

Prevalence & Associated Determinants of Malnutrition Among Children Under 59 Months Attending Homabay Referral Hospital, Kenya

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Abstract

Malnutrition remains a major public health, social, and developmental concern in Kenya, with its multifaceted causes requiring a multi-sectoral response. According to the Kenya Demographic and Health Survey (2014), 35% of children under five are stunted, 16% are underweight, and 7% are wasted, with higher prevalence among rural populations and children of less educated mothers. In Homa Bay County, the problem is particularly severe, with hospital records showing 21 children under five admitted with severe acute malnutrition between October 2016 and March 2017, rising to 57 cases between March and August 2017. This study aimed to determine the prevalence and associated determinants of malnutrition among children under five. A descriptive cross-sectional design was adopted, targeting 233 respondents, of which 180 valid questionnaires (77% response rate) were analyzed using SPSS version 20. Results showed that of the 180 children, 21.8% (n=180) were classified as stunted, 22.2% (n=180) were classified as underweight, and 18.5% (n=180) were classified as wasted. The study concluded that malnutrition in Homa Bay County is driven by determinants associated with socio-economic vulnerability, frequent childhood illness, poor feeding and hygiene practices, and limited access to safe water and sanitation. It recommends enhancing caregiver education, promoting optimal infant feeding, improving water and sanitation infrastructure, and implementing coordinated multi-sectoral interventions to sustainably reduce malnutrition and improve child health outcomes.

Keywords: Malnutrition, Children, Prevalence, Indicators, Homa Bay

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I. Background of the study

Globally, under-nutrition is associated with more than one-third of all deaths in children of the age group of 59 months and below. Malnutrition is a burden of ill health accounting for 60% of the 10.9 million deaths that occur annually among children under five years of age (REF). Data from UNICEF show that the highest level of underweight children is found in South Asia of which 46% are the age of under-fives (Arndt et al., 2024)

The World Food Program (2014) defines malnutrition as a state in which the physical function of a person is impaired to the point where he/she can no longer maintain proper bodily performance process such as growth and development, pregnancy, lactation, physical work and recovering from disease (Desyibelew et al, 2020)

According to the UNICEF report 2015, nearly half of all deaths in children under five are associated with under nutrition. This clearly shows that there is a loss of 3 million young children yearly approximately. Only a fraction of these children die in other circumstances such as famine or war. Malnutrition makes children's' growth stunted, deprives them of essential vitamins and minerals, and makes them predisposed to illness (Choge, 2020)

Malnutrition violates a child's right to survive, grow and develop and its consequences often remain invisible for long till later on in a child's life. The lack of breastfeeding or inadequate breastfeeding practices result in almost 12% of all deaths among children under age (UNICEF, 2015).

Despite the current efforts in prevention and management of under-five malnutrition in Bangladesh, 16% of children under the age of five years are still suffering from acute malnutrition. In India under-nutrition still bears a burden to public health which has a prevalence of 43.5% among under five years population which has been observed to be one of the highest in the world. In this age group of under-five population, 46% of children are reported to be stunt, 47% are under the required weight and 16% are wasted. There is also a disparity in the

prevalence of under-nutrition in the middle of the states of India, which starts at 55% to 27%, (Wali, Agho, & Renzaho, 2020)

The nutritional status in childhood is one of the factors indicating the well-being of households as well as determining the probability of child survival. It is one of the major causes of infant and child death rates. In sub-Saharan Africa, it stands at about 2% of deaths and about 3% of disability-adjusted life years (DALYs) in children of the age of under-five. It affects the child's intellectual development, health and productivity in the later life of these young ones. This leads to perpetuation imbalance in health and other portions of household matters. Child malnutrition is also one of the measures that show the health status of children that the WHO recommends for assessing uniformity in health (Adedokun & Yaya, 2021)

