

**COMMUNITY PERCEPTIONS AND UTILIZATION OF IMMUNIZATION SERVICES
AMONG CHILDREN UNDER ONE YEAR. A CASE STUDY OF KARUNGU SUB-COUNTY,
BUHWEJU DISTRICT.**

1 Ndyamuhaki Emmanuel, 2 Dr Arinaitwe Julius, 3 Irumba Alex

1, 2, 3 Metropolitan International University

ABSTRACT

Petroleum businesses should implement efficient credit practices to reduce revenue leakages brought on by debtors who fail to make payments when they are due. The company would become and remain stronger if an efficient credit and collection procedure was established. This can be accomplished by looking at a company's whole cash cycle and designing processes that provide credit responsibly, monitor your accounts receivables and quickly collect past-due payments. Effective credit policies will also specify the company's credit and collection policies, including whether they are liberal on credit and conservative on collections, intermediate on credit and conservative on collections, or conservative on credit and liberal on collections.

According to the study's findings, community members view immunization programs as a reliable way to shield kids from infections. However, the problem was with the medical professionals who treated moms so severely. Despite the dearth of knowledge on the efficacy of the vaccines, they directed moms to trainers who caused children to suffer severe side effects while having little to no expertise providing immunization services. The report advised the federal government to hire enough medical personnel to address the issue of lengthy wait times, as well as buy and stock enough vaccines to allay worries about vaccine stock outs that result in vaccine postponement and return dates. Further research was suggested on the socio-economic determinants of sporadic attendance of mothers for immunization of children under one year at Karungu Health Centre III and assessment of the status of

cold chain maintenance to ascertain potency of vaccines in health facilities found in Karungu Sub-County.

Key words: community perceptions and utilization

Background of the Study

In 2018 (WHO, 2019b; WHO, 2018), 116.3 million infants worldwide (86% of the required population) received all three doses of the diphtheria-tetanus-pertussis (DTP) vaccine. More than 20 million children globally have not completed a full course of basic vaccinations, according to reports from the WHO and United Nations Children's Fund (UNICEF) (WHO, 2019c; WHO, 2020). Of them, more over 60% of unvaccinated and inadequately immunized children reside in ten LMICs, particularly South Africa, Ethiopia, and Kenya (WHO, 2019a).

In a generation's time, significant progress has been accomplished in Africa in lowering child mortality rates and expanding access to immunizations (WHO, 2018b).

The African Region still lags behind other parts of the world in terms of availability to and usage of vaccinations, and national and subnational immunization vaccination rates have stalled in many nations. According to the WHO (2019c), 1 in 5 African children do not obtain all of the fundamental and required vaccinations. As a result, every year in Africa, more than 30 million children under the age of five still have VPDs. Every year, more than 500,000 children worldwide lose their lives to VPDs, accounting for over 58% of all VPD-related deaths (WHO, 2018b). Children who are exposed to these preventable illnesses typically experience a great deal of growth and physiological squeals (Yenit, Assegid, & Abrha, 2015). Vaccine-preventable illnesses cause a substantial economic and social catastrophe among people, their households, and the community as a whole.

Statement of the Problem

Uganda faces a significant difficulty with the low vaccination rate among youngsters, which is now 54 percent (Topher, Margaret, & Eliphas, 2021). The uptake is also low in Buhweju district, where Karungu Sub- County is located, despite the importance of vaccinations in preventing illnesses, disabilities, and deaths from diseases like diphtheria, measles, pertussis, pneumonia, polio, rotavirus diarrhea, rubella, and tetanus (WHO, 2019a). 40% of kids in Karungu Sub-County do not receive all the recommended immunization doses, according to the Ministry of Health. As a result, the Sub-County continues to frequently report outbreaks of vaccine preventable diseases, especially measles for example in May 2014, the outbreak of measles was blamed on failure to fully immunize the children in the area (Wycliffe Turyasingura, 2018).

