

Socio-economic related factors affecting completion of immunization schedules for children under five years at St. Josephine Bakhita Health Centre II, Lwengo District. A cross-sectional study.

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Page | 1 **ABSTRACT**

Background:

The study aimed to determine the socio-economic related factors affecting completion of immunization schedules for children under five years at St. Josephine Bakhita Health Centre II, Lwengo District.

Methodology:

The study used a descriptive cross-sectional design with both quantitative and qualitative methods at St. Josephine Bakhita Health Centre II in Lwengo District, Uganda. Thirty caregivers of children under five attending postnatal immunization services were selected through convenience sampling over three days. Data were collected using interviewer-administered questionnaires and analyzed using EpiData and SPSS version 17. Immunization completion was the dependent variable, while caregiver-related, socioeconomic, and health facility factors were considered independent variables. Ethical approval was obtained, informed consent was secured from participants, and confidentiality was strictly maintained.

Results:

Farming was the main occupation for 70% of respondents. Socio-economic activities affected immunization attendance, with 67% reporting involvement in activities that hindered clinic visits, mainly garden work (60%) and market vending (30%). Financial challenges were also evident, as 83% lacked adequate transport funds to reach the health facility. Spousal support was limited, with 67% reporting no support for child immunization. Additionally, 53% stated that their spouses had ever prohibited them from taking children for immunization, mainly due to a lack of willingness to accompany or the absence of transport money. These factors negatively affected completion of immunization schedules.

Conclusion:

Farming duties, lack of transport funds, poor spousal support, and occasional partner prohibition hindered completion of childhood immunization schedules.

Recommendation:

Health workers should intensify community sensitization on immunization benefits, encourage male involvement, and support caregivers to start simple income-generating activities.

Keywords: socio-economic, immunization schedules, child immunization, vaccine stock-outs, Spousal support.

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BACKGROUND OF THE STUDY

In some developing countries, such as those in the Asian continent, Latin America, and Africa, incomplete immunization schedules among children under five years continue to be a serious public health challenge (Alvarez et al., 2021). This explains why reduction of child morbidity and mortality is one of the key planks of global development in these continents, thus might contribute to failure to achieve Sustainable Development Goal Three (Bangura et al., 2020).

The same study done in Kenya further revealed that under-immunization was also attributed to low socio-economic status (Donfouet et al., 2019).

As a low-middle-income country, Uganda does not have enough resources and manpower to enhance vaccination services against a rapidly increasing population; this has resulted in persistent coverage gaps in immunization

countrywide because 49.5% of children under five are not fully immunized, causing 6 in every 100 infants to die before their first birthday (Vonasek et al., 2016). Socio-economic status has been identified as an important factor influencing immunisation completion, with mothers of higher income levels less likely to have defaulter children (Tadesse et al., 2019).

Caregiver competing responsibilities, such as work demands, family obligations, illness, and caring for other children, have also been linked to incomplete vaccination schedules. Cultural practices and forgetfulness, especially among mothers with many children, further contribute to missed immunisation appointments.

Health system barriers, including long distances to health facilities, inconvenient service schedules, vaccine stock-outs, and absence of vaccinators, also affect access to immunisation services and increase dropout rates.

Hence, the study aimed to determine the socio-economic related factors affecting completion of immunization schedules for children under five years at St. Josephine Bakhita Health Centre II, Lwengo District.

METHODOLOGY

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Study Design and Rationale

This study employed a descriptive cross-sectional study design employing both quantitative and qualitative approaches of data collection. The main objective of descriptive research was to accurately describe the characteristics of the study population and situations related to incomplete immunization schedules of children under five years. It was a cross-sectional study because data were collected at a single point in time.

Study Setting and rationale

The study was carried out at St. Josephine Bakhita Health Centre II, Lwengo District. Lwengo District is in the Central Region of Uganda, and Lwengo is the largest town in the district and the location of the district headquarters. Lwengo District is bordered by Sembabule District to the north, Bukomansimbi District to the north-east, Masaka District to the east, Rakai District to the south, and Lyantonde District to the west. Lwengo is 45 kilometres (28 miles), by road, west of Masaka, the nearest large city. The study setting was chosen mainly because of the prevailing problem of incomplete immunization schedules in the health facility.