In developing countries, 12 million children under five years die every year. Malnutrition being prevalent in developing countries, it is rarely cited as being one of the leading causes of death. This is due to the conventional way that cause of death data are reported and analyzed. In many countries, mortality statistics are compiled from records in which a single proximate cause of death has been reported (Hussain-Alkhateeb et al., 2019)

In Kenya, malnutrition is poses a serious public health problem with the stunting, wasting and underweight prevalence of 37%, 6% and 27% respectively. Stunting is highest 44.8% among the 1-2 years age group (Okutse & Athiany, 2025). The form of malnutrition most common in Kenya is the chronic malnutrition form with 34% of children under the age of five being stunted, 8% wasted and 23% underweight. This accounts for about 1.5 million Kenyan children under five years. The USAID in 2006 reported that problems of malnutrition continue to worsen despite several interventions in place toward improving food and nutrition security. In 2008, the Kenya Demographic Health Survey showed that 35% of children in Kenya under-five years of age were stunted, which is an increase in the national stunting rates from 30% in 2003, with the highest prevalence ages of 18-35 months (Omuok, 2020)

At the national level, 35% of children under five years are stunted, 16% are underweight and 7% are wasted this is in accordance to Kenya Demographic and Health Survey report (2014). These conditions are increasing in most countries especially in developing and less developed countries. In Kenya the highest levels of low weight for age are found among children age 24-35 months. The Percentage is slightly higher among boys at 12% and girls 10%. In the rural areas it is at 13% and urban areas 7% and the proportion of underweight decreases as mother's education level increases.

In Homabay County, fifteen percent of children under 59 months and below are moderately underweight, 2% are classified as severely underweight, 26% are moderately stunted, 11% are severely stunted, 4% are moderately wasted and 2% are classified as overweight. These percentages have been approximated going by the World Health Organization standards (Kenya National Bureau of Statistics.2013).

II. MATERIALS AND METHODS

2.1 Research Design

This study employed a descriptive survey design administered through the Survey CTO platform to collect data on the nutritional status of children under five at Homa Bay Referral Hospital. This design was appropriate as it enabled the researcher to systematically gather, describe, and analyze information from the target population at a single point in time, providing an accurate snapshot of existing conditions and relationships among variables without manipulating the study environment.

2.2 Target Population

The target population included all guardians/caregivers with their children aged below five years visiting Homabay referral hospital during the study period.

2.2.1 Inclusion criteria

- All guardians/caregivers who had children under five years attending maternal and child health clinic, outpatient department for regular weight check and vaccination during the study period.
- All guardians who had children of 59 months and below admitted with malnutrition conditions at Homabay referral hospital.
- Children whose guardians/caregivers who gave consent to participate in the study.

2.2.2 Exclusion Criteria

- Children who attended maternal and child health clinic for weight check and vaccination services during the study period but were not residents of Homabay County.
- Children whose guardians failed to complete the questionnaires
- Sick children with other illnesses not related to malnutrition were eliminated from the study.

2.3 Sampling

2.3.1 Sample Size Determination

Fisher's model was used to calculate the sample size (Fisher et al.,1998)

$$N = \frac{Z^2 \alpha PQ}{e^2}$$

N-is the desired sample size

Z-Standard normal deviation

α -confidence level of 95%

P-characteristic of the proportion being measured

Q-characteristic of the proportion not measured (1-P)

e-error

P=which is the Prevalence of an indicator of malnutrition in Homabay County 18.7% (KDHS) whereby population for children under 59 months in homabay county is greater than 10,000

$$Q = 1 - 0.187 = 0.813$$

$$\alpha = 100 - 95 = 5\% \text{ which is equivalent to } 0.05$$

$$e = 0.05$$

$$\frac{1.96^2 * 0.813 * 0.187}{0.05^2}$$

Sample size of 233 children under 59 months.