The immunization prevalence for the fiscal years 2019-2020 was 70% and 72.5%, correspondingly. (Health Report for the Buhweju District, 2020). The low rate of receiving vaccinations has an impact on children's health, but it also raises spending by the government by forcing hospitals to treat more vaccine-preventable illnesses. Children's mortality rates from diseases that can be prevented by vaccination are anticipated to double if the issue is not adequately resolved, which will not only be dangerous but also painful for the populace and the government. Consequently, in this study, the investigator investigated how community members in Karungu Sub-County, Buhweju District, perceived and used vaccination programs among children under one year of age.

Specific Objectives

1. *To establish the community perceptions on immunization services among children under one year in Karungu Sub-County.*

2. *To find out the socio-economic factors affecting the utilization of immunization services among children under one year in Karungu Sub-County.*
3. *To suggest the possible ways of improving the utilization of immunization services of children under one year in Karungu Sub-County.*

Research Questions

1. *What are the community perceptions on immunization services among children under one year in Karungu Sub-County?*
2. *What are the socio-economic factors affecting the utilization of immunization services among children under one year in Karungu Sub-County?*
3. *What are the possible ways of improving the utilization of immunization services of children under one year in Karungu Sub-County?*

Methodology

Research Design

Cross-sectional research methodology was used in the study. Cross-sectional studies are those that are conducted at a certain moment in time or over a brief period of time. It is an effective design when the study's goal is descriptive and it aids in determining the prevalence of the desired result for a particular group in the population (Kesmodel, 2018). This approach was chosen because it is straightforward and advantageous in time-constrained circumstances, such as the one for this investigation. The study used qualitative as well as quantitative strategies for gathering and analyzing data. While the qualitative technique allowed the investigator to go further in order to collect and analyze more detailed numerical data, the quantitative approach

Population of Study

According to Amin (2005), the population under investigation is the collective or totality of things or people with one or more traits in common that are important to the investigator and from which conclusions are to be drawn. Mothers who were using Karungu Health Centre III in the Karungu Sub-County to receive immunizations during childhood for their infants or toddlers made up the study's population. 132 mothers with infants under one were seeking immunization services at Karungu Health Centre III, according to the vaccination register at the health center, which the in-charge stated during pre-study interviews with the investigator.

Sample Size

A sample is a group of people chosen from the study's target population who are often meant to reflect the entire population (Mugenda & Mugenda, 2003). There were 106 participants in the study. Among them were 97 mothers of infants between the ages of 0 and 12 months, 3 immunization specialists from Karungu Health Centre III, 3 women councilors from Local Council 1, and a single participant from each of World Vision Uganda, Healthy Child Uganda, and the Center for Integrated Development of Communities Uganda (CICD-Uganda). According to Krejcie and Morgan's (1970) determination of the sample size table for a finite population, 97 responders matched a population of 132 people in the study of mothers with infants aged 0 to 12 months.

Sampling Procedure

Kothari (2004) defined sampling as the process of selecting a number of respondents for study. The sampling procedure of the study involved the use of sampling techniques that included simple random sampling and purposive sampling techniques as described below.

Simple Random Sampling

According to Mugenda & Mugenda (2003), simple random sampling is a subset of a population with statistical properties in which each member has an equal chance of being selected to participate in the study. Mothers who requested childhood immunization treatments at Karungu Health Centre III with children aged 0 to 12 months were chosen using a simple random sample method. The investigator gave each member of the population a number on a piece of paper, folded the papers with the numbers in a container, and then asked the participants in the population to choose papers at random from the box.

Data Processing and Analysis

Qualitative data analysis

Thematic analysis was used to examine qualitative data collected through interviews with Karungu Health Centre III immunization service providers, Women representatives at Local Council one(s), and three staff members from World Vision Uganda, Healthy Child Uganda, and Centre for Integrated Community Development Uganda (CICD-Uganda). To get familiar with the recordings' contents, the investigator began by reading them. He created a code scheme first, followed by coding, categorizing, deriving themes, and writing up the themes. This provided a thorough and trustworthy interpretation of the study. All comments were illustrated with direct quotations.

