IEYP), a Government of Malawi (GoM) Project, started in December 2018 and will end in June 2024. The six-year project’s goal is to magnify the scope, scale, coverage, and quality of on-going nutrition interventions, incorporating early stimulation interventions, and improve coverage and quality of early learning interventions. The Project Development Objective (PDO) is to improve coverage and utilization of early child development services with a focus on nutrition, stimulation, and early learning from conception to 59 months in selected districts of Malawi. The project is being carried out in 13 districts. IEYP endeavors to strengthen health and nutrition activities within Community Based Childcare Centre (CBCCs) and Primary Health Centres (PHCs). The primary target groups for community-based nutrition and early stimulation interventions include pregnant and lactating women, adolescent girls, and 0-36 month old children. The early learning interventions target 36-59 months old children.

IEYP has four components that include: (i) Community-based nutrition and early stimulation interventions, implemented in Zomba, Likoma, and Mwanza districts; (ii) Center-based early learning, nutrition and health interventions, implemented in Rumphi, Mchinji, Ntcheu, Mangochi, Machinga, Neno and Chikwawa districts whilst Dowa, Thyolo and Chiradzulu districts are only implementing early learning interventions; (iii) multi-sectoral coordination, capacity and system strengthening; and (iv) Contingent Emergency Response Component (CERC).

The Annual Survey was commissioned to collect data for all the result and output level project indicators in line with the Results Framework (RF) compared with IEYPs Baseline and Midline thereby providing factual information to appraise the progress of the project implementation. The Annual Survey used an embedded mixed methods approach, collecting primary and secondary data mirroring those used in the midline and baseline surveys. The approaches included a desk review, household survey, and the Malawi Development Assessment Tool (MDAT) and Measuring Early Learning Quality Outcomes (MELQO) assessments. All statistical analyses were done using Statistical Package for Social Sciences (SPSS) software. Syntax programs were designed for data cleaning and analysis.

The Annual Survey methodology was designed to enhance quality and eliminate or limit potential challenges in data collection. The methodology proved to be very effective as no major problems were experienced during data collection and analysis.

1. Research Assistants (RAs) included previously trained health care professionals such as medical doctors and nurses in the MDAT and MELQO tools, Computer Assisted Personal Interviews (CAPI).
2. The geographical positions of the IEYP beneficiaries helped in minimizing quality concerns for the data and ensured timely implementation of the data collection exercise.

The HH annual survey, reached out to a statistically midline-comparable sample of households with infants (0-23 months) and adolescent girls (10-19 years) to report on the status of health and nutrition indicators in the results framework. Over the project implementing years, the proportion of households practicing integrated household farming, a strategy for dietary diversity has progressively increased from 28.0% to 37.3%, the current state of 45.2%. The annual survey reports improvements in the experiences of pregnant women. Specifically, gains have been made in the following interventions; early initiation to antenatal care (from 4.1 to 3.8 gestational months), and consequently, the number of visits to antenatal clinic (from 4.3 to 4.4), duration of folic acid intake (from 3.4 to 3.6 months), and dissemination of information on optimal nutrition during pregnancy (from 94% to 96%). Health surveillance assistants and cluster leaders' provision of information on optimal nutrition during pregnancy increased from 31.9% to 35.7%, and from 3.3% to 24.4% respectively.

The proportion of children being exclusively breastfed progressively improved from the baseline (60%) to midline (66%) to the current (70.4%). Relatedly, the proportion of children receiving at least five of the eight food groups increased from 14.2% in the midline to 29.0% in the annual survey. The proportion of infants aged 9-23 months receiving minimum meal frequency increased from 13.8% to 25.2%. However, the proportion of infants aged 6-8 months meeting the minimum meal frequency dropped from 95.5% to 76.3 and hence calls for an improvement. All in all, the proportion of children aged 6-23months receiving the minimum acceptable increased from 13% to 20.08% to 23.3%

The annual survey reports an increase in the uptake of various health-related interventions amongst targeted adolescent girls. Positive progress has been made in the uptake of HPV (from 32.9% to 72.3%), iron folate supplementation (from 20.2% to 49.9%), de-worming (from 26.9% to 80.5%) and HIV testing (from 9.8% to 24.7%) by adolescent girls.

The annual survey employed the MDAT to establish children’s development, thus whether they were developmentally on track or delayed. On the other hand, MELQO, which was administered to the same children immediately after the MDAT is a measure for assessing children’s literacy and numeracy competencies.

In total, slightly more than half (57.1%) of the children assessed were girls. This trend was true for most of the districts with just a few depicting more boys assessed. Thus Neno had slightly less than half (48.5%) of girl participants while Mangochi had the highest (67.8%).

To include more children who had been part of a CBCC for a considerable time, the survey sampled more from the 48-59 age category. In general, in the two older categories, the 48-59 was represented more in most of the districts. Almost a quarter of the children were in the combined age category of 36–47 months while three quarters were in the combined age category of 48-59 months.

The majority of the children’s biological fathers (96.1%) and mother (99%) were alive. However, it suggests that a quarter of the children were not living with their biological father. In terms of living arrangements, only three-quarters (73.6%) of the children were staying with their father.

Overall, 25 % of the households had books for children at home. However, only 50 % of the households indicating to have books reported that children ever read the books. The majority (98.2%) of the children were taught at school in the language dialect they spoke at home. Slightly less than half (44.8%) were exposed or were able to operate household items.

The annual survey wanted to establish the status of child development among the children screened using the MDAT. The results depict that 71% of the children were developmentally delayed in the four domains combined. When compared with baseline and midline, the annual surveys’ score was higher, suggesting an improvement.

Children were assessed on literacy and numeracy, one of the core indicators of the IEYP. The MELQO modules on numeracy and literacy were used. In the analysis, composite score for numeracy and literacy depicts that children’s scores have been improving. Those attaining more than 50% at baseline was 17%, midline 26.4% while at the 2024 annual survey, was 31.5%.

**Conclusions**

The annual survey depicts steady progress towards accomplishing the end targets of the IEYP. Several indicators have exceeded their end-of-project targets such as children aged 6-23 months receiving a minimum acceptable diet, children aged 0-6 months who were exclusively breastfed, household practicing integrated homestead farming, children achieving at least 50% score on literacy and numeracy among other, and several that have just reached the target rate. A similar trend is observed in other aspects of the project, such children as a decrease in children who are developmentally delayed.

**Recommendations**

While the project is making progress towards achieving its targets, there are various areas of the IEYP activities that are not performing as well but would do better. These areas include dietary diversity for children aged 6-8 months and logistical challenges towards micronutrient supplementation amongst children aged 6-23 months.

**SUMMARY COMPARISON OF KEY INDICATOR RESULTS AT BASELINE, MIDLINE, AND 2024 ANNUAL SURVEY.**

Table 1: Baseline, Midline & Annual Surveys’ key indicator results

| **Indicator Level** | **Indicator** | **Baseline**[[1]](#footnote-2) | **Midline (2022)** | **Annual Survey (2024)** | **End of Project Target (2024)** | **Progress towards end target at 2024 Annual** |
| --- | --- | --- | --- | --- | --- | --- |
| **Project Development Indicator** | Children aged 6 – 23 months receiving a minimum acceptable diet (Percentage) | 13 | 20.1 | **23.3** | 20 | 116.5% |
| Children aged 0 – 6 months who were exclusively breastfed (Percentage) | 60 | 66.2 | **70.4** | 68 | 103% |
| Children aged 36-59 months who completed at least one year of early learning in CBCCs (Percentage). | 0 | 82.3 | **87.1** | 50 | 174.2% |
| Project beneficiaries who are children 0-59 months, adolescent girls 11-19 years and pregnant women (Number) | 0 | 879,901 | **2,003,631** | 2,600,000 | 71.1% |
| **Intermediate Result Indicators** | Children aged 48 – 59 months achieved at least 50% score on literacy and numeracy components of the MDAT (Percentage) | 17 | 26.4 | **31.5** | 30 | 105% |
| Households practicing integrated homestead farming (Percentage) | 28 | 37.3 | **45.2** | 38 | 118.8% |
| Children aged 6 – 24 months who received micronutrient powder supplementation (Percentage) | 5 | 16.1 | **14.4** | 25 | 56.7% |
| Households where children 0 – 36 months play with toys made from locally available materials (Percentage) | 43 | 59.5 | **55.5** | 58 | 95.7% |
| Adolescent girls aged 10-19 years who received iron-folate supplementation (Number) | 0 | 57,468 | **936, 199** | 1,700,000 | 50.1% |
| Care group cluster leaders and promoters who received an integrated training package (Percentage) | 0 | 36.9 | **93.9** | 80 | 117.4% |
| Model CBCCs upgraded and equipped (Number) | 0 | 0 | **76** | 150 | 51% |
| Model CBCCs in target communities engaged in VSL activities (Number) | 0 | 150 | **150** | 150 | 100% |
| CBCC caregivers and mentors that received an integrated training package (Percentage) | 0 | 44 | **83.6** | 80 | 104.5% |
| Councils that receive a satisfactory rating from women and caregivers whose children received nutrition interventions and early learning and stimulation services (Number) | 0 | 7 | **8** | 13 | 62% |
| Percentage of districts budget allocated for nutrition and early learning in the project districts (Percentage) | 0 | 1.87 | **2.1** | 10 | 21% |
| Councils that submitted a monthly report into the nutrition database on time (Percentage) | 0 | 62 | **90** | 90 | 100% |
| Staff completed short and long term courses including diploma and master programs (Number) | 0 | 0 | **70** | 100 | 70% |
| Councils incorporated and implemented DIPs with ECD and nutrition (Number) | 0 | 13 | **13** | 13 | 100% |

**THE TREND OF THREE PDO IEYP INDICATORS**

The figure below demonstrates steady progress in the three PDO IEYP indicators. Of note is that the current rates either match or surpass the projects’ targets.