2.3.2 Sampling Procedure

Systematic sampling procedure were done whereby the first segment of the population was selected randomly then proceeded with the selection of every k^{th} element (sample size). In this case mothers assigned number 2 were chosen randomly then followed by the selection of every 5th mother who were selected on an interval basis until the sample size was done. The exercise took 3 days a week i.e. Mondays, Wednesdays and Fridays till the sample size was done. Every mother who met the inclusion criteria and consent was sampled.

2.4 Data Collection

Data was collected by the use of structured questionnaires that were self-administered and 24 hour dietary recall form. The questionnaire consisted of open and close-ended questions to allow new ideas that may be raised from the study. The questionnaires were formulated from the objectives of the study in plain language for easier understanding.

Anthropometric measurements for the children were taken and height and weight parameters were used to determine their nutritional status. The weight measurement were taken using seca scale (Hanson mode) and the height /length portable wooden constructed scale calibrated for height measurement. Height for age (stunting), weight for age (underweight) and weight for height were calculated using = 2 D NCHS (National Centre for Health Statistics) reference data. The height for age z-score (HAZ) of < -2 classified children under study as stunted and Z- score cut off point of $< -2SD$ was used to classify low weight for age, low height for age and low weight for height.

2.4.1 Data Entry

Completed forms and questionnaires were checked for confirmation to rule out errors.

2.4.2 Data Analysis

The data collected was analyzed by use of quantitative methods. This involved the use of statistical methods, as percentages, fractions, averages, modes and median through STATA. Tables were used in data presentation. The study was analyzed using descriptive statistic and Poissons regression analysis to determine the relationship between independent variables and dependent variable. The regression formulae and equation was:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \alpha$$

Where β_0 is the regression intercept;

$\beta_1 - \beta_4$ are the regression coefficients

While Y will be the dependent variable (Nutritional Status)

X_1 is the social economic demographic characteristics,

X_2 is feeding practices among caregivers

X_3 is risk factors

III. RESULTS & DISCUSSION

3.1 Descriptive Statistics

The principal investigator circulated questionnaires to 233 respondents. One hundred and eighty (180) questionnaires were duly filled and returned for analysis. It is noteworthy to mention that the completion rate of the study stands at 77%. This indicates that 77% of the initially recruited participants successfully completed the study requirements, including data collection and any follow-up procedures. In the context of this study, the completion rate of 77% is considered sufficient for two major reasons. Firstly, indicates a strong level of engagement and commitment from the participants, suggesting a genuine interest in the research topic. Secondly, the completion rate is well above the commonly accepted threshold of 50% recommended by Mugenda and Mugenda (2003) for drawing meaningful conclusions in social science research, which is often deemed acceptable for drawing meaningful conclusions from study findings.

3.2 Prevalence of Malnutrition among Children Under 59 Months

The prevalence of malnutrition among the 180 children under 59 months was established using the proportion of children classified as stunted, underweight, and wasted. Of the 180 children, 21.8% (n=180) were classified as stunted, 22.2% (n=180) were classified as underweight, and 18.5% (n=180) were classified as wasted. These prevalence estimates are broadly comparable to the county-level estimates reported by the Kenya National Bureau of Statistics (2013) for Homabay County, and confirm that malnutrition remains a significant public health concern among children attending Homabay County Referral Hospital.

3.3 Demographic characteristics of the study respondents

Sample of 180 mothers/ caregivers of children under 59 months at Homabay Referral Hospital were included in the study to establish determinants of malnutrition and associated factors. Table 4.1 presents the demographic characteristics of the study respondents.

Most respondents fell within the age range of 20-29 years (52.9%), followed by those aged 30-39 years (40.3%). A smaller proportion of respondents were below the age of 20 years (7.1%). A significant portion of respondents were married (81.4%), while smaller proportions were divorced (5.7%), single (10.0%), or separated (2.9%). The largest proportion had attained secondary education (44.3%), followed by tertiary education (24.4%) and primary education (22.9%). A smaller proportion of mothers had no formal education (8.6%).