Study Population

The study population was the caregivers of children under five years seeking postnatal care services at St. Josephine Bakhita Health Centre II, Lwengo District. Sample Size Determination: The sample size was 30 respondents who were comprised of caregivers of children under five years reporting to the facility for immunization services. This sample size was considered appropriate as the minimum number as per the research guidelines of the Uganda Nurses and Midwives Examinations Board 2009.

Sampling Procedure

A convenience sampling method was used. In this approach, participants were selected based on their availability, accessibility, and proximity to the study setting. This method was chosen because it was faster, easier, and cost-effective in recruiting individuals with the desired characteristics for the study. Caregivers who presented to the postnatal clinic for childhood immunization were included, provided they voluntarily agreed and gave informed consent to participate. A total of 10 respondents were enrolled per day over a period of three days to achieve the required sample size of 30 participants.

Inclusion and Exclusion Criteria

The study considered only parents/caretakers with children who attended the Postnatal Clinic at St. Josephine Bakhita Health Centre II who were mentally stable and participated

voluntarily and freely consented during the time of the study. The study excluded the parents/caretakers with children who attended the Postnatal Clinic at St. Josephine Bakhita Health Centre II who never consented to participate in the study, and those who were mentally ill or very sick.

Definition of Variables

The study examined the relationship between two variables: dependent and independent variables. The dependent variable was the completion of immunization schedules, while the independent variables were the caregiver-related factors, socio-economic-related factors, and health facility-related factors affecting completion of immunization schedules.

Research Instruments

An interviewer-administered questionnaire was used to collect data from caregivers of children under five years during the data collection period.

The tool consisted of both closed-ended and open-ended questions. It was preferred because not all caregivers were able to read and write English fluently; interviews were conducted to ensure accurate responses. Additionally, the data obtained were easier to analyze and present in figures and tables compared to data collected through interview guides or focus group discussions.

Data Collection Procedure

After approval of the proposal and clearance by the supervisor, a letter of introduction was obtained from St. Michael Lubaga Hospital Training Schools and presented to the In-charge of St. Josephine Bakhita Health Centre II to request permission to conduct the study among caregivers of children under five years attending the postnatal clinic for immunization. Permission to collect data was granted by the In-charge.

Acceptance was then sought from the selected respondents during sampling, and the questionnaire was administered after informed consent was obtained through signing of the consent form. Respondents who were able to read and write English completed the questionnaires independently, while those who were unable to do so were interviewed, and their responses were recorded accordingly.

Data Management

The filled questionnaires were collected back, counted, checked for completeness/accuracy, and edited after every data collection day to ensure that they were all returned, coded, and kept in a safe place as a backup. A flash disk was also used to store data. Filled questionnaires were then cleaned as they waited for data analysis.

Data Analysis

Collected data was sorted, entered into Epidata, and then exported to Statistical Package for Social Scientists for analysis. Data from open-ended questions was also sorted,

arranged, and similar responses were grouped and analyzed using SPSS version 17.

Ethical Consideration

An introduction letter was obtained from the Principal Tutor, St. Michael Lubaga Hospital Training Schools, which was presented to the In-Charge of St. Josephine Bakhita Health Centre II, seeking permission to carry out the study among

caregivers of children under five years presented at the Postnatal Clinic.

Both verbal and written consent were obtained from the respondents before the data collection exercise. Participants were assured that confidentiality would be strictly maintained and that their names were not required on the questionnaires.