Figure 1: Trend of Three PDO IEYP Indicators

# INTRODUCTION

## Background

This report provides the current status of the Investing in Early Years for Growth and Productivity Project (IEYP) indicators following the annual survey that was conducted in April – May 2024. The IEYP is a World Bank-funded project whose overall objective is to improve coverage and utilization of early childhood development services, with a focus on nutrition, stimulation, and early learning. The target group are children from conception to 59 months from selected districts of Malawi.

Evidence suggests that healthy early child development (ECD) lays the foundation for an individual to reach their full adult potential in terms of health, well‐being, and contribution to society (Bromley, 2021). Children who take significantly longer than age‐matched peers to develop new skills are referred to as having ‘developmental delay’, which can arise due to a wide range of medical, environmental, and social determinants, and occurs within a complex context of risk and protective factors. Additional supports are critical for children with and at risk of developmental delay. Early childhood care and experiences, especially in the first 1,000 days of life, have a profound impact on brain and cognitive development including longer-term effects on learning, skills gain, and ultimately, income.

The IEYP main goal is to reduce stunting and improve cognitive ability among children from districts with poor nutrition indicators with a dearth of partner organizations to support ECD. The interventions are tailored to improve: (i) prenatal development, (ii) nutrition and early stimulation especially in the first 35 months after birth; and (iii) early learning from 36-59 months. The interventions are intended to nurture child development and enable children to learn, earn, innovate and compete through an integrated approach illustrated in the Theory of Change, Fig.1.

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Figure 2: Theory of Change for IEYP

## Project Interventions and Geographical Scope

The IEYP project has interventions in four thematic areas with the inclusion of Contingent Emergency Response Component (CERC) that might be activated depending on the need. Table 2 and Figure 2 below show mapped interventions by districts.

Table 2: Project interventions and location

|  |  |  |
| --- | --- | --- |
| **Intervention** | **District** | |
| 1. Community-based nutrition and early stimulation | Zomba, Likoma and Mwanza | 3 |
| 1. Center-based early learning, nutrition and health | Rumphi, Mchinji, Ntcheu, Mangochi, Machinga, Neno and Chikwawa | 7 |
| 1. Early learning interventions | Dowa, Thyolo and Chiradzulu | 3 |
| 1. Multi-sectoral coordination, capacity and system strengthening | Likoma, Rumphi, Dowa, Mchinji, Ntcheu, Mangochi, Machinga, Zomba, Chiradzulu, Thyolo, Neno, Mwanza and Chikwawa | 13 |

The map of Malawi below depicts the district in which the IEYP is being implemented with Colour codes representing the type of interventions being implemented.

Map

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Figure 3: IEYP districts

## Objectives of the Annual Survey

Based on the Terms of Reference (ToR), the main objective of the annual survey is to collect data for selected annual and survey-based project indicators (result and output level) to update the Results Framework (RF). The survey will also collect qualitative information to appraise the progress of project implementation. The annual survey will also provide the basis for scaling up activities that might be needed based on the survey outcomes.

Specifically, the annual survey will assess the progress of the following selected project development outcome indicators and intermediate result indicators:

### Project Development Indicators:

1. Children aged 6-23 months receiving a minimum acceptable diet.
2. Children aged 0-6 months who were exclusively breastfed.
3. Project beneficiaries (Number)who are:
   1. Children 0-59 months,
   2. Adolescent girls 11-19 years, and
   3. Pregnant women.

### Intermediate Result Indicators:

**Component 1: Community-based nutrition and early stimulation interventions**

1. Households practicing integrated homestead farming (Percentage)
2. Children aged 6-24 months who received micronutrient powder supplementation (Percentage)

**Component 2: Center-based early learning, nutrition, and health interventions**

1. Adolescent girls aged 15-19 years who have begun childbearing (Percentage)
2. Households where children 0-36 months play with toys made from locally available materials (Percentage)
3. Children aged 48-59 months achieved at least 50% score on literacy and numeracy components of MDAT (Percentage)

# METHODOLOGY

## Technical Approach

As recommended in the ToRs, the annual survey utilized a multi-methods cross-sectional design. This approach allowed for a comprehensive coverage of project indicators. Quantitative data from the different approaches were collected to update the IEYP results framework. The annual survey also reviewed relevant literature to inform the mixed approach.

The quantitative and qualitative data were collected using the following tools;

1. A structured household survey questionnaire - for the nutrition component and adolescent girl’s component.
2. The MDAT and MELQO questionnaire - for children 48-59 months.
3. A secondary data capturing template - for indicators on coverage.

Figure 3 provides a graphic representation of the survey design.

Figure 4: Technical approach to the survey

Following is a detailed methodology process depicting the districts where specific indicators were assessed based on the project activities taking place there.

Table 3: Detailed methodology to assess project indicators

| **IEYP Indicators** | **Data collection methods** | **Target population** | **Districts** |
| --- | --- | --- | --- |
| * Children aged 0-6 months who were exclusively breastfed. * Children aged 6-23 months receiving a minimum acceptable diet. * Households where children 0-36 months play with toys made from locally available materials (Percentage). * Households practicing in integrated homestead farming (Percentage). * Adolescent girls aged 15-19 years who received iron-folate supplementation (Number). | 1. Structured interviews with HH using a structured questionnaire containing the following modules:  * Home-based early learning and stimulation * Adolescent girls’ nutrition and health | * Households (caregivers) with children 0-23 months and/or an adolescent girl (15-19 years) * Adolescent girls | Zomba, Likoma, Mwanza, Rumphi, Mchinji, Ntcheu, Mangochi, Machinga, Neno, Chikwawa |
| * Children aged 48-59 months achieved at least 50% score on literacy and numeracy components of the MDAT/MELQO (Percentage). * Households where children 0-36 months play with toys made from locally available materials (Percentage) | 1. MDAT/MELQO 2. KII | * Children aged 36-59 months * District Nutrition Officers (DNOs) * District Social Welfare Officers (DSWOs) | Dowa, Chiradzulu, Thyolo, Rumphi, Mchinji, Ntcheu, Mangochi, Machinga, Neno, Chikwawa |

## Sampling

### Sampling Strategy

A multi-stage sampling technique was employed to draw a representative sample of respondents for each module of the survey. For the household survey module, the first stage involved sampling of Traditional Authorities (TAs). The next step was a sampling of villages of the beneficiaries and allocation of the sample by village. A list of beneficiaries by village formed a sampling frame for the household survey. The target population for the household survey were household beneficiaries with children 0-6 months, children 6-23 months, and adolescent girls 11-19 years. On the other hand, the MDAT sampling strategy involved a sampling model and satellite CBCCs. A list of children aged 48-59 months registered at the CBCC formed the sampling frame for MDAT and MELQO were children

### Sampling Units and Frame

Based on the differentiated nature of the interventions in the various districts, study participants were specifically targeted as follows;

Table 4: Sampling frame for a quantitative approach

|  |  |  |
| --- | --- | --- |
| **Survey indicators** | | **Sampling frame** |
|  | Children aged 6-23 months receiving a minimum acceptable diet | Children 0-59 months in IEYP enlisted households |
|  | Children aged 0-6 months who were exclusively breastfed |
|  | Households where children 0-36 months play with toys made from locally available materials (Percentage) |
|  | Children aged 48-59 months achieved at least 50% score on literacy and numeracy components of MDAT (Percentage) |
|  | Adolescent girls aged 15-19 years who have begun childbearing (Percentage) | Adolescent girls 11-19 years in enlisted IEYP households |
|  | Households practicing integrated homestead farming (Percentage) | Enlisted IEYP households |

### Sample Size

#### Household Survey Sample Size

The sample size (n) was calculated according to the following formula:

n= [z2 \* p(1-p)] / e2 / 1 + [z2 \* p(1-p)] / e2 \* N]

*where:*

*n=is the sample size*

*z = 1.96 for a confidence level (α) of 95%*

*p = proportion (expressed as a decimal), p set at 0.5*

*N = population size (N= 534,295)*

*e=margin of error of 3%*

Based on the formula above, the sample size was estimated at 1065 but adjusted to 1193 taking into account 12% non-response and sampling error. The sample was allocated proportionally to the number of beneficiaries in each district.

Table 5: Sample allocation for the household survey

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No.** | **District** | **TAs** | **No. of sampled TAs** | **Households** | **Proportion** | **Sample allocation** | **Sample adjustment** |
| 1 | Chikwawa | 11 | 3 | 88418 | 0,1655 | 197 | 195 |
| 2 | Rumphi | 11 | 3 | 24439 | 0,0457 | 55 | 112 |
| 3 | Machinga | 18 | 4 | 104859 | 0,1963 | 234 | 231 |
| 4 | Neno | 4 | 2 | 16459 | 0,0308 | 37 | 112 |
| 5 | Mangochi | 13 | 3 | 96884 | 0,1813 | 216 | 214 |
| 6 | Ntcheu | 11 | 3 | 7532 | 0,0141 | 17 | 112 |
| 7 | Mchinji | 15 | 4 | 68715 | 0,1286 | 153 | 152 |
| 8 | Mwanza | 3 | 2 | 5599 | 0,0105 | 13 | 112 |
| 9 | Zomba | 15 | 4 | 53602 | 0,1003 | 120 | 118 |
| **Total** | | **101** | **28** | **534295** | **1** | **1193** | **1357** |

**Note:** For districts with low allocations, their sample sizes were adjusted upwards to a recommended minimum of 100 with 12% adjustments to increase statistical inference.

