

Knowledge, attitude and practices of effective handwashing among clients receiving health care services at Apac General Hospital. A cross-sectional study.

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Abstract

Background:

Handwashing is a key measure to prevent cross-infection with microorganisms and Hospital-Acquired Infections. The study aims to assess the knowledge, attitude, and practices of hand washing among the people seeking health care services at APAC General Hospital, APAC district.

Methodology:

A cross-sectional study design that employed a quantitative method of collecting, organising, and presenting data. The study population was of clients who came to seek health care services in Apac general hospital, with a sample size of 30 participants, using a simple random sampling selection procedure.

Results:

(30%) were 15-25 years old, (36.7%) were 26-35 years, (26.7%) were 36-45 years, (6.6%) were 46 and above. 27(90%) had information on the hand washing using the soap and 3(10%) had no information. 25(83.3%) reported that health workers normally advised them to wash their hands when they come to the hospital. 40% reported that their hands become visibly dirty after meals. 17(56.7%) of the respondents wash their hands in the morning, and only 13(43.3%) said they don't wash their hands in the morning. 20(66.7%) Said they use water and soap and 10(33.3%) said they use water only. All the respondents (100%) reported that poor hand washing exposes one to germs. 19(63.3%) reported that only water is not enough for hand washing,

Conclusion:

Clients seeking health care services in Apac hospital demonstrated a positive level of knowledge and awareness about hand washing, with low indicators of the need for awareness regarding the importance of cleaning and disinfecting hospital objects. The analysis also revealed a positive attitude, behavior/practices towards hand washing, and a relatively good culture of hand hygiene practices.

Recommendation:

WHO and MoH should formulate more policies and guidelines concerning hand washing, and ensure IEC materials reach the lower health care units.

Keywords: Knowledge, Attitude and Practices, Hand washing, Health care services, Apac district, WASH.

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Background

Globally, Water, Sanitation, and Hygiene (WASH) services in health care facilities (HCFs) remain sub-standard, and pose a serious public health concern that needs immediate action. In 2016, more than half of HCFs globally lacked hand hygiene facilities at most points of care, as well as soap and water at toilets (Wafula, 2020). Only 57% of HCFs had hand hygiene facilities, while 51% had alcohol-based hand rub at points of care (Wafula, 2020).

A New WHO/UNICEF report on WASH in health care facilities in 2022 shows that half of health care facilities around the world lack basic hygiene services, and 9% cent having no hygiene services at all. A study conducted in the

Health Care Centre in Raichur, India, indicated that knowledge on hand hygiene was moderate (107 out of 144, 74%) among the total study population. Only 9% of participants (13 out of 144) had good knowledge regarding hand hygiene.

In Nigeria, over 70.6% of children's caregivers had good knowledge of hand washing, materials used in hand washing, and the importance of hand washing in the prevention of diarrhea diseases. Similarly, a study done in Nakawa division of Kampala revealed that a high proportion of respondents, 224 (70.44%), had adequate knowledge on hand washing, with most of them, 281 (88.36%), knowing

that hand washing prevents diarrhoeal diseases (Godfrey, 2017).

In another study conducted in Nigeria, in a General Hospital by IkotEkpene, AkwaIbom, (2018) revealed that 82.4% of respondents had good knowledge of hand washing, and 17.6% had poor knowledge. Also, all the respondents were aware of hand hygiene practices, and a large proportion (72.3%) were informed by HCWs during Health Education sessions. Only 53.4% of the participants had ever received any form of training on hand washing. Recent statistics indicated that 84% of hospitals in sub-Saharan Africa have hand hygiene facilities at points of care compared to 64% of other levels of HCFs. Hand hygiene and bathing facilities were often poorer for patients and caregivers.

A study conducted in Ethiopia reported that 52% of children had adequate knowledge of proper hygiene and 99.0% washed their hands before meals, but only 36.2% used soap. Although 76.7% of children reported that washing hands after defecation was important, only 14.8% reported actually following this practice; thus, children with adequate knowledge of proper hygiene were more likely to maintain proper hand hygiene.

In Uganda, a study conducted in Makerere University showed that only 8.4% of the participants had good knowledge of hand hygiene, where 11.7% of the university students had good knowledge compared to 0.9% of the Katanga residents, 22.2% of year five students had good knowledge compared to 3.2% of the year students (Julius Nuwagaba et al, 2020).