Understanding the age distribution, marital status, and education level of the respondents provides insights into the socio-demographic factors that may influence child malnutrition. For example, marital status and maternal education level can impact household income, access to healthcare, and knowledge of nutrition practices, all of which are important determinants of child malnutrition. Additionally, the age distribution of respondents may provide insights into the age groups most affected by malnutrition, guiding targeted interventions and strategies to address the issue effectively. Overall, the demographic characteristics outlined in Table 1.0 lay the foundation for further analysis and interpretation of the determinants of malnutrition among children under 59 months at Homabay Referral Hospital.

Table 1.0 Respondents Demographics

Variable	N	Percentage (%)
Respondent ages in years (N=180)		
<20	12	7.1
20-29	95	52.9
30-39	73	40.3
Marital status of respondents (N=180)		
Married	146	81.4
Divorce	10	5.7
Single	18	10.0
Separated	6	2.9
Mothers level of education (N=180)		
No formal education	16	8.6
Primary	40	22.9
Secondary	80	44.3

3.4 Socio Economic characteristics of study respondents

Most mothers in the study were categorized as housewives (60.0%), followed by businesspersons (28.6%). A smaller proportion were classified as civil servants (21.4%) and casual workers (11.4%). These findings suggest that a significant portion of mothers in the study were engaged in household responsibilities, while others were involved in business ventures or employed in civil service positions.

Among fathers in the study, the majority were businesspersons (40.7%), followed by civil servants (24.1%) and fishermen (20.4%). A smaller proportion were classified as casual workers (14.8%). These findings indicate a diverse range of occupations among fathers, with a substantial portion engaged in entrepreneurial activities or formal employment.

Regarding the perception of the cost of food, the majority of respondents perceived it as either high (30%) or too expensive (40%). Only a small proportion perceived food as affordable (28.6%), while an even smaller percentage considered it cheap (1.4%). These findings suggest that a significant portion of the study population perceives the cost of food as a considerable challenge, potentially impacting their ability to access nutritious and affordable food options.

A study by Smith et al. (2018) on the socio-economic determinants of child malnutrition in Sub-Saharan Africa supports the findings of the current study. Smith et al. found that maternal occupation, paternal occupation, and perceptions of food affordability were significant predictors of child malnutrition, emphasizing the need for targeted interventions to address socio-economic disparities in access to adequate nutrition and healthcare.

Occupation was retained in the analysis as a proxy for household income stability and caregiver time availability for childcare and feeding, both of which are plausible pathways to child nutritional status; however, occupation category alone does not capture actual household income or purchasing power, which limits its explanatory value and is acknowledged as a limitation of the current variable set. Similarly, the food affordability measure used in this study captured caregivers' subjective perception of food cost rather than an objective measure of household purchasing power or capacity to purchase food (such as food expenditure share of income); future studies should consider incorporating actual expenditure or income-based affordability measures alongside perception-based ones to strengthen this indicator.

The socio-economic characteristics outlined in Table 1.1 provide valuable insights into the contextual factors that may influence child malnutrition, highlighting the relevance of addressing socio-economic determinants in interventions aimed at reducing malnutrition prevalence among children under 59 months.

Table 1.1. Socio Economic characteristics

Table 1.1. Socio-Economic Characteristics				
Variable	n		Percentage %	
Mother's occupation (N=180)				
Civil servant	133	21.430	44.3	30.000
Housewife	84	30.000	28.0	60.000
Casual worker	18	11.430	6.0	71.430
Businessperson	57	28.570	19.0	100.000
Civil servant	5	21.430	2.7	30.000
Father's Occupation (N=129)				
Civil servant	31		24.1	
Fisherman	26		20.4	
Casual worker	19		14.8	
Businessperson	53		40.7	
Perception on cost of food(N=180)				
Affordable	51		28.6	
Cheap	3		1.4	
High	54		30	
Too expensive	72		40	

3.5 Household characteristics of study respondents

The household characteristics of the study respondents were investigated to gain insights into their living conditions and hygiene practices. Table 1.2 presents the findings related to the source of drinking water, food preparation practices, handwashing before food preparation, and types of toilet facilities used by household.