#### MDAT and MELQO Sample Size

The sample size (n) was calculated according to the following formula:

n= [z2 \* p(1-p)] / e2 / 1 + [z2 \* p(1-p)] / e2 \* N]

*where:*

*n=is the sample size*

*z = 1.96 for a confidence level (α) of 95%*

*p = proportion (expressed as a decimal), p set at 0.5*

*N = population size (N=72,011)*

*e=margin of error of 3%*

Applying the formula above, the sample size was estimated at 1,056 but adjusted to 1,178 taking into account 12% non-response and sampling error. The sample was allocated proportionally to the number of children in the district.

Table 6: Sample allocation for MDAT/MELQO

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No.** | **District** | **CBCC** | **Sampled CBCC** | **No. of children** | **Proportion** | **Sample allocation** | **Sample adjustment** |
| 1 | Chikwawa | 15 | 5 | 9458 | 0,1313 | 155 | 155 |
| 2 | Rumphi | 15 | 5 | 5906 | 0,0820 | 97 | 101 |
| 3 | Machinga | 15 | 5 | 7118 | 0,0988 | 116 | 116 |
| 4 | Mangochi | 15 | 5 | 6027 | 0,0837 | 99 | 101 |
| 5 | Ntcheu | 15 | 5 | 7224 | 0,1003 | 118 | 118 |
| 6 | Neno | 15 | 5 | 396 | 0,0055 | 6 | 101 |
| 7 | Mchinji | 15 | 5 | 6592 | 0,0915 | 108 | 108 |
| 8 | Thyolo | 15 | 5 | 3992 | 0,0554 | 65 | 101 |
| 9 | Dowa | 15 | 5 | 14793 | 0,2054 | 242 | 242 |
| 10 | Chiradzulu | 15 | 5 | 6941 | 0,0964 | 114 | 114 |
|  | **Total** | **150** | **50** | **72011** | 1 | 1178 | 1257 |

***Note:*** *Districts with low allocations, their sample sizes were adjusted upwards to a recommended minimum of 100 with 12% adjustments in order to increase statistical inference.*

## Key Nutrition Data

The following nutrition-related data were collected to report on the annual status of the set indicators:

### Children aged 6-23 months receiving a minimum acceptable diet

The annual survey assessed complementary feeding practices of children aged 6-23 months using standardized protocols guided by WHO/UNICEF. At first, the survey ascertained the proportion of children aged 6-23 months who are currently being breastfed. Following this, the annual survey assessed the proportion of children aged 6-23 months receiving a Minimum Acceptable Diet (MAD). MAD, being a composite indicator assesses the proportion of children receiving at least five of the eight groups (Minimum Dietary Diversity, MDD) and the proportion of children receiving the Minimum Meal Frequency (age-adjusted, MMF). The annual survey assessed MDD and MMF as follows;

### Minimum Dietary Diversity

The annual survey assessed the proportion of children aged 6-23 months receiving at least five of the following eight food groups as recommended by WHO/UNICEF.

1. Breastmilk
2. Grains, roots and tubers
3. Legumes, nuts and seeds
4. Dairy products (milk, infant formula, yogurt, cheese)
5. Flesh foods (e.g. meat, fish, poultry, organ meats)
6. Eggs
7. Vitamin A-rich fruits and vegetables
8. Other fruits and vegetables

### Minimum Meal Frequency

World Health Organization guides that breastfeeding infants aged 6–8 months be provided complementary foods 2–3 times per day and breastfed children aged 9–23 months be provided complementary foods 3–4 times per day with additional nutritious snacks offered 1–2 times per day. World Health Organization further guides that non-breastfed children aged 6-24 months be provided 4–5 meals per day. In line with these guidelines, the annual survey assessed the percentage of children 6–23 months of age who consumed solid, semi-solid, or soft foods the minimum number of times or more during the previous day. Minimum Meal Frequency was calculated by adding up non-breastfed children 6–23 months of age who consumed at least four solid, semi-solid, or soft food feeds or milk feeds during the previous day, with at least one of the four being a solid, semi-solid or soft-food feed.

### Minimum Acceptable Diet

Children aged 6–23 months are expected to be fed meals at an appropriate frequency and in a sufficient variety to ensure that energy and nutrient needs are met. The annual survey utilized the results of the two indicators; Minimum Dietary Diversity and Minimum Meal Frequency to come up with the Minimum Acceptable Diet for children aged 6-23 months (breastfed child and non-breastfed) with the extra requirement that non-breastfed children should receive milk at least twice on the previous day. The composite indicator assessed:

1. Breastfed children receiving at least the minimum dietary diversity and minimum meal frequency for their age during the previous day; and
2. Non-breastfed children receiving at least the minimum dietary diversity and minimum meal frequency for their age during the previous day as well as at least two milk feeds.

### Egg and/or Flesh Food Consumption 6–23 Months

The annual survey also assessed the percentage of children 6–23 months of age who consume egg and/or flesh food to ascertain levels of animal protein intake which is critical in promoting child growth.

## MDAT and MELQO Data

The annual survey collected data that aimed at establishing children who would be on track in terms of development and those who would be delayed. Development in this case is in four domains; gross motor, fine motor, social, and language. Further, a question was added, acting as an independent item to establish children using homemade playing material. MELQO data established children’s literacy and numeracy.

## Data Collection

Survey Solutions (SuSo) a versatile software developed by the World Bank with several functionalities for designing and monitoring CAPI-based surveys was utilized to collect quantitative data. SuSo improved data quality by automatically checking for data consistency, using validation rules, and skip options

The annual survey conducted key informant interviews (using a checklist) with district ECD coordinators and Principal Nutrition and HIV Officers (PNHAO) to assess beneficiary reach-out and further understand the implementation process

## Data Quality Assurance

As part of quality control checks, sound management, effective teamwork, and coordination of activity systems were instituted to ensure the collection of data of high quality. KUHeS-RSC experts were fully available in the field to ensure the collection of valid and reliable data and correct any deviations on the spot. Training of research assistants, pre-testing of the tools, and use of an android-based questionnaire with inbuilt quality checks and onsite verification processes during fieldwork further ensured that the data collected was of high quality and was a true reflection of the situation on the ground. KUHeS-RSC developed training manuals, and developed field systems for data quality assurance, and instituted a strict online instant validation data system.

### Recruitment of Research Assistants

The Consultant recognized the value and promptness of this Annual Survey. As such, the Consultant was dedicated to investing robustly in the human resource sector to ensure that valid and reliable data was collected most efficiently to meet the objectives of the study. Based on the study objectives, the responsive tools, and the available timeframe, the Consultant utilized research assistants who were already well-versed with MDAT and MELQO tools, well versed with Computer Assisted Personal Interviews (CAPI), well versed with the geographical positions of the IEYP beneficiaries and could ably collect data on all the modules. To this effect, the Consultant utilized research assistants who were trained, passed the test, and successfully collected data in the previous IEYP MDAT and MELQO exercises and household surveys. The Consultant instituted a supervisory team that consisted of research assistants and district level officers to facilitate sampling process and oversee district data collection to ensure the quality of the data.

### Training Manual for Household Questionnaire

The training manual for the household survey was adopted and adapted from the one that was used as baseline (*Determinants of Reductions in Childhood Stunting in the Community-Based Nutrition Programs in Malawi Report*). The components that were adopted from this report were already translated and these were as they were but the additional questions to the household questionnaire were translated using the in-house translator who was well conversant with the issues captured in the additional questions. The manual was used to train enumerators on how to administer the household questionnaire using tablets. The training manual was submitted as a separate deliverable after the Inception Report.

### Training Manuals for MDAT and MELQO

The Consultant used the training manual for MDAT, Version 7 which was already translated. This was the latest version for MDAT training manual and was the one that was used in the baseline survey. Similarly, the MELQO modules training manual that was used at baseline which was also already translated was also used in this study. The training manuals were submitted as a separate deliverable after the Inception Report.

### Training for Research Assistants and Data Reviewers

The Consultant trained all Research Assistants (RAs) and data reviewers on household questionnaire, MDAT and MELQO modules using the training manuals that were used at baseline which were also already translated. This was done to ensure that RAs and data reviewers were well drilled with the specific administration skills unique to the tools. The training mainly focused on getting the RAs and data reviewers to have a clear understanding about the design and content of the instruments, recording the results and how to administer those instruments in a manner that did not introduce unintended biases into the response patterns.

### Use of CAPI in Household Survey, MDAT and MELQO

CAPI was utilized in household survey, MDAT, and MELQO data collection using tablets. CAPI is very efficient as it facilitates logic checks, skip patterns, and validations during the interview helps [assure](https://dimewiki.worldbank.org/wiki/Data_Quality_Assurance_Plan) higher quality data, and also reduces time for data processing and cleaning since data entry is done simultaneously as data collection is going on.