RESULTS

Demographic Characteristics

Figure 1: Respondents' distribution by gender (n=30)

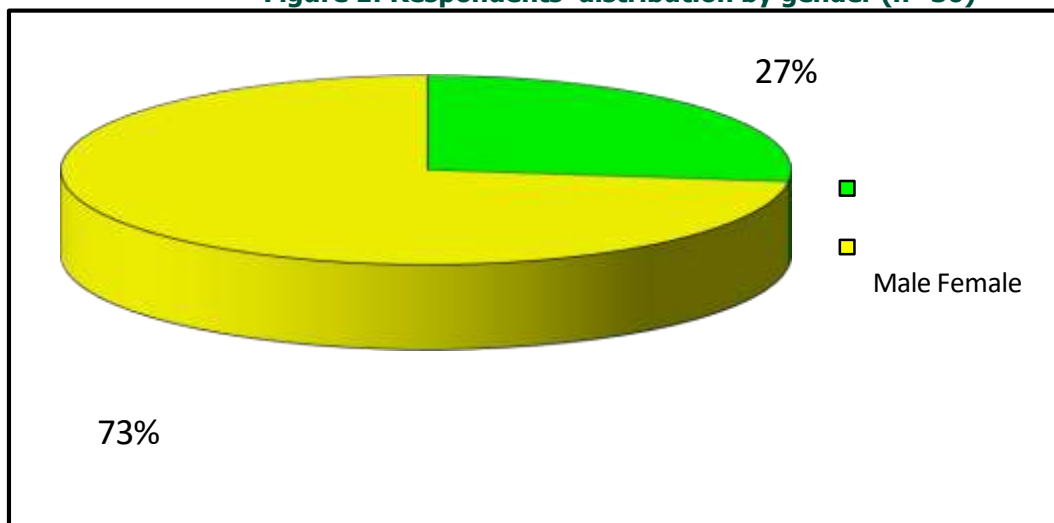


Figure 1 indicates that the majority, 22(73%) of the respondents were female caregivers, while the minority, 8(23%) were male.

Table 1: Shows the respondents' distribution by marital status (n=30)

Variable	Responses	Frequency	Percentage (%)
Marital status	Married	20	67
	Single	6	20
	Separated	4	13
	Total	30	100

Table 1 shows that the majority, 20(67%) of the respondents were married, followed by 6(20%) who were single caregivers, while the least, or minority, 4(13%) had separated from their spouses.

Figure 2: Shows the respondents' distribution according to their age brackets (n=30)