RESULTS

Community Perceptions on Immunization Services among Children Under One Year in Karungu Sub-County

In order to establish the community perceptions on immunization services among children under one year in Karungu Sub-County, respondents were asked to indicate the benefits of immunizing a child under one year, behaviours of immunization providers towards mothers, feelings of mothers towards immunization of their children, reasons for mothers not immunizing their children between 0-12 months, mothers' opinion on the effectiveness and the risks of immunization. Data was statistically described and the findings are well presented in the following subsequent sections along with qualitative finds:

Benefits of Immunizing a Child Under One Year

The benefits of immunizing a child under one were investigated for this study and the results are presented in Table 4.2 below.

Table 1: Benefits of Immunizing a Child Under One Year

<i>Benefits</i>	<i>Frequency</i>	<i>Percent</i>
<i>It prevents the disease</i>	<i>71</i>	<i>73.2</i>
<i>It promotes the child's health</i>	<i>21</i>	<i>21.6</i>
<i>I don't know</i>	<i>5</i>	<i>5.1</i>
<i>Total</i>	<i>97</i>	<i>100</i>

Source: Primary Data, 2022

The study findings in Table 1 above highlight that majority of the respondents (73.2%) were believed in immunization services to prevent their children under one year from getting diseases. These were followed by 21.6% of the respondents who revealed that immunizing their children would promote their health and lastly, 5.1% of them did not know the benefits of immunizing a child under one year. In the analysis of the qualitative data, it was emphasized that mothers know the benefits of immunization for their children under one year. Interview participants explained it as the way of

protecting a child from deadly childhood epidemics and a sure way of having a healthy child:

Behaviours of Immunization Service Providers Towards Mothers

Respondents were asked to indicate the behaviours of immunization service providers towards mothers and data was statistically described of which the results are presented in Table 2 below.

Table 2: Behaviours of Immunization Service Providers Towards Mothers

<i>Behaviours</i>	<i>Frequency</i>	<i>Percent</i>
<i>They are harsh</i>	38	39.2
<i>They make us stay for long</i>	20	20.6
<i>They don't care</i>	27	27.8
<i>They are good</i>	12	12.4
<i>Total</i>	97	100

Source: Primary Data, 2022

Findings in Table 2 above indicate that a bigger proportion of respondents, 39.2 percent had tested the sour fruits of harsh immunization service providers while, 27.8% showed that these service providers did not care at all. In addition, 20.6% of mothers hated the way the service providers would make them stay for long at the health facility and on contrary, 12.4% of the respondents showed that the immunization service providers were good. The above quantitative findings are supported by the qualitative findings that mothers are at times treated badly by the immunization service providers at the health facilities. In this regard, majority of interview participants mentioned a bad welcome while arriving at the health facility, particularly for those who lost their child's vaccination cards

Feelings of Mothers Towards Immunization of Their Children

Respondents were asked to indicate how they feel when their children under one year are immunized. Data was statistically described and the results are presented in Table 3 below.

Table 3: Feelings of Mothers Towards Immunization of Their Children

<i>Feelings</i>	<i>Frequency</i>	<i>Percent</i>
<i>Happy</i>	<i>14</i>	<i>14.4</i>
<i>Worried</i>	<i>55</i>	<i>56.7</i>
<i>Don't mind</i>	<i>11</i>	<i>11.3</i>
<i>Feel ashamed</i>	<i>17</i>	<i>17.5</i>
<i>Total</i>	<i>97</i>	<i>100</i>

Source: Primary Data, 2022

The study findings in the table above show that more than half of the respondents (56.7%) were worried about the immunizing their children under one year whereas 17.5% of them felt ashamed of taking children for immunization. In addition, 14.4% of the respondents were happy to immunize their children and finally, 11.3% of them did not mind taking their children for immunization. The above findings demonstrate the same meaning as qualitative findings. Health workers behavior during the vaccination session was mainly appreciated positively.

Reasons for Mothers Not Immunizing Their Children Between 0-12 Months

The findings in Table 4 below show the reasons why some parents do not take their children for immunization between 0-12 months.