## Data Management and Quality Control

The Statistician was responsible for designing a platform using Survey Solution for verifying incoming data from the field, checking the accuracy of data received (such as respondent’s identification and linkages among questionnaires), setting all validation criteria for data collection using tablets in CAPI, doing approval of the correct and completed interviews using Survey Solution database and software and data cleaning based on mismatches. The programming of the questions in the CAPI tablets ensured that safeguard mechanisms were put in place such that any cheating by the enumerators could easily be detected instantly.

As part of quality control checks, sound management, effective teamwork, and coordination of activity systems were instituted to ensure that the team collects data of high quality. All key experts were fully available in the field to ensure the collection of valid and reliable data and correct any deviations on the spot while data reviewers reviewed questionnaires submitted by RAs on a daily basis and approved or rejected the submitted questionnaires under the supervision of the Statistician. Training of research assistants and data reviewers, pre-testing of the tools, the use of Android tablets with inbuilt quality checks such as skip patterns, basic specifying question types, among others, and onsite verification processes during fieldwork further helped to ensure that the data collected was of high quality and a true reflection of the situation on the ground. For example, as part of training, the research assistants and data reviewers conducted peer interviews amongst themselves under close supervision of the experts to ascertain their competencies, level of flexibility in interaction with each other, ability to build rapport and seek consent and identify gaps requiring further mentorship. The following are the key quality assurance steps at the field level that were implemented:

### Daily team debriefing sessions

Every evening after field work, the survey teams converged to deliberate on the day’s work as well as discuss challenges faced and observations made. The teams asked themselves questions such as, what happened today? What were the problems? What can we learn from this? What should we do differently? By answering such questions, the survey teams were able to adapt the methodology to suit the local context in the districts.

### Supervisory checks

As already stated, the experts, including the MDAT/MELQO Specialist, were in the field with enumerators to supervise them and address any unforeseen challenges that may arise. Supervision specifically ensured that the survey methodology was followed as agreed during training and checking completeness of questionnaires and providing feedback at all times. Immediately after data collection, the household record was uploaded to the server for immediate quality checks by the data reviewers, the Statistician, the MDAT/MELQO Specialist, and the Team Leader.

### Online Quality Checks

As part of quality control, questionnaires were designed with automated consistency checks; appropriate validation rules, Geographic Information System (GIS) coordinates and skip pattern analysis. In addition, a team of data reviewers who were responsible for checking the questionnaires online were recruited and trained. The team was responsible for approving or rejecting the questionnaires.

### Data Cleaning and Validation

The Consultant believed in high-quality data to ensure the reliability of the results. As part of quality control, the Consultant ensured that data reviewers were well-trained and were conversant with data collection instruments. Data cleaning and validation were done with the assistance of the data reviewers to ensure that only quality data was analysed. The process of data validation and cleaning ran concurrently with data collection. If there were inconsistencies or data errors, appropriate corrections were made, and/or the field teams were contacted for clarifications.

## Code of Conduct, Respondent Protection and Data Security

The Consultant abided by the code of conduct and respondent protection and data security requirements as provided at all times. The whole team signed a non-disclosure agreement signifying their understanding of ethical behavior in the field and proper handling of respondents’ confidential information and private information including personally identifiable information. Furthermore, the Consultant made observations in the field to monitor enumerator’s conduct with respect to respondent protection and data security.

All interviews were preceded by a brief introduction by the interviewers about the purpose of the study and then seeking consent from the respondents. Research assistants informed the respondents that participation was voluntary, highlighting on people’s rights to refuse participation and to discontinue their participation at any time. They assured them that there were no consequences for exercising these rights. Each respondent was informed about the confidentiality of the information that they were asked to provide. The study team abided by the professional ethical conduct as provided by the Client, such as neutrality, respect for respondent’s dignity, culture and data verification, throughout the period of field work. Completed questionnaires were not shared with anyone outside the study team.

# RESULTS AND DISCUSSIONS

## Household Survey

The household survey provides results of various community-based nutrition and health interventions in the IEYP

### Household background information

Out of the 1,552 households interviewed for component 1 of the IEYP, three quarters (74.2%) were male-headed while a quarter (25.8%) were female-headed. Head of households largely attained primary (57%) and secondary (34%) level of education.

### Households practicing Integrated Homestead Farming

Malawi aims to improve dietary diversity by promoting the home production of a diversity of foods. Improved production of diverse foods coupled with effective education and counseling services is a strategy to improve infant and young child feeding. The annual survey assessed the proportion of households practicing Integrated Homestead Farming (IHF). IHF comprises a combination of three of the following four agro-practices; crop production, small livestock rearing, fish farming, and vegetable growing. Results of the annual survey show that overall, the proportion of households practicing IHF has progressively increased as compared to the baseline status (baseline = 28.0%, midline = 37.3%, annual survey=45.2%).

Most of the districts are also doing well as shown in Table 7 below:

Table 7: Households practicing Integrated Homestead Farming (%)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | **Baseline** | **Midline** | | **Annual** | |
| **Descriptor** | | **>=3** | **>=3 practices** | | **>=3 practices** | |
| **n** | **Percentage** | **n** | **Percentage** |
| Total | | 28.0% | 270 | 37.3% | 702 | 45.2% |
|  | Mchinji | 50 | 61.0% | 56 | 31.1% |
|  | Machinga | 6 | 60.0% | 79 | 34.2% |
|  | Mwanza | 53 | 55.2% | 47 | 38.8% |
|  | Likoma | 27 | 55.1% | 57 | 53.3% |
| District | Rumphi | 32 | 49.2% | 92 | 67.6% |
|  | Zomba | 42 | 33.1% | 44 | 39.6% |
|  | Chikwawa | 28 | 28.9% | 107 | 55.4% |
|  | Mangochi | 20 | 17.4% | 140 | 61.1% |
|  | Neno | 2 | 15.4% | 39 | 33.1% |
|  | Ntcheu | 10 | 14.5% | 41 | 32.5% |

Table 7 shows that there is an increase in households practicing integrated homestead farming compared to the midlines rate. In terms of the districts, it is evident that Rumphi, followed by Mangochi are the ones doing better. In general, the majority of the districts are doing well except for a few that are not as good.

### Presence of sanitation facilities

Effectively and sustainably improving nutrition outcomes requires a coordinated, multi-sectoral approach among the health, water, sanitation, and hygiene (WASH) and agricultural sectors[[2]](#footnote-3). The IEYP therefore integrates improvements in sanitation to reap benefits in nutrition outcomes. The annual survey established that over the years, sanitation, as assessed by the presence of a handwashing facility, rubbish pit, and toilet facility had improved in comparison to midline status as shown in Table 8 below.

Table 8: Status of sanitation facilities

|  |  |  |
| --- | --- | --- |
| **Facility** | **Midline** | **Annual survey** |
| **%** | **%** |
| Handwashing | 11.2% | 32.8% |
| Rubbish pit | 19.0% | 62.8% |
| Toilet | 34.1% | 88.7% |

**Maternal background information**

Antenatal Care (ANC) is one of the crucial factors in ensuring healthy outcomes in women and newborns. Nutrition education and counselling is an integral part of ANC that influences maternal and child health outcomes[[3]](#footnote-4). The annual survey investigated various maternal-related characteristics to make inferences about infant and young child feeding practices. Results of the annual survey show improvements in time of ANC initiation, duration of folic acid intake, number of visits to ANC, the proportion of pregnant women getting malarial intermittent preventive treatment, and dispensation of nutrition-related information as shown in Table 9 below.

Table 9: Maternal and antenatal care practices

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Antenatal care** | | **Midline** | **Annual Survey** | ***P*** |
| First attendance to antenatal care (gestation) | M±SD | 4.1 ± 1.3 | 3.8 ±1.2 | < 0.00 |
| Number of visits to ANC | M±SD | 4.3 ± 1.2 | 4.4 ±1.3 | 0.07 |
| Duration of folic acid supplementation | M±SD | 3.4 ± 2.5 | 3.6 ± 1.7 | 0.03 |
| Took malarial Intermittent Preventive Treatment | % | 97.9 | 96.7 | 0.09 |
| Received information on nutrition during pregnancy | % | 94.4 | 96.0 | 0.09 |

The proportion of health surveillance assistants and cluster leaders reported by pregnant women to provide information on nutrition during pregnancy increased during the annual survey in comparison to midline (31.9% to 35.7%, 3.3% to 24.4% respectively).

### Children aged 0-6 months who were exclusively breastfed

Exclusive Breastfeeding (EBF) up to six months of age has profound biological effects and important consequences on the health and nutritional outcomes of children. Among the array of benefits is the positive contribution of the immunological properties of breast milk to ensuring adequate nutritional status, proper growth and develop morbidity-prevention capacity in the growing bodies of children.

The annual survey assessed breastfeeding practices amongst infants of 0-6 months. The practices included; early initiation of breastfeeding, infants ever breastfed, infants still being breastfed, and infants being exclusively breastfed. The results show that almost all (99.7%) infants are breastfed. However, early initiation to breastfeeding in the first days of life remains a challenge as shown in Table 10 below.