Majority of households relied on public tap water (37.1%) as their primary source of drinking water, followed by piped-in dwelling (24.5%). A smaller proportion reported using other sources such as rainwater and lake water (11.4%) or protected dug wells or protected rivers (27.1%). Access to safe and clean drinking water is essential for maintaining good health and preventing waterborne diseases. The high percentage of households relying on public tap water suggests relatively good access to treated and potable water sources.

Most respondents (78.6%) reported preparing food in their households, indicating active involvement in food preparation practices within the community. Food preparation practices play a critical role in food safety and hygiene. The high percentage of households engaged in food preparation highlights the importance of promoting safe food handling practices to prevent foodborne illnesses. It is acknowledged that, as recorded, this variable only indicates whether the respondent (rather than another household member) was the one who prepared the child's food, and does not by itself capture food safety, hygiene, or dietary diversity; its analytical value therefore lies mainly in identifying the primary caregiver responsible for feeding decisions rather than in assessing food preparation quality. Among households where food was prepared, the majority (69.1%) reported practicing handwashing before food preparation. Handwashing is a simple yet effective measure for preventing the spread of infections and reducing the risk of food contamination. The high percentage of households practicing handwashing before food preparation is encouraging, as it indicates awareness of the importance of hand hygiene in maintaining food safety.

Most households used private pit latrines (60.1%) as their primary toilet facilities, followed by in-house flush toilets (14.6%), public flush toilets (20%), and public pit latrines (5.01%). Access to proper sanitation facilities is crucial for promoting hygiene and preventing the spread of diseases. The high percentage of households using private pit latrines suggests relatively good access to sanitation facilities within the community.

The findings regarding the source of drinking water and sanitation facilities usage are consistent with previous studies that have highlighted the importance of access to clean water sources and proper sanitation facilities in promoting public health and preventing waterborne diseases (Smith et al., 2015; Press-Stud et al., 2019). These studies emphasize the need for continued efforts to improve access to safe drinking water and sanitation facilities, particularly in low-resource settings, to reduce the burden of waterborne diseases and improve overall health outcomes within communities.

Table 1.2. Household Characteristics

Table 1.2: Household Characteristics				
Variable	N		Percentage	
Source of drinking water (N=180)				
Other (rain and lake)	21	11.430	11.4	11.430
Piped-in dwelling	44	24.290	24.5	35.710
Public tap	67	37.140	37.1	72.860
Protected dug well or protected river	49	27.140	27.1	100.000
Food preparation by respondent (N=180)				
No	39	21.430	21.4	21.430
Yes	141	78.570		100.000
Hand Washing before food preparation(N=141)				
No	44	30.910	30.9	30.910
Yes	97	69.090	69.1	100.000
Types of toilet facilities used by household (N=180)				
In house flush toilet	26		14.6	
Public flush toilet	36		20	
Private pit latrine	108		60.1	
Public pit latrine	9		5.01	

3.6 Child Morbidity

The results pertaining to child morbidity among the study participants are presented in Table 1.3

Majority of caregivers reported that their child had fallen sick once a month (48.6%), followed by those who reported their child falling sick once a week (24.3%). A smaller proportion reported their child falling sick twice a week (4.3%), while a notable percentage reported that their child had never fallen sick (27.1%). Most caregivers (61.4%) reported that their child had not been hospitalized, while 38.6% reported that their child had been hospitalized. Among the children who had been sick in the last three months, the most common illnesses reported were diarrhea (51.9%) and fever (29.6%). Fewer children were reported to have had cough (11.1%) and anaemia (7.4%). Majority (62.9%) indicated that they go to the clinic, while others either buy drugs from a drug store (17.1%) or consult a traditionalist (20.0%).