Table 4: Reasons for Mothers Not Immunizing Their Children Between 0-12 Months

<i>Reasons</i>	<i>Frequency</i>	<i>Percent</i>
<i>Not aware of the immunization days</i>	22	22.7
<i>Fear of the side effects (child becoming sick)</i>	37	38.1
<i>Lack of awareness</i>	16	16.5
<i>Disinterest</i>	17	17.5
<i>Laziness</i>	5	5.1
Total	97	100

Source: Primary Data, 2022

The statistical figures presented in Table 4 above indicate that most of the respondents (38.1%) did not take their children for immunization in the fear of the side effects. These were followed by 22.7% of the respondents who showed that they were not aware of the immunization days and yet, 17.5% of them were just not interested, 16.5% lacked complete awareness about the whole process and lastly, 5.1% of the respondents were just lazy. These quantitative findings are supported by the qualitative views from interviews conducted that illiterate mother lacked knowledge on the benefits of immunization.

Mothers' Opinion on the Effectiveness of Immunization

Respondents were required to show whether immunization is effective and as such, data was statistically described whereby, the results are presented in Table 4.6 below.

Table 5: Mothers' Opinion on the Effectiveness of Immunization

<i>Response</i>	<i>Frequency</i>	<i>Percent</i>
Yes	73	75.2

No	21	21.6
I don't know	3	3.1
Total	97	100

Source: Primary Data, 2022

In their response to whether immunization is effective, majority of the respondents (75.2%) agreed much as 21.6% of them disagreed and 3.1 percent of the respondents did not know anything about it. This implies that mothers in Karungu Sub-County have hopes in quality immunization services given to their children under one year.

Mothers' Opinion on the Risks of Immunization

The study respondents were asked to show whether the risks of immunization outweighed its benefits. Data was collected and analyzed through both frequencies and percentage descriptive statistics and the findings are presented in Table 6 below.

Table 6: Mothers' Opinion on the Risks of Immunization

<i>Response</i>	<i>Frequency</i>	<i>Percent</i>
Yes	43	44.3
No	54	55.7
Total	97	100

Source: Primary Data, 2022

The results in Table 6 above show that more than half of the respondents (55.7%) disagreed to the opinion that the risks of immunization outweigh its benefits as opposed to 44.3% of them who agreed about it. This finding means that children immunized under one year in Karungu Sub-County enjoy more benefits than risks.

Socio-economic Factors Affecting the Utilization of Immunization Services among Children Under One Year in Karungu Sub-County

Immunization and Immunizable Disease Information Dissemination

Findings on the reception of information about immunization and Immunizable diseases were based on the frequencies and percentages whose responses were computed, summarized, presented and analyzed in Table 7 below.

Table 7: Immunization and Immunizable Disease Information Dissemination

Variables	Frequency (n=97)	Percent (100)
<i>Whether mothers received information</i>		
Yes	41	42.3
No	56	57.7
<i>Source of information</i>		
Radio	24	24.7
Television	10	10.3
From friends/peers	37	38.1
From school	2	2.1
Health personnel	24	24.7

Source: Primary Data, 2022

The findings presented in Table 7 above show at more than half of the respondents (57.7%) disagreed about receiving information concerning immunization and immunizable diseases as opposed to 42.3% of them who agreed about it. Regarding the source of information, the results in the table above show that most of the respondents (38.1%) were getting information from friends/ peers and these were

followed by 24.7% who got the information from radio stations and 24.7 were getting it from the health personnel.

Action Taken by Mothers to Ensure Routine Immunization of Their Children

The researcher investigated the action taken by mothers to ensure that they routinely immunize their children and the ways in which they could be convinced to access and utilize immunization services. Results are presented in Table 8 below.