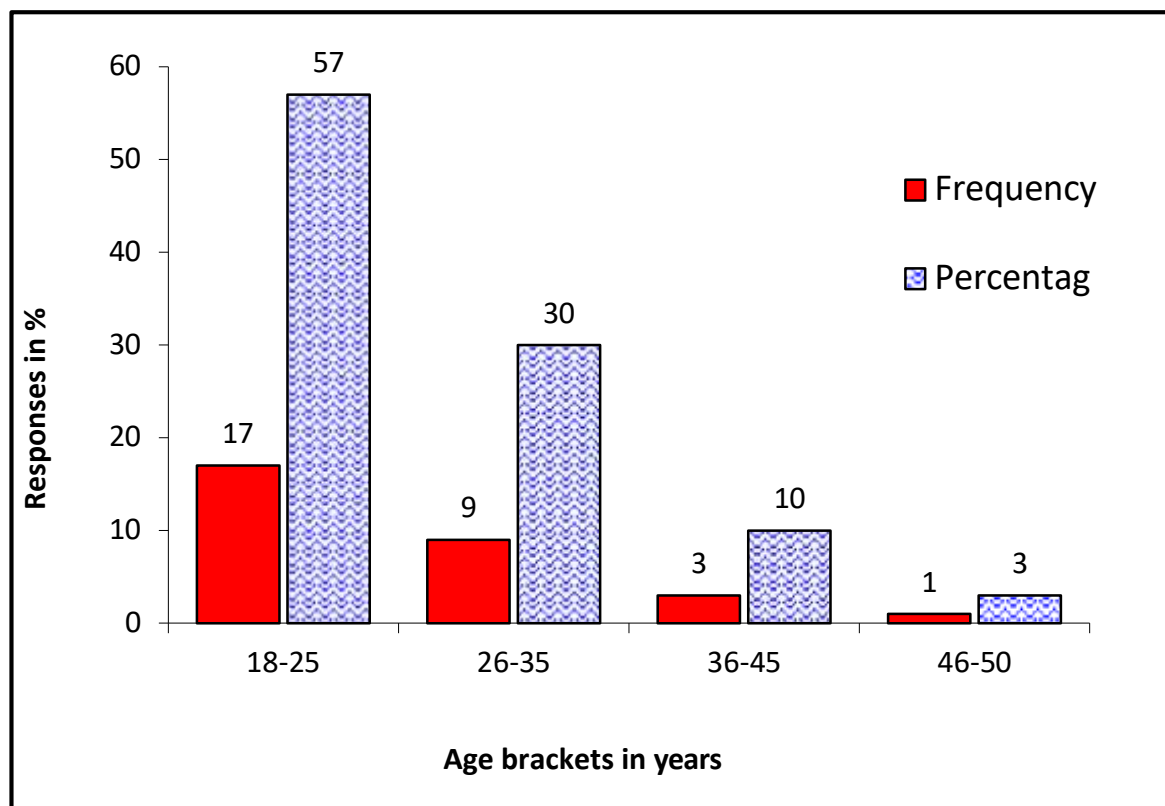


Figure 2 depicts that more than half 17, 57% of the respondents were in the age bracket of 18- 25 years, followed by 9(30%) who were in between 26-35 years; 3(10%) were in between 36- 45 years, and the least 1(3%) was aged 46 years.

Table 2: Distribution of the respondents according to their education level (n=30)

Variable	Responses	Frequency	Percentage (%)
Education level	No formal education	1	3
	Primary	20	67
	Secondary	9	30
	Total	30	100

Table 2 indicates that the majority, 20(67%) of the respondents had attained primary education level, followed by 9(30%) with secondary education, and the least represented, 1(3%) of them had no formal education level.

Figure 3: The distribution of the respondents according to their occupations (n=30)