The high prevalence of child sickness, particularly diarrhea and fever, underscores the importance of addressing factors contributing to morbidity among children in the study population. Strategies aimed at preventing and managing common childhood illnesses, such as promoting hygiene practices and timely healthcare-seeking behaviour, are crucial in reducing child morbidity rates. It should be noted, however, that because respondents were recruited at a referral hospital, the observed frequency of illness and hospitalization is likely elevated relative to the general child population, since children already seeking or receiving care are over-represented in a facility-based sample.

Furthermore, the caregivers' actions in response to child sickness highlight the need for accessible and quality healthcare services. The preference for clinic visits suggests a reliance on formal healthcare providers for managing child illnesses. This underscores the importance of strengthening healthcare systems and ensuring accessibility to healthcare facilities for all caregivers.

The results also emphasize the importance of caregiver education and awareness regarding childhood illnesses and appropriate healthcare-seeking behaviours. Promoting caregiver knowledge on recognizing signs of illness, preventive measures, and timely treatment-seeking can contribute to improved child health outcomes.

In alignment with the study findings, previous research has highlighted the significance of socioeconomic factors, healthcare access, and caregiver knowledge in influencing child health outcomes. Studies by Bealu et al. (2017), Leslie (1989), and Peter Maina Chege et al. (2013) emphasize the impact of household food insecurity, feeding behaviours, and caregiver nutritional knowledge on child health and nutritional status. These findings underscore the interconnectedness of socioeconomic factors, healthcare practices, and child morbidity, highlighting the need for holistic approaches to address child health challenges.

Table 1.3 Child Morbidity

Variable	N		Percentage	
Frequency Child Sickness in (N=180)				
Twice in a week	8	4.290	4.3	4.290
Once in a week	36	20.000	20	24.290
Never fallen sick	49	27.140	27.1	51.430
Once in a month	87	48.570	48.6	100.000
Child hospitalized in 3 months ago (N=180)				
No	111	61.430	61.4	61.430
Yes	69	38.570	38.6	100.000
Child diseases in the last 3 months (N=69)				
Fever	20	29.630	29.6	29.630
Diarrhea	36	51.850	51.9	81.480
Cough	8	92.590	11.1	
Anemia	5	7.410	7.4	100.000
Action taken when child is sick (N=180)				
Buy drugs from drugs store	31	17.140	17.1	17.140
Consult traditionalist	38	20.000	20.0	37.140
Go to the clinic	113	62.860	62.9	100.000

3.7 Characteristics Of Study Children

The characteristics of the study children are summarized in Table 1.4. Among the 180 children included in the study, the majority (31.4%) fell within the age range of 13-24 months, followed by those aged 25-36 months (30.0%). Smaller proportions were distributed across the other age categories, with 8.6% in the 0-12 months category, 20.0% in the 37-48 months category, and 10.0% in the 49-60 months category.

Regarding childbirth weight, 27.1% of the children had low birth weight (<2500 grams), while the remaining 72.9% had normal birth weight ($\geq$ 2500 grams). Additionally, a significant majority of children (80.0%) had been breastfed at some point, while a smaller proportion had never been breastfed (17.1%), and a negligible percentage of respondents were unsure (2.9%).

The findings from the literature review align with the results of this study, providing additional context and support for the observed trends. For instance, Bealu et al. (2017) reported high levels of household food insecurity, which could contribute to inadequate nutrition intake and subsequent malnutrition among children. Similarly, studies by Peter Maina Chege et al. (2013) and Edward A. et al. (1997) emphasize the role of caregiver knowledge and socio-demographic factors in shaping child nutrition outcomes, echoing the importance of addressing these factors in interventions aimed at reducing malnutrition rates. These findings collectively underscore the multifaceted nature of malnutrition and the need for comprehensive, context-specific approaches to address the underlying determinants effectively.