Study shows that more than half of mothers have heard information on IPC and disease prevention while at the HCFs. HCFs are characterised by a heavy workload, implying that health care providers may not have sufficient time to sensitise patients and caregivers. Similarly, patients also do not want to wait for long at HCFs, which implies they do not have time for health education sessions.

Health education sessions in HCFs were often conducted as a one-off during patient enrolment, and therefore, some patients missed the information shared by the healthcare providers in such sessions. It is therefore important that sensitisation campaigns are promoted during the routine medical visits, treatment, and diagnosis programs at all HCFs.

There is a scarcity of information on the hygiene status of HCFs in Uganda; however, a recent survey of 50 HCFs in rural south-western Uganda indicated that only 38% of the HCFs had hand-washing facilities at their toilets. Only 24% of the surveyed facilities had both soap and water for hand washing. In addition, hygiene promotion materials such as constant reminders on the importance of IPC for patients and caregivers have to be implemented by the health workers since improved hygiene service provision is associated with utilization of health services and reduces both maternal and neonatal morbidity and mortality.

The study aims to assess the knowledge, attitude, and practices of hand washing among the people seeking health care services at APAC General Hospital, APAC district.

Methodology

Study Design and Rationale

This study employed a hospital-based cross-sectional design and used quantitative methods to collect, organize, analyse, and present data. Structured questionnaires were used, and the analysis was based on assessing the knowledge, attitudes, and practices of handwashing among clients seeking health care services at Apac General Hospital in Apac District.

Study setting and rationale.

The study was conducted at Apac General Hospital. The hospital has a bed capacity of 154 beds with an approximated annual recurrent budget of 162 million. The major departments within the hospital include the maternity ward, general ward, theatre, surgical, and the OPD. Outpatient services at the health facility include daily immunisation, HIV testing and counselling, Elimination of mother-to-child HIV transmission (EMTCT), and safe male circumcision.

The hospital lies in the business centre of town, Apac district, which is approximately 60 kilometres (37 miles) by road southwest of Lira Regional Referral Hospital. The coordinates of Apac General Hospital are: 01°58'42.0"N, 32°32'01.0" E (Latitude: 1.978325; Longitude: 32.533618). The district is situated in the Northern region of Uganda and serves the Lango Sub-region and neighbouring districts, which include Kwania, Kole, Oyam, Kiryandongo, and Amolatar, from where the study will be able to access the respondents.

Study population

The study population was clients who came to seek health care services in Apac General Hospital.

Sample size determination

The population of this study comprised clients who came to seek health care services. Therefore, the study will take a sample size of 30 participants.

The sample size was calculated using the sample determined by Krejcie and Morgan's method.

Note: N is Population Size = 30

S- Is the Sample size = 30

N- Is Population Size

Therefore, the sample size was **30** respondents for the study. This sample size was chosen because it was thought to be representative of the general population.

Sampling procedures

A simple random sampling method was used, whereas clients who come for services in the respective clinics/departments were randomly sampled consecutively until the overall sample size was realised. Since different hospital clinics/departments may receive unequal numbers of clients coming for health services, the distribution of enrolled participants was not equal for the different clinics/departments.

Inclusion criteria

The clients who were able to perform hand washing on their own were included in the study.

Exclusion criteria.

The clients who were unconscious and young children who were unable to perform hand washing on their own were not included in the study.

Study Variables

Independent variable

The independent variable was Knowledge, attitude, and practices of hand washing among clients seeking health care services in Apac General Hospital and their demographic characteristics.

Dependent variable

A dependent variable was hand washing.

Research instruments

This study used a semi-structured questionnaire. Quantitative data will be collected using a closed-ended questionnaire to gather information on the knowledge, attitude, and practice of hand washing among clients seeking services. The questionnaire was developed in English and then translated into Luo to ensure clarity of questions to respondents.

Data collection procedures

This study used a questionnaire for data collection. The questionnaire was divided into sections. The first section sought to establish socio-demographic information of the respondents. The other two sections are in accordance with the specific objectives to assess the knowledge, attitudes, and practices of hand washing among patients seeking

medical services. The questionnaire contains closed-ended questions. It was a self-administered questionnaire where the respondents answered for themselves. The study helped in administering the questionnaire in case of any difficulty.