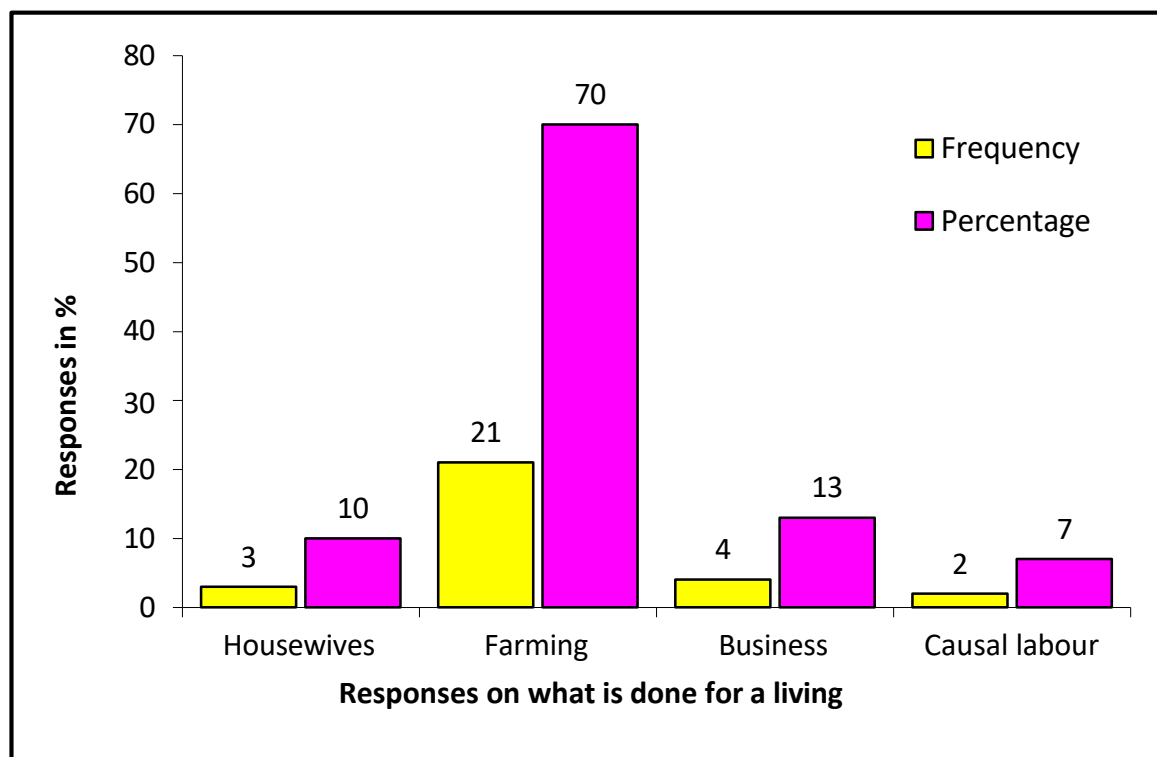


Figure 3 indicated that the majority, 21(70%) of the respondents were doing farm work for a living, followed by 4(13%) who were doing business; 3(10%) were housewives, and only 2(7%) were doing casual labour to earn a living.

Socio-economic related factors affecting completion of immunization schedules

Table 3: Caregivers were involved in activities that hinder immunization (n=30)

Variable	Responses	Frequency	Percentage (%)
As a caregiver, are you always involved in other activities that hinder taking the child for immunization	Yes	20	67
	No	10	33
	Total	30	100
If yes, which activities were those	Responses	Frequency	Percentage
	Market vending	6	30
	Garden work	12	60
	Caring for other children	2	10
	Total	20	100

Table 3 showed that the majority, 20(67%) of the respondents said yes, they were always involved in other activities that hindered taking the child for the immunization schedule, while only 10(33%) said no. In addition, among

those 20 who were always involved, the majority, 12(60%), were involved in garden work, followed by 6(30%) who were involved in market vending, and the minority, 2(10%), were involved in caring for other children.

Figure 4: Whether respondents always had enough transport funds to the facility (n=30)

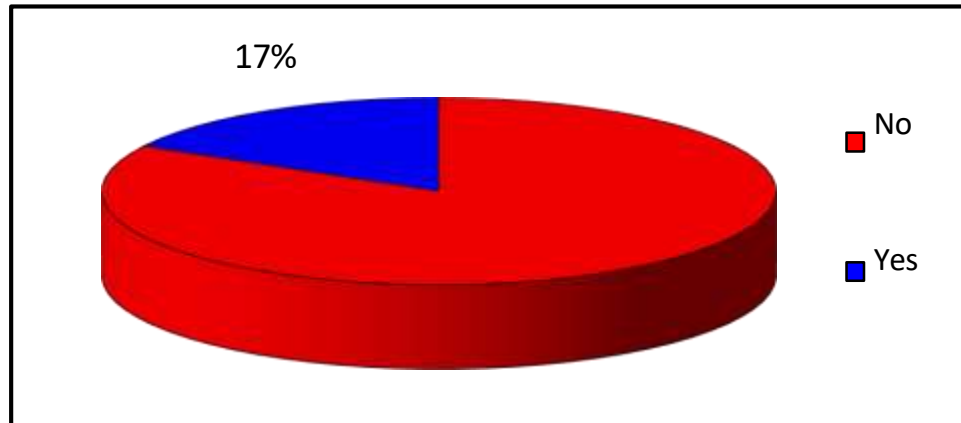


Figure 4 shows that the majority, 25(83%) of the respondents always did not have enough transport funds to the health facility, while only 5(17%) said yes, had enough transport funds.

Table 4: Caregivers were always supported to seek the child's immunization (n=30)

Variable	Responses	Frequency	Percentage
Always supported by the spouse to seek child's immunization	Yes	10	33
	No	20	67
	Total	30	100
If yes, how were you supported?	Responses	Frequency	Percentage
	Giving transport funds	3	30
	Giving accompaniment to the facility	6	60
	Reminding about return dates	1	10
	Total	10	100

Table 4 indicates that the majority, 20(67%) of the respondents said no, they were never supported by their spouses to seek the child’s immunization, while only 10(33%) said yes, they were always supported. Among the

10 who said they were always supported by their spouses, the majority, 6(60%), were given accompaniment to the facility; 6(30%) were given transport funds to the facility, while 1(10%) was reminded about the return dates.