Table 10: Infant and young child feeding breastfeeding indicators (%)

|  |  |  |
| --- | --- | --- |
| **Infant and young child feeding breastfeeding indicators** | **Midline** | **Annual Survey** |
| Early initiation of breastfeeding | 86.3% | 85.9% |
| Still being breastfed | 98.6% | 99.7% |
| Exclusive breastfeeding | 66.2% | 70.4% |

The proportion of children being exclusively breastfed progressively improved from the baseline (60%) to midline (66%) to the current (70.4%).

### Children aged 6-23 months receiving a minimum acceptable diet

MAD, a composite indicator assesses the proportion of children receiving at least 5 of the 8 groups (Minimum Dietary Diversity, MDD) and the proportion of children receiving the Minimum Meal Frequency (age-adjusted, MMF). The annual survey assessed the proportion of children aged 6-23 months receiving a Minimum Acceptable Diet (MAD).

#### Minimum Dietary Diversity

The proportion of children receiving at least five of the eight food groups increased from 14.2% in the midline to 29.0% in the annual survey as shown in table 11 below.

Table 11: Minimum dietary diversity

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variable | | Midline | | Annual Survey | |
| >=5/8 food groups | | >=5/8 food groups | |
| Number | Percent | Number | Percent |
| Sex of the child | Total | 132 | 14.2% | 207 | 29.0% |
| Male | 73 | 15.8% | 107 | 31.0% |
| Female | 59 | 12.6% | 100 | 27.2 |
| Name of district | Rumphi | 6 | 8.7% | 22 | 40.7 |
| Likoma | 11 | 21.6% | 18 | 32.1 |
| Mchinji[[4]](#footnote-5) | 4 | 2.5% | 35 | 43.2 |
| Ntcheu | 18 | 21.2% | 8 | 13.1 |
| Machinga | 2 | 18.2% | 24 | 20.0 |
| Mangochi | 16 | 8.7% | 26 | 26.0 |
| Neno | 4 | 13.8% | 15 | 27.8 |
| Mwanza | 8 | 8.0% | 12 | 27.3 |
| Zomba | 17 | 12.9% | 17 | 33.3 |
| Chikwawa | 46 | 40.4% | 30 | 32.6 |

#### Minimum Meal Frequency

The annual survey assessed the percentage of children 6–23 months of age who consumed solid, semi-solid, or soft foods (but also including milk feeds for non-breastfed children) the minimum number of times or more during the previous day. World Health Organization’s guiding principles for feeding infants recommends differentiated feeding between breastfeeding infants and non-breastfeeding infants as follows; breastfed infants aged 6–8 months be provided complementary foods 2–3 times per day and breastfed children aged 9–23 months be provided complementary foods 3–4 times per day with additional nutritious snacks offered 1–2 times per day. On the other hand, non-breastfed infants should be provided with 4–5 meals per day.

Minimum meal frequency was calculated by adding up non-breastfed children 6–23 months of age who consumed at least four solid, semi-solid, or soft food feeds or milk feeds during the previous day, with at least one of the four being a solid, semi-solid, or soft food.

The proportion of infants aged 9-23 months increased from 13.8% to 25.2% [(midline=6.8%, annual survey= 6.4% for infants aged 9-11 months) and (midline=7.0%, annual survey= 13.8% for infants aged 12-23 months). However, the proportion of infants aged 6-8 months meeting the minimum meal frequency dropped from 95.5% to 76.3%. This paints a picture that younger infants unlike older ones are not receiving the recommended meal frequency.

Table 12: Minimum meal frequency for breastfeeding children (%)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Age of breastfeeding child** | **Consuming recommended**  **complementary food** | | | |
| **Midline** | | **Annual** | |
| **N** | **%** | **n** | **%** |
| 6-8 months | 64 | 95.5% | 59 | 76.3% |
| 9-11 months | 59 | 6.8% | 60 | 6.4% |
| 9-23 months | 683 | 7.0% | 225 | 25.2% |

Table 12 shows that there are variations in terms of the ages doing well in consuming complementary food.

#### Minimum Acceptable Diet

The midline study assessed the Minimum Acceptable Diet (MAD) for children aged 6-23 months (breastfed children and non-breastfed). Children aged 6–23 months are expected to be fed meals at an appropriate frequency and in a sufficient variety to ensure that energy and nutrient needs are met MAD combines information on minimum dietary diversity and minimum meal frequency, with the extra requirement that non-breastfed children should receive milk at least twice on the previous day. The composite indicator thus assessed:

1. breastfed children receiving at least the minimum dietary diversity and minimum meal frequency for their age during the previous day; and
2. non-breastfed children receiving at least the minimum dietary diversity and minimum meal frequency for their age during the previous day as well as at least two milk feeds.

The results show an increase (from 13% to 20.08%) in the proportion of children aged 6-23 months receiving the minimum acceptable diet as shown in Table 13.

**Table 13: Children aged 6-23 months receiving a minimum acceptable diet (%)**

|  |  |  |  |
| --- | --- | --- | --- |
| Minimum Acceptable Diet | **Baseline** | **Midline** | **Annual** |
| 13% | 20.1% | 23.3% |

Table 13 shows a steady increase in MAD.

#### Egg and/or Flesh Food Consumption 6–23 Months

It is recommended that both breastfed and non-breastfed children aged 6 – 23 months should be fed egg and/or flesh foods daily or as often as possible***.*** The annual survey hence assessed the percentage of children 6–23 months of age who consumed egg and/or flesh food during the previous day. Overall, there was an improvement in egg and/or flesh consumption from 51.7% in the midline to 52.3%. The proportion of children consuming eggs and/or flesh food during the previous day was highest in Likoma (78.6%) while the lowest was in Mangochi (24.4%).

### Child feeding practices

Optimal infant feeding is when the child is fed and is also allowed to feed on his/her own. The annual survey reports improvement in the status of child feeding. Currently, more children are being fed and allowed to feed alone (41.3%) with less proportion eating alone (21.9%).

Figure 5: Mode of child feeding (6-23 months)

Relative to the midline, caregivers reported fewer problems in feeding the infant. Current common problems center around strategies of feeding a child at all times and nutrition and health status of breastfeeding women as shown in Table 14

Table 14: Problems encountered in feeding your child (6-24 months), %

|  |  |  |
| --- | --- | --- |
| **Problem in infant feeding** | **Midline** | **Annual** |
| Poor appetite | 43.5% | 10.4% |
| Child sick | 29.5% | 12.1% |
| Breastmilk not enough | 24.4% | 4.6% |
| Child does not like semi solid/solid foods | 23.3% | 8.7% |
| Child runs around too much | 21.2% | 12.1% |
| Problems with breast (pain) | 8.8.% | 6.7% |
| Cracked nipples | 5.7% | 4.0% |
| Not enough time to feed child | 4.1% | 1.7% |

### Infant morbidity

Children with a poor nutritional status have an increased risk of experiencing infections with increased duration, consequently negatively influencing child growth. The annual survey assessed infant morbidity in the preceding two weeks. Results show that children aged 6-23 months experienced the following incidences; cough (56.8%), fever (46.1%[[5]](#footnote-6)), diarrhoea (29.4%), loss of appetite (22.9%) fast breathing or shortness of breath (12.4%) and nausea/vomiting (14.1%). For these incidences, 75.3% of caregivers sought treatment at a health facility and 57.2% were given advice on nutrition in managing the incidence.

### Health of Adolescent girls

The IEYP targets adolescent girls based on their vulnerability and their critical contribution to the prevention of multi-generational malnutrition. Adolescent girls’ vulnerability is multifaceted as only about a third of them complete primary school, a third become mothers, and pose a significant risk to the nutrition status of the child. The likelihood of infants born to teenage girls being stunted is 6.3% higher than infants born to adult mothers. This is compounded by the high prevalence (35%) of anaemia and underweight (12.9%) among adolescent girls[[6]](#footnote-7).

The annual survey reached out to 437 adolescent girls between 10-19 years (14.1 ± 2.2). The reach-out was comparable to the midline one (n=484, 13.8 ± 2.7). 40% of the adolescent girls reported to have been reached out by cluster leaders and promoters where information on household water hygiene, sanitation, and health practice was commonly dispensed.

Table 15: Information received by adolescent girls from cluster leaders/promoters

|  |  |
| --- | --- |
| **Information received** | **%** |
| Household water hygiene, sanitation, and health practice | 68.5% |
| Food and nutrition | 34.8% |
| Growth and development | 25.8% |
| Family planning and nutrition | 24.2% |
| Communication skills | 11.2% |
| Child safety and protection | 8.4% |
| Integrated farming | 4.5% |
| Food production, processing, and utilization | 3.4% |
| Infant and young child feeding | 2.8% |
| Maternal nutrition, early stimulation, and nurturing | 2.2% |

#### Health-related Practices of Adolescent Girls

The annual survey assessed the uptake of various health-related interventions pertinent for adolescent girls such as HPV vaccination, Iron folate supplementation, and tetanus toxoid vaccination. Results show that comparatively, there has been an increase in the uptake of various health-related interventions, especially HPV, iron folate supplementation, de-worming, and HIV testing.

Table 16: Uptake of various health-related interventions

|  |  |  |  |
| --- | --- | --- | --- |
| **Intervention** | **Midline** | **Annual** | |
| **%** | **%** | **Age (Mean ±SD)** |
| HPV vaccine | 32.9% | 72.3% | 12.0±2.2 |
| Iron-folate supplementation | 20.2% | 49.9% | 12.1±2.4 |
| TT vaccine | 34.0% | 36.2% | 11.4±3.9 |
| De-worming | 26.9% | 80.5% |  |
| HIV test | 9.8% | 24.7% |

## MDAT AND MELQO Survey

The annual survey employed the MDAT to establish children development, thus whether they were developmentally on track or delayed. On the other hand, MELQO, that was administered to the same children immediately after the MDAT is a measure for assessing children’s literacy and numeracy competencies.

