

Socio-cultural related factors contributing to anaemia in children under the age of five years at the paediatric ward in Nakaseke general hospital, Nakaseke district. A cross-sectional study.

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Page | 1 **ABSTRACT**

Background:

The study aimed to determine the socio-cultural related factors contributing to anaemia in children under the age of five years at the paediatric ward in Nakaseke General Hospital, Nakaseke district.

Methodology:

The study employed a descriptive cross-sectional design at Nakaseke General Hospital, targeting caretakers of children under five diagnosed with anaemia. A sample of 80 respondents was selected using simple random sampling, with participants approached, consented, and enrolled using folded-paper selection. Data were collected via pretested, self-administered, structured questionnaires in Luganda, guided by trained research assistants. Quantitative data were analyzed in Microsoft Excel and presented in tables, charts, and graphs. Ethical clearance, informed consent, confidentiality, and adherence to SOPs were ensured throughout the study.

Results:

Among the 80 respondents, 55 (68.7%) were female, and 25 (31.3%) were male. Most were aged 26–35 years (35; 43.8%), followed by 14–25 years (20; 25.0%), 36–45 years (15; 18.7%), and 46+ years (10; 12.5%). Household sizes were 1–4 members (30; 37.5%), 5–8 members (40; 50.0%), and 8+ members (10; 12.5%), with 45 (56.3%) living in rural areas. Half were married (40; 50.0%), 25 (31.3%) single, 10 (12.5%) divorced, and 5 (6.2%) widowed. Regarding education, 30 (37.5%) had secondary, 25 (31.3%) primary, 15 (18.7%) tertiary, and 10 (12.5%) never attended school. Socio-culturally, 35 (43.8%) reported fathers as primary decision-makers on family income, 30 (37.5%) said both parents shared decisions, and 15 (18.7%) said mothers decided alone. Food taboos were practiced in 25 (31.3%) of households, mainly restricting fish (8; 10.0%), chicken (7; 8.7%), eggs (5; 6.3%), and fruits (3; 3.8%).

Conclusion:

Male-dominated decisions, poor feeding practices, and food taboos reduced children's dietary diversity and increased anaemia.

Recommendation:

Community and religious leaders should discourage food taboos and promote joint parental decision-making on child nutrition.

Keywords: Anaemia, Children under five, Socio-cultural factors, Food taboos, Household, decision-making, Complementary feeding, Nakaseke General Hospital.

Submitted: June 19, 2026 **Accepted:** July 21, 2026 **Published:** August 8, 2026

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BACKGROUND OF THE STUDY

Socio-cultural factors significantly influence the nutritional status of children under five years, contributing to anaemia through gender norms, feeding practices, traditional beliefs, and maternal roles. In many settings, patriarchal systems limit women's control over household resources, often prioritizing personal or non-essential expenditures, which reduces access to adequate food and healthcare for children. A study in the Southern Highlands of Tanzania reported that men controlled family resources, leading to food shortages in 75% of households and unequal food distribution, with boys receiving larger portions than girls, causing

undernutrition in 60% of female children. Cultural food taboos, such as restricting women and girls from consuming nutrient-rich foods like fish and eggs, were reported by 70% of participants, contributing to micronutrient deficiencies in children (Frumence et al., 2023).

Restrictions on women's roles, including limitations on harvesting vegetables during menstruation, reduced household vegetable intake, while a lack of decision-making power limited family planning, resulting in larger families and insufficient childcare. Misconceptions linking undernutrition to witchcraft delayed medical care, and poor parental nutrition knowledge combined with alcohol abuse

further compromised child feeding and care (Frumence et al., 2023).

Household food insecurity exacerbates these challenges. In Southwestern Nigeria, 63% of households experienced food insecurity, and under-five children had inadequate iron, Vitamin A, and zinc intake, increasing anaemia risk (Yahaya et al., 2021). Demographic surveys across 15 African countries revealed that early maternal marriage (before 18 years) was strongly associated with higher anaemia prevalence, whereas marriage after 18 reduced risk by 20% (Seun Anjorin et al., 2021). Similar patterns were reported in Peru, where maternal education, wealth, and family size influenced anaemia prevalence, with rural children being more affected than urban ones (Al-Kassab-Cordova et al., 2022).

Food taboos are also prevalent in Uganda, where pregnant and breastfeeding women avoid sugarcane, fish, eggs, and chicken due to cultural beliefs, increasing micronutrient deficiencies among children (Tugume et al., 2024). Reliance on traditional healers in Ethiopia delayed treatment for malnutrition and anaemia in 45% of children (Ketema et al., 2022). Maternal illiteracy and suboptimal infant feeding practices, including inappropriate breastfeeding and timing of complementary feeding, further increase anaemia risk (Tadesse et al., 2022).