Table 8: Action Taken by Mothers to Ensure Routine Immunization of Their Children

Sample size = 97		
Action taken by mothers	Multiple responses	Percent
<i>Using reminder devices to avoid missing immunization for their children.</i>	87	47.5
<i>Saving money for transport to the immunization post</i>	29	15.8
<i>Seeking for information about immunization from the health workers</i>	67	36.6
Total	183	100
Ways of convincing mothers to immunize their children		
<i>Reminding them about the immunization appointments</i>	57	18.7
<i>Sensitizing them about immunization benefits</i>	51	16.7

<i>Describing to them the possible side-effects of immunization</i>	68	22.3
<i>Increasing on the number of days for immunization</i>	26	8.5
<i>Healthcare providers being respectful, compassionate, and polite to mothers</i>	63	20.7
<i>Ensuring timely availability of vaccines at the health facilities</i>	40	13.1
Total	305	100

Source: Primary Data, 2022

The findings presented in Table 8 above show that most of the respondents (45.5%) used reminder devices to avoid missing immunization for their children. However, 36.6% of them sought for information about immunization from the health workers, and 15.8% of them saved money for transport to the immunization posts. Regarding ways to convince mothers to take children for immunization, the results in the table above show that most of the respondents (22.3%) advocated for the need to describe the possible side-effects of immunization to the mothers. These followed by 20.7% who suggested that healthcare providers should be respectful, compassionate, and polite to mothers in addition to 18.7% who showed an interest in reminding mothers about the immunization appointments.

Conclusions

The examination of both quantitative and qualitative findings came to the conclusion that moms view immunization services as a reliable method of shielding their kids from infections. The problem, however, is with the healthcare professionals who

treat them so rudely when they bring their kids in for vaccinations. Mothers are identified as trainees who have no expertise providing immunization services, and as a result, they cause children to face significant side effects while lacking knowledge about the efficacy of the vaccinations. Due to their need to go to funerals as a wedding, and places of business as well as because it is difficult to access certain areas during the rainy season, mothers also have a limited amount of time to take their kids for immunizations.

Recommendations

The Ugandan government, through the Ministry of Health, should hire more medical personnel to solve the issue of lengthy wait times. In the same way, there is a requirement to buy and stock enough vaccines to allay worries about vaccine stock outs that result in vaccine postponement and return dates. In order to address family-related problems like lack of knowledge, side effects, and effects on parity, the health promotion officers ought to involve not only mothers but also leaders in the community. They should also debunk rumors and misunderstandings and provide the public with precise details to help them deal with these issues and likely increase accordance levels.

REFERENCES

- Amin, E.M. (2005). *Social Science Research, Conception, Methodology and Analysis*. Makerere University Press, Kampala.
- Andersen, R. and Newman, J. F. (1973). *Societal and Individual Determinants of Medical Care Utilization in the United States*. *Health and Society*, 51(1), 95-124. <http://doi.org/10.2307/3349613>

Andersen, R.M. (1995). *Revisiting the Behavioral Model and Access to Medical Care: Does It Matter?*. *Journal of Health and Social Behavior*, 1-10.
<http://dx.doi.org/10.2307/2137284>

Encyclopedia.com (2021). *Reliability*. Updates on 25th February 2021. Retrieved from:
<https://www.encyclopedia.com>reliability>

European Centre for Disease Prevention and Control (ECDC) (2016). *Let's talk about hesitancy. Enhancing confidence in vaccination and uptake*. Stockholm: European Centre for Disease Prevention and Control; 2016.

Frey, B.B. (2018). *Validity, the SAGE Encyclopedia of Encyclopedia of Educational Research, Measurement and Evaluation*. Retrieved from:
<https://methods.sagepub.com/reference/the-sage-encyclopedia-of-educational-research-measurement-and-evaluation>

Hussien. A. and Haidar, D.J. (2015). *Assessment of Maternal Satisfaction towards Childhood Immunization and Its Associated Factors in MCH Clinic, At Kombolcha, in Amhara Regional State, Northern Ethiopia [Dissertation]*. Addis Ababa University College of Health Sciences School of Public Health; 2015.

Kothari, C.R (2004). *Research Methodology: Methods and Techniques*, 2nd Edition New Delhi; India: New Age International Publishers.

Krejcie, R.V. and Morgan, D.W. (1970). *Determining Sample Size for Research Activities*. *Educational and Psychological Measurement*, 1970, 30, 607-610.