### Demographic Characteristics of the Children Assessed

The demographic characteristics summarized in the following tables are for children assessed by the MDAT and the MELQO literacy and numeracy modules as well as their parents or guardians.

Table 17: Number of children assessed by sex at district level (%)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Background Characteristics** | **Sex of the Child** | | | | | |
| **Male** | | **Female** | | **Total** | |
| **N** | **Percentage** | **n** | **Percentage** | **n** | **Percentage** |
| Total | 574 | 42.9% | 764 | 57.1% | 1,338 | 100% |
| Rumphi | 60 | 40.3% | 89 | 59.7% | 149 | 100% |
| Dowa | 127 | 51.4% | 120 | 48.6% | 247 | 100% |
| Ntcheu | 49 | 44.5% | 61 | 55.5% | 110 | 100% |
| Mchinji | 68 | 46.6% | 78 | 53.4% | 146 | 100% |
| Mangochi | 39 | 32.2% | 82 | 67.8% | 121 | 100% |
| Machinga | 41 | 36.6% | 71 | 63.4% | 112 | 100% |
| Chiradzulu | 41 | 35.0% | 76 | 65.0% | 117 | 100% |
| Thyolo | 50 | 44.2% | 63 | 55.8% | 113 | 100% |
| Chikwawa | 46 | 38.3% | 74 | 61.7% | 120 | 100% |
| Neno | 53 | 51.5% | 50 | 48.5% | 103 | 100% |

Table 17 shows that, in total, slightly more than half (57.1%) of the children assessed were girls. This trend was true for most of the districts with just a few depicting more boys assessed. Thus Neno had slightly less than half (48.5%) of girl participants while Mangochi had the highest (67.8%).

Table 18: Number of children assessed by age category and sex (%)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Background Characteristics** | **Sex of the Child** | | | | | |
| **Male** | | **Female** | | **Total** | |
| **N** | **Percentage** | **n** | **Percentage** | **n** | **Percentage** |
| **Total** | 574 | 42.9% | 764 | 57.1% | 1338 | 100% |
| 36-41 | 63 | 43.4% | 82 | 56.6% | 145 | 100% |
| 42-47 | 62 | 40.3% | 92 | 59.7% | 154 | 100% |
| 48-53 | 197 | 43.8% | 2537 | 56.2% | 450 | 100% |
| 54-59 | 252 | 42.8% | 337 | 57.2% | 589 | 100% |

Table 18 depicts a trend where the proportion of female children assessed was higher than the male children.

#### Children Assessed by Age at District Level

In order to include more children who had been part of a CBCC for a considerable time, the survey sampled more from the 54-59 age category. In general, in the two older categories, the 48-59 was represented more in most of the districts.

Table 19: Age of children assessed at district level (%)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Background Characteristics** | **Age group** | | | | | | | | | |
| **36-41** | | **42-47** | | **48-53** | | **54-59** | | **Total** | |
| **n** | **%** | **n** | **%** | **n** | **%** | **n** | **%** | **n** | **%** |
| Total | 145 | 10.8% | 154 | 11.5% | 450 | 33.6% | 589 | 44.0% | 1338 | 100% |
| Rumphi | 25 | 16.8% | 28 | 18.8% | 55 | 36.9% | 41 | 27.5% | 149 | 100% |
| Dowa | 31 | 12.6% | 32 | 13.0% | 105 | 42.5% | 79 | 32.0% | 247 | 100% |
| Ntcheu | 6 | 5.5% | 10 | 9.1% | 32 | 29.1% | 62 | 56.4% | 110 | 100% |
| Mchinji | 20 | 13.7% | 26 | 17.8% | 47 | 32.2% | 53 | 36.3% | 146 | 100% |
| Mangochi | 7 | 5.8% | 4 | 3.3% | 26 | 21.5% | 84 | 69.4% | 121 | 100% |
| Machinga | 17 | 15.2% | 10 | 8.9% | 31 | 27.7% | 54 | 48.2% | 112 | 100% |
| Chiradzulu | 17 | 14.5% | 17 | 14.5% | 38 | 32.5% | 45 | 38.5% | 117 | 100% |
| Thyolo | 13 | 11.5% | 9 | 8.0% | 48 | 42.5% | 43 | 38.1% | 113 | 100% |
| Chikwawa | 0 | 0.0% | 1 | 0.8% | 43 | 35.8% | 76 | 63.3% | 120 | 100% |
| Neno | 9 | 8.7% | 17 | 16.5% | 25 | 24.3% | 52 | 50.5% | 103 | 100% |

Table 19 further shows that almost a quarter of the children were in the combined age category of 36–47 months while three quarters were in the combined age category of 48-59 months.

#### Birth Order of Children

The annual survey established that the birth order of children, as literature suggests, is associated with their social skills in pre-school children. A summary of the birth order is provided in Table 20 below.

Table 20: Birth order of children by sex (%)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Background Characteristics** | **Sex of the Child** | | | | | |
| **Male** | | **Female** | | **Total** | |
| **n** | **Percentage** | **n** | **Percentage** | **n** | **Percentage** |
| Total | 574 | 42.9 | 764 | 57.1% | 1,338 | 100% |
| First born | 190 | 43.1% | 251 | 56.9% | 441 | 100% |
| Second born | 144 | 43.0% | 191 | 57.0% | 335 | 100% |
| Third born | 96 | 43.0% | 127 | 57.0% | 223 | 100% |
| Fourth born | 66 | 46.2% | 77 | 53.8% | 143 | 100% |
| Fifth born | 46 | 39.3% | 71 | 60.7% | 117 | 100% |
| Sixth born | 19 | 55.8% | 34 | 64.2% | 53 | 100% |
| Seventh born | 11 | 47.8% | 12 | 52.2% | 23 | 100% |
| Eighth born | 1 | 50.0% | 1 | 50.0% | 2 | 100% |
| Ninth born | 0 | 00.0% | 0 | 0.0% | 0 | 0.0% |
| Tenth born | 1 | 100% | 0 | 0.0 | 1 | 100% |

Table 20 shows that majority of the children were sixth born in their family.

### Education level of caregivers by sex

The annual survey demographics included the educational levels of the caregivers. This is important information as it can inform the potential of the caregivers in supporting their children adequately in activities like reading books at home. The table 21 shows the education of primary and secondary caregivers.

Table 21: Primary and Secondary Caregiver Educational Levels

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Characteristics** | | **Male** | | **Female** | | **Total** | |
| **Number** | **Percent** | **Number** | **Percent** | **Number** | **Percent** |
| Primary Caregiver | Total | 94 | 7.0 % | 1,244 | 93.0 % | 1,338 | 100% |
| None | 3 | 3.9 % | 74 | 96.1 % | 77 | 100 % |
| Pre-school | 0 | 0.0 % | 3 | 100.0 % | 3 | 100 % |
| Primary | 50 | 5.7 % | 830 | 94.3 % | 880 | 100 % |
| Secondary | 40 | 10.9 % | 328 | 89.1 % | 368 | 100 % |
| Tertiary | 1 | 10.0 % | 9 | 90.0 % | 10 | 100 % |
| Secondary Caregiver | Total | 342 | 25.6 % | 994 | 74.4 % | 1,336 | 100 % |
| None | 1 | 100.0 % | 0 | 0.0 % | 1 | 100 % |
| Pre-school | 1 | 50.0 % | 1 | 50.0 % | 2 | 100 % |
| Primary | 35 | 11.4 % | 273 | 88.6 % | 308 | 100 % |
| Secondary | 305 | 30.5 % | 696 | 69.5 % | 1,001 | 100 % |
| Tertiary | 0 | 0.0 % | 24 | 100.0 % | 24 | 100 % |

Table 21 shows that majority of the primary caregivers had some primary school education. More of the secondary caregivers had secondary education.

Table 22: Mothers’ Educational Level (%)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **District** | **None** | | **Pre-school** | | **Primary** | | **Secondary** | | **Tertiary** | |
| **n** | **%** | **n** | **%** | **n** | **%** | **n** | **%** | **n** | **%** |
| Total | 65 | 4.9 | 2 | 0.2 | 903 | 68.3 | 344 | 26.0 | 9 | 0.7 |
| Rumphi | 1 | 0.7 | 0 | 0.0 | 89 | 61.8 | 53 | 36.8 | 1 | 0.7 |
| Dowa | 8 | 3.3 | 1 | 0.4 | 196 | 80.0 | 39 | 15.9 | 1 | 0.4 |
| Ntcheu | 2 | 1.8 | 0 | 0.0 | 75 | 68.8 | 32 | 29.4 | 0 | 0.0 |
| Mchinji | 10 | 6.9 | 0 | 0.0 | 103 | 71.0 | 32 | 22.1 | 0 | 0.0 |
| Mangochi | 13 | 10.8 | 0 | 0.0 | 86 | 71.7 | 20 | 16.7 | 1 | 0.8 |
| Machinga | 2 | 1.9 | 0 | 0.0 | 63 | 58.3 | 42 | 38.9 | 1 | 0.9 |
| Chiradzulu | 1 | 0.9 | 1 | 0.9 | 68 | 58.1 | 44 | 37.6 | 3 | 2.6 |
| Thyolo | 1 | 0.9 | 0 | 0.0 | 58 | 51.3 | 52 | 46.0 | 2 | 1.8 |
| Chikwawa | 23 | 19.3 | 0 | 0.0 | 78 | 65.5 | 18 | 15.1 | 0 | 0.0 |
| Neno | 4 | 3.9 | 0 | 0.0 | 87 | 84.5 | 12 | 11.7 | 0 | 0.0 |

Table 22 shows that majority (68.3%) of the mothers had primary education followed by secondary school education (26.0%).