The study aimed to determine the socio-cultural related factors contributing to anaemia in children under the age of five years at the paediatric ward in Nakaseke General Hospital, Nakaseke district.

METHODOLOGY

Study Design

The study employed a descriptive cross-sectional design to collect quantitative data. This design was chosen because it enabled the capture of a wide range of views from respondents.

Study Area

The study was conducted at Nakaseke General Hospital in Nakaseke District. The study area was selected because it has a high prevalence of anaemia among children under the age of five who were received at the ward. Nakaseke general hospital has a bed capacity of 150 beds with several departments like the outpatients department, dental department, laboratory department, eye care department, paediatric ward, male and female wards, among other departments.

Study Population

The study population comprised all caretakers of children under 5 years of age who were diagnosed with anemia and admitted to the Pediatric Ward of Nakaseke General Hospital at the time of data collection.

Sample Size Determination

The sample size for caregivers of children attending Nakaseke General Hospital will be obtained using the Kish-Leslie formula (1965)

$$N = \frac{Z^2 PQ}{d^2}$$

Where; n=sample size

Z-score corresponding to 95%

Confidence interval=1.96

P = anticipated proportion of caregivers of children Q = 1 – P

d = precision/sampling error (9.8%)

Therefore; n = $\frac{1.96 \times 1.96 \times 0.4(1-0.5)}{0.098 \times 0.098}$

n = 80 respondents

Sampling Technique

A simple random sampling method was used to select mothers and caretakers of anemic children under five years of age admitted at Nakaseke General Hospital during the study period. This method was considered appropriate and time-efficient for selecting study participants. Simple random sampling also helped to minimize bias compared to other methods, such as judgmental sampling, where selection depends on personal preference.

Sampling Procedure

Mothers and caretakers of anemic children under five years of age admitted at Nakaseke General Hospital during the study period were enrolled using simple random sampling to ensure fairness in participant selection. Since a specific sample size was required, participants were first approached, informed about the purpose of the study, and informed consent was obtained.

Papers equal to the number of available respondents were prepared; some were labeled “participate” according to the required sample size, while the rest were labeled “do not participate.” These papers were folded, thoroughly mixed in a container, and participants randomly selected one without seeing its content. Those who picked papers labeled “participate” were included in the study. This process continued until the desired sample size of 80 participants was achieved. Luganda was used since most of the participants will find it easier and more comfortable to express themselves, as well sharing ideas and views about the problem of anemia.

Data Collection Methods

A self-administered questionnaire method was used to collect data for mothers/caretakers of children admitted to the hospital, to collect data because questionnaires are a safe and easy way of collecting organized data, and also saved time.

Data Collection Tools

A self-administered structured questionnaire comprising closed-ended questions was used to collect data. This method is efficient, allows for standardized responses, and saves time during data collection. Open-ended questions: These require participants to provide detailed responses rather than simple "yes" or "no" answers, allowing for deeper insights into personal experiences, perceptions, and factors influencing contraceptive use. For example: "What challenges do you face in accessing modern contraceptives in your community?" Closed-ended questions: These require respondents to select from predetermined options, such as "yes" or "no," or choose from multiple-choice responses. This type of question simplifies data analysis and ensures consistency across responses. For example: "Have you ever used any form of modern contraceptive? Yes / No."

Data Collection Procedure

After obtaining an introductory letter from the Research Committee of Kampala Institute of Health Professionals, permission to conduct the study was sought from the hospital administration before data collection began. Respondents were selected using simple random sampling due to its simplicity and effectiveness in providing an unbiased representation of the population. All eligible caretakers of children who consented were considered for participation. Five folded papers were prepared to guide the order of data collection, and respondents were randomly selected upon arrival at the hospital. The data collection process involved randomly approaching mothers or caretakers of reproductive age to participate in the study. The investigator introduced themselves to the selected participants, explained the purpose, procedures, and ethical considerations such as informed consent and confidentiality, and then administered the questionnaire. Participants were required to sign a consent form before taking part in the study.

Study Variables

Dependent Variables.

It was anaemia among children under the age of five years.

Independent Variables.

It was the socio-cultural related factors.

Data Quality Control

Pre-testing of the Research Tool

Pretesting of data collection tools, specifically self-administered questionnaires, was carried out a week prior to the start of actual data collection to check their effectiveness and reduce errors. Pretesting was done at Semuto Health Centre IV by giving questionnaires to be answered accordingly so as to check the effectiveness of the self-

administered questionnaires and to rectify any errors before actual data collection, as Semuto Health Centre IV has a similar population and climatic conditions to Nakaseke General Hospital.

Piloting of the Study

The three (3) Research Assistants were trained on how to correctly fill out questionnaires and ensure ethical considerations during the research process to enhance data validity.