Table 5: Caregivers were prohibited from taking the child for immunization (n=30)

Variable	Responses	Frequency	Percentage (%)
The spouse has ever prohibited taking the child for immunization	Yes	16	53
	No	14	47
	Total	30	100
If yes, why	Responses	Frequency	Percentage (%)
	Didn’t want to accompany me	9	56
	Didn’t have transport funds	5	31
	He was committed to work	2	13
	Total	16	100

Table 5 showed that more than half 16(53%) of the respondents said yes that their spouse had ever prohibited taking the child for immunization schedule, while 14(47%) said no. Among the 16 who said yes, more than half, 9(56%), gave the reason that the spouse didn’t want to accompany them to the facility; 5(31%) said the spouse didn’t have transport funds.

DISCUSSION

The second specific objective of this study was to determine the socio-economic related factors that were affecting completion of immunization schedules for children under five years at St. Josephine Bakhita Health Centre II, Lwengo District. According to the data collected and analysed, the majority, 20 (67%) of the caregivers, were always engaged in activities such as garden work, which was a source of the family’s income, while 10 (33%) were not involved in any activity that hindered taking the child for immunization. This implied that there were characteristics of low income in the families since the majority were engaged in subsistence farming as a source of income. Similarly, Wemakor et al. (2018) found that conflicting priorities among mothers or caregivers were among the factors associated with immunization dropout rates.

It was also discovered that the majority, 25 (83%), of the caregivers attending the postnatal clinic for child immunization did not have enough transport funds to the health facility. This implied that inadequate transportation funds were among the socio-economic factors that affected the completion of the child’s immunization schedules. This could be attributed to low education levels and the main source of earning being subsistence farming. Similarly, Wemakor et al. (2018) noted that lack of family resources and logistics contributed to immunization dropout and affected childhood immunization schedule completion. On the other hand, a study conducted by Omiye & Omona (2020) in Northern Uganda revealed that caregivers’ low economic status, reported by 75%, was one of the major factors that contributed to incomplete immunization schedules.

The study findings further revealed that when the respondents were asked whether spouses supported seeking childhood immunization, the majority, 20 (67%), said no, while only 10 (33%) said yes. This implied a lack of spousal support in seeking childhood immunization services, which affected completion of immunization schedules. These findings were in agreement with those of Zewdie et al. (2016), which indicated that a lack of family and partner

support negatively influenced completion of immunization schedules in developing countries.

CONCLUSION

Most reported that commitment to some activities like farming negatively affected their commitment to childhood immunization schedule follow-ups; most of them raised inadequate transport funds to the health facility, which sometimes affected follow-up of the immunization schedules; most of them raised lack of support from the spouses and others mentioned prohibition from the spouses sometimes to seek immunization services due to lack of funds for facilitation.

RECOMMENDATION

There is also a need for nurses conducting immunization and other health workers in the health facility to continue conducting community sensitization on the benefits of completing childhood immunization schedules, immunizable diseases and immunization vaccines, benefits associated with male supportive involvement in healthcare-seeking behaviours, and encourage caregivers to set up simple income-generating activities since most of them were relying on subsistence farming.

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List of abbreviations

LMIC:	Low- and Middle-Income Countries
SDG:	Sustainable Development Goals
SPSS:	Statistical Package for Social Sciences
SSA:	Sub-Saharan Africa
UNICEF:	United Nations Children's Emergency Fund
UNMEB:	Uganda Nurses and Midwives Examinations Board
WHO:	World Health Organization

Source of funding

The study had no funding.

Conflict of interest

The authors declare no conflict of interest.

Data availability

Data is available upon request from the author.

Author biography

Letasi Jackline, a student pursuing a diploma in nursing at St. Michael Lubaga Hospital Training Schools

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Author contributions

LJ: collected the data

KN: supervised the study

JFN: supervised the study

Jane Frances Namuddu supervised the study

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