### Parental Survivorship and Living Arrangements of the Children

Parental care in early childhood is one of the most important factors that helps foster the cognitive and non-cognitive abilities of children. Evidence suggests that the  
absence of parental care in early childhood negatively affects children’s development in health status, daily behaviors, and in-school performance. The midline endeavored to establish the proportion of children who were living with their parents or not through death or migration, among other reasons.

Table 23: Parental survivorship and living arrangements of the children (%)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **District** | **Biological father alive** | | | **Biological mother alive** | | **Double orphan hood** | | **Biological father live in same household** | | | **Biological mother live in same household** | | | **Both parents live in same household** | | |
| **n** | **%** | **n** | | **%** | **n** | **%** | | **n** | **%** | | **n** | **%** | | **n** | **%** | |
| Total | 1285 | 96.1 | 1323 | | 99.0 | 63 | 4.7 | | 946 | 73.6 | | 1224 | 92.5 | | 928 | 69.4 | |
| Rumphi | 145 | 97.3 | 144 | | 96.6 | 8 | 5.4 | | 94 | 64.8 | | 121 | 84.0 | | 92 | 61.7 | |
| Dowa | 235 | 95.5 | 245 | | 99.6 | 13 | 5.3 | | 195 | 83.0 | | 235 | 95.9 | | 193 | 78.1 | |
| Ntcheu | 106 | 96.4 | 109 | | 99.1 | 5 | 4.5 | | 77 | 72.6 | | 106 | 97.2 | | 76 | 69.1 | |
| Mchinji | 144 | 98.6 | 145 | | 99.3 | 3 | 2.1 | | 111 | 77.1 | | 129 | 89.0 | | 104 | 71.2 | |
| Mangochi | 116 | 95.9 | 120 | | 99.2 | 6 | 5.0 | | 82 | 70.7 | | 110 | 91.7 | | 82 | 67.8 | |
| Machinga | 107 | 95.5 | 108 | | 96.4 | 7 | 6.3 | | 68 | 63.6 | | 103 | 95.4 | | 68 | 60.7 | |
| Chiradzulu | 112 | 95.7 | 117 | | 100 | 5 | 4.3 | | 67 | 59.8 | | 106 | 90.6 | | 66 | 56.4 | |
| Thyolo | 109 | 96.5 | 113 | | 100 | 4 | 3.5 | | 83 | 76.1 | | 103 | 91.2 | | 80 | 70.8 | |
| Chikwawa | 110 | 91.7 | 119 | | 99.2 | 10 | 8.3 | | 89 | 80.9 | | 112 | 94.1 | | 88 | 73.3 | |
| Neno | 101 | 98.1 | 103 | | 100 | 2 | 1.9 | | 80 | 79.2 | | 99 | 96.1 | | 79 | 76.7 | |

Table 22 shows that the majority of the children’s biological fathers and mothers were alive. However, it suggests that a quarter of the children were not living with their biological father.

### Availability and ability to utilize reading materials and household items

An important element of early child development is stimulation. This stimulation can take different forms including cognitive that can be enhanced through reading books, being taught in the vernacular language spoken at home, and being able to operate household items.

Table 24: Availability of reading material, language used, and operating household items

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **District** | **HH with children’s books** | | **HH whose children read children's books** | | **Children who speak the dialect used as the language of instruction at school** | | **Children exposed, use or operate some HH items** | |
| **n** | **%** | **n** | **%** | **n** | **%** | **n** | **%** |
| Total | 334 | 25.0 | 168 | 50.3 | 1038 | 98.2 | 599 | 44.8 |
| Rumphi | 44 | 29.5 | 15 | 34.1 | 133 | 97.8 | 49 | 32.9 |
| Dowa | 37 | 15.0 | 20 | 54.1 | 221 | 98.2 | 82 | 33.3 |
| Ntcheu | 46 | 41.8 | 26 | 56.5 | 108 | 99.1 | 61 | 55.5 |
| Mchinji | 27 | 18.5 | 15 | 55.6 | 111 | 95.7 | 51 | 34.9 |
| Mangochi | 53 | 43.8 | 30 | 56.6 | 121 | 100 | 71 | 58.7 |
| Machinga | 56 | 50.0 | 33 | 58.9 | 111 | 99.1 | 65 | 58.0 |
| Chiradzulu | 33 | 28.2 | 10 | 30.3 | 42 | 95.5 | 90 | 76.9 |
| Thyolo | 20 | 17.7 | 7 | 35.0 | 51 | 98.1 | 70 | 61.9 |
| Chikwawa | 7 | 5.8 | 3 | 42.9 | 64 | 97.0 | 38 | 31.7 |
| Neno | 11 | 10.7 | 9 | 81.8 | 76 | 100 | 22 | 21.4 |

The results in Table 23 shows that, overall, 25 % of the households had books for children at home. However, only 50 % of the households indicating to have books reported that children ever read the books. The majority (98.2%) of the children were taught at school in the language dialect they spoke at home. Slightly less than half (44.8%) were exposed or were able to operate household items.

The following figure depicts the difference in the availability of books in the home, children who read books in their homes, children who are taught at school in the same dialect they used at home, and those who operate household items. The figure depicts a steady decline in all aspects except in the use of dialect.

Figure 6: Comparison of availability of books, children reading books, dialect used at school same as home, and operating HH items between baseline, midline, and annual surveys

### Playing with Toys

The Annual Survey undertook to establish the proportion of children who played with homemade toys, manufactured or toys bought from shops and those who played with household objects. The results in Table 30 show that 59.5 percent of the children indicated playing with homemade toys, 29 percent with manufactured toys while 85 percent played with household objects. The proportion of children playing with toys in the midline is slightly higher than in the baseline.

Table 25: Children who play with toys and household objects baseline and midline by sex of the child and age group (%)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Background Characteristics** | **Children who play with** | | | | | |
| **Homemade toys** | | **Toys from a shop/manufactured** | | **Household objects** | |
| **Number** | **Percent** | **Number** | **Percent** | **Number** | **Percent** |
| Total | 972 | 73,0 | 625 | 47,0 | 1016 | 76,6 |
| Male | 432 | 75,4 | 251 | 44,0 | 426 | 74,9 |
| Female | 540 | 71,2 | 374 | 49,3 | 590 | 77,9 |
| 36- 41 | 104 | 71,7 | 72 | 49,7 | 107 | 73,8 |
| 42-47 | 118 | 76,6 | 81 | 52,6 | 124 | 80,5 |
| 48-53 | 331 | 74,0 | 218 | 48,8 | 316 | 71,5 |
| 54-59 | 419 | 71,6 | 254 | 43,6 | 469 | 80,2 |
| Rumphi | 101 | 67,8 | 76 | 51,4 | 55 | 37,4 |
| Dowa | 151 | 61,6 | 99 | 40,2 | 115 | 47,3 |
| Ntcheu | 82 | 74,5 | 67 | 60,9 | 103 | 93,6 |
| Mchinji | 138 | 94,5 | 51 | 34,9 | 143 | 98,6 |
| Mangochi | 78 | 66,1 | 49 | 41,9 | 87 | 73,7 |
| Machinga | 75 | 67,6 | 67 | 59,8 | 94 | 83,9 |
| Chiradzulu | 91 | 77,8 | 80 | 68,4 | 111 | 95,7 |
| Thyolo | 78 | 69,6 | 70 | 62,5 | 107 | 95,5 |
| Chikwawa | 81 | 67,5 | 38 | 31,7 | 101 | 84,2 |
| Neno | 97 | 94,2 | 28 | 27,7 | 100 | 97,1 |

Table 25 shows that nearly three-quarters (73.0%) of the children played with homemade toys while less than half (47.0%) played with shop/manufactured toys.

The analysis compared the rates of playing with homemade and manufactured toys as well as household items at baseline, midline, and annual survey points. The figure below suggests an increase in playing with both homemade and manufactured toys, while there is a decrease from the midline in the use of playing with household items. Household items that children would play with include brooms, plates, pots, shoes, cars, etc.

Figure 7: Children who play with homemade toys, manufactured toys and household objects

### Child Development

The annual survey wanted to establish the status of child development among the children screened using the MDAT. The results in table 25 show that 71% of the children were developmentally delayed in the four domains combined.