Adequate Time for Data Collection

Adequate time was allocated for data collection to allow for a comprehensive assessment of household and hospital-related factors contributing to anaemia. The primary criteria for participant selection were caretakers/mothers with at least one child under five years admitted or attending the paediatric ward. This ensured that respondents were directly relevant to the study objectives and that the data collected reflected real experiences of anaemia in children within Nakaseke District.

Adherence to Standard Operating Procedures (SOPs)

All activities in the study were conducted in strict adherence to standard operating procedures (SOPs). This included maintaining the confidentiality of participants, ensuring accurate recording of responses, and following hospital protocols during interviews with caretakers and clinical staff. Such adherence minimized errors, safeguarded ethical integrity, and enhanced the reliability of findings regarding the causes of anaemia among under-five-year-olds

Selection Criteria

Inclusion Criteria

The study included all the caretakers of children under 5 years of age with anemia admitted in the Pediatric Ward, Nakaseke General Hospital, who were free, willing, and voluntarily consented to participate in the study.

Data Analysis and Presentation

The quantitative data was sorted, processed, and analyzed using Microsoft Excel 2013, as this eliminates errors, and it was easy to use.

Data was analyzed and presented in figures, tables, pie-charts, and bar graphs in the report for easy interpretation of the research findings.

Ethical Considerations

An introductory letter for data collection was obtained from the Research and Ethics Committee of Kampala Institute of Health Professionals. This letter was taken to the Research and Ethics Committee of Nakaseke General Hospital to introduce and seek permission to carry out the research.

Caretakers' autonomy was respected by allowing them to freely decide on participation. Those who decline will not be forced but may be replaced by other willing respondents. Caretakers were required to voluntarily consent to take part in the research, and the contents of the consent form were clearly explained before participation.

Confidentiality was ensured by assigning identification codes instead of using real names. All the information

collected will strictly be used for academic and research purposes and will not be shared with unauthorized persons. Beneficence was observed by sensitizing caretakers and the community about the importance of proper child feeding practices, malaria prevention, deworming, and other preventive measures that can help reduce the burden of anaemia among children under five years.

RESULTS

Demographic Characteristics of the Respondents

Table 1: Distribution of respondents by their demographic Characteristics of Respondents (n = 80)

Variable	Category	Frequency	Percentage (%)
Gender	Female	55	68.7
	Male	25	31.3
	Total	80	100
Age (Years)	14–25	20	25.0
	26–35	35	43.8
	36–45	15	18.7
	46 years and above	10	12.5
	Total	80	100
Marital Status	Single	25	31.3
	Married	40	50.0
	Divorced	10	12.5
	Widowed	5	6.2
	Total	80	100
Level of Education	Primary	25	31.3
	Secondary	30	37.5
	Tertiary	15	18.7
	Never attended school	10	12.5
	Total	80	100
Occupation	Housewife	30	37.5
	Small-scale business	25	31.3
	Peasant	20	25.0
	Others	5	6.2
	Total	80	100
Household members	1–4	30	37.5
	5–8	40	50.0
	8 or more	10	12.5

Area of residence	Rural	45	56.3
	Urban	35	43.7
	Total	80	100

Source: Primary data, 2025

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The results in Table 1 show that the majority of respondents, 55 (68.7%), were female, while 25 (31.3%) were male. Regarding age distribution, most respondents, 35 (43.8%), were aged 26–35 years, followed by 20 (25.0%) aged 14–25 years, and 15 (18.7%) aged 36–45 years. The smallest group, 10 (12.5%), was aged 46 years and above. With respect to marital status, half of the respondents, 40 (50.0%), were married, 25 (31.3%) were single, 10 (12.5%) were divorced, while 5 (6.2%) were widowed. Considering the level of education, 30 (37.5%) of respondents had attained secondary education, 25 (31.3%)

had primary education, 15 (18.7%) had tertiary education, while 10 (12.5%) had never attended school. In terms of occupation, 30 (37.5%) were housewives, 25 (31.3%) engaged in small-scale business, 20 (25.0%) were peasants, and 5 (6.2%) were in other occupations. Regarding household size, half of the respondents, 40 (50.0%), lived in households with 5–8 members, 30 (37.5%) had 1–4 members, while 10 (12.5%) had 8 or more members. Concerning the area of residence, 45 (56.3%) of the respondents lived in rural areas, while 35 (43.7%) were from urban settings.