Legesse, E. and Dechasa, W. (2015). *An Assessment of Child Immunization Coverage and Its Determinants in Sinana District, Southeast Ethiopia*. *BMC Pediatr*. 2015; 15(1):31.

Lovrić, M.Z, Kolarić, B., Tomljenović, M., and Posavec, M. (2018). *Attitudes and Beliefs Related to Childhood Vaccinations among Parents of 6 Years Old Children in Zagreb, Croatia. Vaccine* 2018; 26;36(49).

Njeru, M.W. (2019). *Utilization of Immunization Services Among Children Aged Under Five in Kirinyaga County, Kenya. Master's Thesis for The Degree of Master of Public Health (Reproductive Health), Kenyatta University.*

Oladebo, O (2019). *Nigerian Rural Mothers' Knowledge of Routine Childhood Immunizations and Attitudes About Use of Reminder Text Messages for Promoting Timely Completion. Journal of Public Health Policy* (2019) 40:459-477.
<https://doi.org/10.1057/s41271-019-00180-7>

Osuma, E. (2015). *Immunization Status among Children in Kenya. Maternal Child Health Journal.*

Samra, S., Anwar, S., Khan, M. A. and Jeelani, G. (2015). *Impact of Mother's Employment on Child vaccination, A Case Study of Bangladesh. Journal of Finance and Economics.* Vol. 3, No.4,64-66.

Sarfaraz, H. (2017). *Assessment of Knowledge, Attitude and Perception among Mothers towards Immunization in a Tertiary Care Teaching Hospital. Int J Community Med Public Health.* 2017; 4:3429-35.

Singh, J., Deepti, S.S., Mahajan, S., Lal, M., Singh, T., and Neki, N.S. (2018). *Assessment of Socio-demographic Factors Affecting Immunization Status of Children of Age 0-2 Years in Slums of Amritsar City. Int J of Current Research in Med Sci* 2018; 4(3): 17-25.

- Taiwo, L., Idris, S., Abubakar, A., Nguku, P., Nsubuga, P., Gidado, S. (2017). *Factors affecting access to information on routine immunization among mothers of under 5 children in Kaduna state Nigeria. Pan Africa Medical Journal.* 2017;27.
- Titoria, R., Upadhyay, M., and Chaturvedi, S. (2020). *Quality of Routine Immunization Service: Perception of Clients. Indian J Public Health* 2020; 64:44-9.
- Topher, B, Margaret, K.M., and Eliphas, G. (2021). *Perceptions of Caregivers on Immunization in Ntungamo District, Uganda. International Journal of Community Medicine and Public Health,* 2021;8:5729-35.
- USAID Center for Development Information and Evaluation (1996). *Conducting Key Informant Interviews, Performance Monitoring & Evaluation TIPS.* Washington DC, USAID. Retrieved from http://pdf.usaid.gov/pdf_docs/PNABS541.pdf
- World Health Organization (WHO) (2017). *Planning guide to reduce missed opportunities for vaccination.* Geneva, Switzerland: World Health Organization; 2017. <http://apps.who.int/iris/bitstream/handle/10665/259202/9789241512947-eng>
- World Health Organization (WHO) (2018a). *National Immunization Coverage Score Cards Estimates for 2018 [Internet].* World Health Organization; 2018:24. Retrieved from: http://www.who.int/immunization/monitoring_surveillance/data/en
- World Health Organization (WHO) (2018b). *Business Case for WHO Immunization Activities on the African Continent, 2018-2030.* Brazzaville: World Health Organization; 2018.
- World Health Organization (WHO) (2019a). *Introduction of Inactivated Polio Vaccine (IPV) in Routine Immunizations,* 2019. Retrieved from: https://www.who.int/immunization/diseases/poliomyelitis/inactivated_polio_vaccine/ipv_operational_manual

World Health Organization (WHO) (2019b). Immunization Coverage. Fact Sheet. WHO; 2019:1.

World Health Organization (WHO) (2019c). Immunization Agenda 2030: A Global Strategy to Leave No One Behind. WHO; 2019:1-29.