Table 1.4 Characteristics of study children

Variable	N	Percentage (%)	
Age in months (N=180)			
0-12	15	8.6	
13-24	57	31.4	
25-36	54	30.0	
37-48	36	20.0	
49-60	18	10.0	
Childbirth weight (N=180)			
Low birth weight (<2500 grams)	49	27.140	27.140
Normal birth weight (>or = 2500 grams)	131	72.860	100.000
Child ever ben breastfed(N=180)			
I don't know	5	2.9	
Yes (ever breastfed)	144	80.0	
No (never breastfed)	31	17.1	

3.8 Breastfeeding practices

Variable	N	Percentage (%)
Child ever ben breastfed(N=180)		
I don't know	5	2.9
Yes (ever breastfed)	144	80.0
No (never breastfed)	31	17.1
Hand wash practice (N=180)		

Yes	124	69.09
No	56	30.91
Source of Drinking Water (N=180)		
Other specify	21	11.43
Piped-in dwelling	44	24.29
Public tap	67	37.14
Protected dug well or protected river	49	27.14

On breastfeeding, a significant majority (80.0%) reported that their child had ever been breastfed, indicating a prevalent adherence to global recommendations for infant feeding. However, it is concerning that a notable portion (17.1%) stated that their child had never been breastfed, which warrants further investigation into the reasons behind this deviation from recommended practices. Moreover, a small percentage (2.9%) of respondents expressed uncertainty regarding their child's breastfeeding history, suggesting a potential lack of awareness or documentation regarding infant feeding practices. It is also acknowledged that, because children in the sample ranged up to 60 months of age, caregivers of older children were being asked to recall breastfeeding practices that may have occurred three to four years earlier, which introduces a risk of recall bias; responses to this item, particularly among caregivers of older children, should therefore be interpreted with some caution.

Regarding food preparation, the majority of respondents (78.57%) reported being responsible for preparing food for their child. This finding underscores the pivotal role of caregivers in ensuring adequate nutrition for their children. However, it is concerning that a sizeable proportion (21.43%) indicated that they were not responsible for food preparation, raising questions about the quality and adequacy of nutrition provided to children in such cases.

Hygiene practices, particularly handwashing before food preparation, emerged as an area of concern. While a majority (69.09%) reported practicing handwashing, a significant proportion (30.91%) admitted to not adhering to this crucial hygiene practice. Poor hygiene practices can contribute to the transmission of diseases and compromise child health, underscoring the importance of promoting and reinforcing proper hygiene behaviours among caregivers.

The study also examined the sources of drinking water among respondents, revealing varied patterns. A substantial number reported relying on public taps (37.14%) and protected dug wells or rivers (27.14%) for drinking water, while others had access to piped-in dwellings (24.29%). However, a notable proportion (11.43%) specified other sources of drinking water, which may include less reliable or safe sources. Access to safe drinking water is essential for maintaining overall health and preventing waterborne diseases, highlighting the need for ensuring adequate access to clean and safe water sources for all households.

IV. Conclusion:

The findings revealed that malnutrition in the study population remains a major public health concern, with wasting, stunting, and underweight persisting despite various nutritional interventions. Socio-demographic factors such as maternal education, occupation, and marital status showed limited statistical association with child malnutrition, though descriptive findings indicated their potential influence on household nutrition practices.

V. Recommendations

1. Strengthen Nutrition Education:

The Ministry of Health, in collaboration with community health workers, should intensify nutrition education for caregivers, emphasizing proper infant feeding practices, dietary diversity, and hygiene.

2. Promote Maternal Empowerment:

Programs aimed at improving maternal education and economic empowerment should be prioritized, as maternal literacy and income levels are crucial in enhancing child nutrition and healthcare-seeking behavior.

3. **Strengthen Health Services and Disease Prevention:**

Health facilities should enhance preventive healthcare, including regular child growth monitoring, immunization, and prompt treatment of common childhood illnesses such as diarrhea and fever.

4. **Community-Based Nutrition Interventions:**

There is need for community-driven programs that integrate health, nutrition, and hygiene interventions tailored to local contexts to address the root causes of malnutrition.

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