Socio-Cultural factors contributing to anaemia in children under the age of five years at the paediatric ward

Table 2: Distribution of Respondents by Socio-Cultural factors contributing to anaemia in children under the age of five years at the paediatric ward (n = 80)

Variable	Category	Frequency	Percentage (%)
Decision-maker on family income	Father	35	43.8
	Mother	15	18.7
	Both equally	30	37.5
	Total	80	100
Household practices and food taboos	Yes	25	31.3
	No	55	68.7
	Total	80	100
Restricted foods (if yes)	Fish	8	10.0
	Eggs	5	6.3
	Chicken	7	8.7
	Fruits	3	3.8
	Other	2	2.5
	Total	80	100

Source: Primary data, 2025

From table 2, 35(43.8%) of respondents reported that their husbands were the decision-maker on family income, while the least 15 (18.7%) of mothers were the sole decision-makers. The majority, 55(68.7%) of the respondents reported that their household doesn't practice food taboos, whereas the minority, 25(31.3%), practiced food taboos. Most 8(10.0%) of the respondents reported that fish was the most restricted food, whereas the least (2.5%) of respondents reported other foods, such as rice.

The study established that in most households (43.8%), fathers were the main decision-makers regarding family income. This indicates that men predominantly control financial resources, which may affect how funds are allocated toward children's nutrition and healthcare. When women lack decision-making power, they may be unable to prioritize essential nutritional needs for their children. This finding aligns with Frumence et al. (2023) in Tanzania, who noted that patriarchal systems often result in men controlling household finances and prioritizing personal expenditures like alcohol over children's welfare. Consequently, 75% of these households reported inadequate food access for children. Empowering women to participate in household financial decisions could therefore improve child nutrition and reduce anaemia prevalence.

DISCUSSION

Half of the mothers (50.0%) introduced complementary foods at six months, aligning with WHO recommendations for proper infant feeding. Early or delayed introduction of complementary feeding increases the risk of anaemia by causing infections or nutrient deficiencies. This finding is consistent with Tadesse et al. (2022), who reported similar feeding practices in their study. Proper timing of complementary feeding is vital to meet infants' iron and micronutrient requirements, highlighting the need for community education on appropriate feeding practices.

The study also revealed that 31.3% of households practiced food taboos that restricted the consumption of nutrient-rich foods, contributing to iron and protein deficiencies linked to anaemia. This finding mirrors Frumence et al. (2023), who found that 70% of Tanzanian households observed food taboos restricting items like fish and eggs for women and children. Such cultural beliefs negatively impact children's nutritional status, underscoring the importance of addressing harmful food taboos.

In addition, the study found that most mothers (37.5%) breastfed their children for more than one year. While extended breastfeeding is beneficial, prolonged exclusive breastfeeding without the timely introduction of complementary foods can cause iron deficiency. Conversely, early cessation of breastfeeding deprives children of vital nutrients. This finding is consistent with Tadesse et al. (2022), who reported that half of the mothers planned to stop breastfeeding after one year. Therefore, educating mothers on maintaining optimal breastfeeding duration alongside timely complementary feeding is essential to prevent anaemia.

CONCLUSION

The study revealed that socio-cultural factors play a major role in the occurrence of anaemia. Fathers were the primary decision-makers regarding household income, limiting mothers' ability to make nutritional decisions for children. Additionally, practices such as early or delayed introduction of complementary feeding and adherence to food taboos reduced dietary diversity among children, increasing their risk of anaemia.

RECOMMENDATION

Community and religious leaders should be engaged to discourage harmful food taboos that limit children's access to nutritious foods. Programs promoting joint decision-making between spouses on household income and child feeding should be strengthened to improve children's nutritional outcomes.

Acknowledgement

With gratitude, I thank the almighty God for protecting me throughout the entire period in which I carried out my

research and for giving me the wisdom to complete this programme successfully.

I also appreciate the following for their stable support while in Nakaseke General Hospital, Nakaseke district: the entire staff of Nakaseke General Hospital for their hospitality and willingness to equip me with the relevant medical knowledge and skills needed in different sections of medical care, and also thank my family for the continuous support throughout my career development.

I also want to acknowledge the efforts of my research committee and the staff of Kampala Institute of Health Professionals for their unrelenting support during this research activity.

Finally, I want to acknowledge the effort of my research supervisor, OJJALE MOSES, for his continuous encouragement and support throughout my research activity.

List of abbreviations

ANC – Antenatal Care
SOPs – Standard Operating Procedures
WHO – World Health Organization
IV – Intravenous
n – Sample size
P – Proportion (anticipated)
d – Precision/Sampling error

Source of funding

The study received no external funding.

Conflict of interest

The authors declare no conflict of interest.

Data availability

Data is available upon request from the author.

Author contributions

JW: collected the data.
MO: supervised the study.
GM: supervised the study

Informed consent

Written informed consent was obtained from all participants prior to their inclusion in the study. Participants were informed about the purpose of the study, procedures involved, potential risks and benefits, and their right to withdraw at any time without penalty.

Author biography

Joseph Wabomba is a student pursuing a diploma in clinical medicine and community health.

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