Table 26: Annual Survey, Children Developmentally on-track by domain

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Characteristics** | **Developmentally on-track** | | | | | |
| **Total** | **Social** | **Expressive**  **Language** | **Fine**  **Motor** | **Gross**  **Motor** |
| **n (%)** | **n (%)** | **n (%)** | **n (%)** | **n (%)** |
| Total | 944 (70.6%) | 1170 (87.4%) | 1212 (90.6%) | 1213 (90.7%) | 1256 (93.9%) |
| 36- 41 | 101 (69.7%) | 134 (92.4%) | 134 (92.4%) | 125 (86.2%) | 127 (87.6%) |
| 42-47 | 81(52.6%) | 123 (79.9%) | 145 (94.2%) | 107 (69.5%) | 138 (89.6%) |
| 48-53 | 298 (66.2%) | 351 (78.0%) | 440 (97.8%) | 407 (90.4%) | 411 (91.3%) |
| 54-59 | 464 (78.8%) | 562 (95.4%) | 493 (83.7%) | 574 (97.5%) | 580 (98.5%) |
| Male | 388 (67.6%) | 483 (84.1%) | 510 (88.9%) | 524 (91.3%) | 543 (94.6%) |
| Female | 556 (72.8%) | 687 (89.9%) | 702 (91.9%) | 689 (90.2%) | 713 (93.3%) |
| Rumphi | 82 (55.0%) | 128 (85.9%) | 123 (82.6%) | 123 (82.6%) | 133 (89.3%) |
| Dowa | 150 (60.7%) | 199 (80.6%) | 215 ((87.0%) | 221 (89.5%) | 234 (94.7%) |
| Ntcheu | 100 (90.9%) | 107 (97.3%) | 107 (97.3%) | 104 (94.5%) | 107 (97.3%) |
| Mchinji | 99 (67.8%) | 127 (87.0%) | 131 (89.7%) | 132 (90.4%) | 137 (93.8%) |
| Mangochi | 103 (85.1%) | 113 (93.4%) | 112 (92.6%) | 119 (98.3%) | 119 (98.3%) |
| Machinga | 96 (85.7%) | 102 (91.1%) | 111 (99.1%) | 108 (96.4%) | 108 (94.4%) |
| Chiradzulu | 77 (65.8%) | 99 (84.6%) | 110 (94.0%) | 98 (83.8%) | 102 (87.2%) |
| Thyolo | 82 (72.6%) | 98 (86.7%) | 108 (95.6%) | 103 (91.2%) | 105 (92.9%) |
| Chikwawa | 87 (72.5%) | 104 (86.7%) | 105 (87.5%) | 112 (93.3%) | 112 (93.3%) |
| Neno | 68 (66.0%) | 93 (90.3%) | 90 (87.4%) | 93 (90.3%) | 99 (96.1%) |

Table 26 suggests that majority (70.6%) were developmentally on track. Female children (72.8%) compared to males (67.6%).

**Development across baseline, midline and annual surveys**

The analysis compares the baseline, midline and annual survey developmental levels. The figure below depicts an increase in the number of children developmentally on track.

Figure 8: Proportion of children developmentally on-track

### Literacy and Numeracy

Children were assessed on literacy and numeracy, one of the core indicators of the IEYP. The MELQO modules on numeracy and literacy were used. In the analysis, composite score for numeracy and literacy. The results are presented in Table 26 and Fig 6 depicts the scores for children in the baseline, midline, and annual surveys individual items.

Table 27 MELQO Numeracy and Literacy Scores

| **MELQO Domain** | **Children scoring (≥ 50%)** | | |
| --- | --- | --- | --- |
| **Baseline** | **Midline** | **Annual** |
| Expressive language | 70.8 % | 98.2 % | 97.4 % |
| Expressive vocabulary | 99.1 % | 47.4 % | 79.5 % |
| Letter identification | 8.3 % | 8.1 % | 2.9 % |
| Listening comprehension story | 56.3 % | 75.7 % | 69.8 % |
| Name writing | 66.0 % | 7.3 % | 31.3 % |
| Copying | 23.5 % | 53.9 % | 52.3 % |
| Copying images | 24.8 % | 12.3 % | 78.7 % |
| Receptive spatial vocabulary | 43.8 % | 53.3 % | 47.7 % |
| Verbal counting | 1.1 % | 21.9 % | 47.7 % |
| Producing a set | 38.1 % | 46.7 % | 55.1 % |
| Number identification | 9.1 % | 11.9 % | 6.0 % |
| Forward digit span | 81.8 % | 74.1 % | 93.6 % |
| Pencil tap | 50.5 % | 59.3 % | 43.2 % |

Table 27 shows the scores for the various modules in the MELQO numeracy and literacy assessment. The table shows that children, across the three time periods performed well in expressive language. Both baseline and annual did so well in expressive vocabulary but not so well in the midline.

Below is a graphical view of the comparison in MELQO module performance by children. Fig. 6 demonstrates an improvement in most items of the numeracy and literacy scale.

Figure 9: Literacy and Numeracy at baseline, midline and annual surveys

The figure below shows the composite score differences in literacy and numeracy scores across the three assessment time periods.

**Figure 10: Composite Literacy and Numeracy at baseline, midline and annual surveys**

# CONCLUSIONS AND RECOMMENDATIONS

## Conclusions

From the Household survey, it is evident that the proportion of children aged 6-23 months receiving a minimum acceptable diet has progressively increased from 13% to 20.08% to 23.3%. Similarly, the proportion of children aged 0-6 months exclusively breastfed has progressively improved from the baseline (60%) to midline (66%) and is currently at (70.4%).

In terms of reach out, the cumulative number of children (0-59 months), adolescent girls (11-19 years), and pregnant women increased from 879,901 to 2,003,631 and is therefore at 71.1% of the project target (2,600,000).

The intermediate result indicators under community-based nutrition interventions depict the current proportion of households practicing integrated homestead farming has progressively increased from 37.3% during midline to the current state of 45.2%. The proportion of children (6-24 months) who received micronutrient powder supplementation has currently faced stagnation from the onset due to logistical challenges. At baseline, the proportion of children receiving micronutrient powder supplementation soared from 5% to 16.1% at midline but has currently declined to 14.4%.

The project also targets adolescent girls to improve their health outcomes. The annual survey reports an increase in the uptake of various health-related interventions amongst targeted adolescent girls. Positive progress has been made in the uptake of HPV (from 32.9% to 72.3%), iron folate supplementation (from 20.2% to 49.9%), de-worming (from 26.9% to 80.5%) and HIV testing (from 9.8% to 24.7%) by adolescent girls. In total, slightly more than half (57.1%) of the children assessed were girls. This trend was true for most of the districts with just a few depicting more boys assessed. Thus Neno had slightly less than half (48.5%) of girl participants while Mangochi had the highest (67.8%).

The MDAT and MELQO revealed that the majority of the children’s biological fathers (96.1%) and mothers (99%) were alive. However, it suggests that a quarter of the children were not living with their biological father. In terms of living arrangements, only three-quarters (73.6%) of the children were staying with their father.

Further, it shows that, overall, 25 % of the households had books for children at home. However, only 50 % of the households indicating to have books, reported that children ever read the books. The majority (98.2%) of the children were taught at school in the language dialect they spoke at home. Slightly less than half (44.8%) were exposed or were able to operate household items.

The annual survey wanted to establish the status of child development among the children screened using the MDAT. The results depict that 71% of the children were developmentally delayed in the four domains combined. When compared with baseline and midline, the annual surveys’ score was higher, suggesting an improvement.

In terms of literacy and numeracy, one of the core indicators of the IEYP, the annual survey’s composite score depicts that children’s scores have been improving. Those attaining more than 50% at baseline was 17%, midline 26.4% while at the annual survey, was 31.5%.

## Recommendations

The household survey has found a low proportion of children aged 6-8 months who receive minimal dietary diversity. As such, a recommendation to ensure optimal feeding at this critical age is made. Improvements made in integrated household farming should directly translate into increased dietary diversity for this age. A behavioural change approach that focuses on specific energy requirements for this age group as it commences complementary feeding is hence recommended

The survey also found great variations of micronutrient supplementation amongst children aged 6-23 months across the districts. Interviews with PNHAO revealed several logistical challenges associated with MNP supplements. Based on the relatively high prevalence of anaemia and inflammation, high susceptibility to malaria, and low blood levels of micronutrients (zinc, iron, vitamin A) the need for micronutrient supplementation cannot be overemphasized. It is therefore recommended that IEYP addresses any logistical challenges encountered to avail MNP to targeted populations.

The MDAT/MELQO survey findings depict an improvement in many aspects assessed. However, it is worrying that the proportion of children reading books is declining. It is therefore strongly recommended that more efforts should be made to encourage heads of households to read books to children.

**APPENDICES**

## : Household Questionnaire



## : MDAT and MELQO Questionnaire



## MELQO Numeracy and Literacy



1. Sources: MDAT Study (2021) and MCBN Survey (2019). [↑](#footnote-ref-2)
2. WHO (2015): Improving nutrition outcomes with better water, sanitation and hygiene: practical solutions for policies and programmes [↑](#footnote-ref-3)
3. Ghosh-Jerath, S., Devasenapathy, N., Singh, A. et al. Ante natal care (ANC) utilization, dietary practices and nutritional outcomes in pregnant and recently delivered women in urban slums of Delhi, India: an exploratory cross-sectional study. Reprod Health 12, 20 (2015). https://doi.org/10.1186/s12978-015-0008-9 [↑](#footnote-ref-4)
4. Mchinji which had the lowest diversity in the midline (4.3%) significantly improved to 43.2%. [↑](#footnote-ref-5)
5. Preventively, 92.7% slept under an insecticide treated mosquito net [↑](#footnote-ref-6)
6. https://blogs.worldbank.org/en/home [↑](#footnote-ref-7)