Data management

The study only used one data collection method, i.e., a questionnaire survey. The method was used to collect numeric data, which was analysed based on statistical procedures on the knowledge, attitudes, and practices of hand washing among clients seeking services. The method allowed the study to design closed-ended questions on the subject matter and also allowed distribution of the questionnaires to the key respondents for answering and later collecting. Additionally, the method is comparatively inexpensive and easy when gathering data from a larger group of people; it reduces the chances of bias because the same questions were asked for all respondents, and the numeric responses were interpreted.

Data analysis and presentation

The filled-in questionnaires were checked for completeness and consistency. Data was then cleaned and coded, and entered using SPSS and then. Univariate analysis was used to determine frequencies, cross tabulations, and measures of central tendency for categorical variables such as sex and age, while the bivariate analysis was used to determine the association between independent and dependent variables. The results were presented in the form of a written report, tables, graphs, percentages, or pie charts, depending on their relevance and appropriateness.

Ethical consideration

A letter of introduction was obtained from Florence Nightingale School of Nursing and Midwifery, introducing the study to the administration of Apac General Hospital, seeking permission to carry out the study. After permission was granted, the administration introduced the study to the in-charges of various units, i.e., ANC, OPD, F/P, ART, who then introduced the study to the respondents. Respondents were assured of maximum confidentiality as only numbers and not names were used for their identity. The study only commenced after the objectives of the study were well explained to participants, and they consented to participate in the study.

Results

Demographic characteristics of respondents.

Table 1: Showing the demographic characteristics of the respondents

VARIABLE	FREQUENCY(N)	PERCENTAGE (%)
SEX		
Male	17	56.7
Female	13	43.3
Total	30	100.0
Age Group (Years)		
15-25	9	30.0
26-35	11	36.7
36-45	8	26.7
46 & Above	2	6.6
Total	30	100.0
Level of Education		
Nil	2	6.68
Primary	13	43.33
Secondary	10	33.33
Tertiary/Diploma	4	13.33
University	1	3.33
Total	30	100.0
Occupation		
Employed	3	10.00
Self Employed	19	63.33
Unemployed	8	26.67
Total	30	100.0
Marital Status		
Married	5	16.67
Single	18	60.00
Divorced	2	6.66
Cohabiting	5	16.67
Total	30	100.0
Religion		
Catholic	11	36.67
Anglican	10	33.33
Pentecostal	6	20.00
Muslim	3	10.00
Total	30	100.0

Table 1 (56.7%) were male and (43.3%) were female. (30%) were 15-25 years old, (36.7%) of the respondents were in the age group of 26-35 years old, (26.7%) of the respondents were in the age group of 36-45 years old, and (6.6%) were 46 and above. 6.68% had not attained any Education, 43.33% had attained primary education, 33.33% had attained secondary education, (13.33%) had attained tertiary/diploma education, and 3.33% attained University

Education. (63.33%) self-employed, while (26.67%) were unemployed, and only (10%) were employed. (60%) of sampled respondents were married, (16.7%) were single, (16.7%) were cohabiting, and only (2%) were divorced. (36.67%) Of the household head were Catholics, (33.33%) were Anglicans, 20 % were Pentecostals, and only (10 %) were Muslims.

Knowledge of hand washing among patients seeking medical services

Table 2: Showing the distribution of respondents on knowledge of hand washing among patients seeking medical services.

VARIABLES	FREQUENCY(N)	PERCENTAGE (%)
Yes	27	90
No	3	10
Total	30	100.0

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Table 2, the majority, 27(90%), had information on hand washing using soap, and 3(10%) did not have any information on hand washing using soap.

Table 3: Showing the distribution of Whether Health Workers Advise on Hand Washing While in the hospital

VARIABLES	FREQUENCY(N)	PERCENTAGE (%)
Yes	25	83.3
No	5	16.7
Total	30	100.0

Table 3 indicates that 25(83.3%) of the respondents reported that health workers normally advised them to wash their hands when they come to the hospital, and 5(16.7%) reported that they were not advised by health workers to wash their hands with soap when they come to the hospital.

Table 4: Showing the distribution of respondents on whether unclean hands can transmit germs.

Variables	Frequency (N)	Percentage (%)
Yes	29	96.7
No	1	3.3
Total	30	100.0

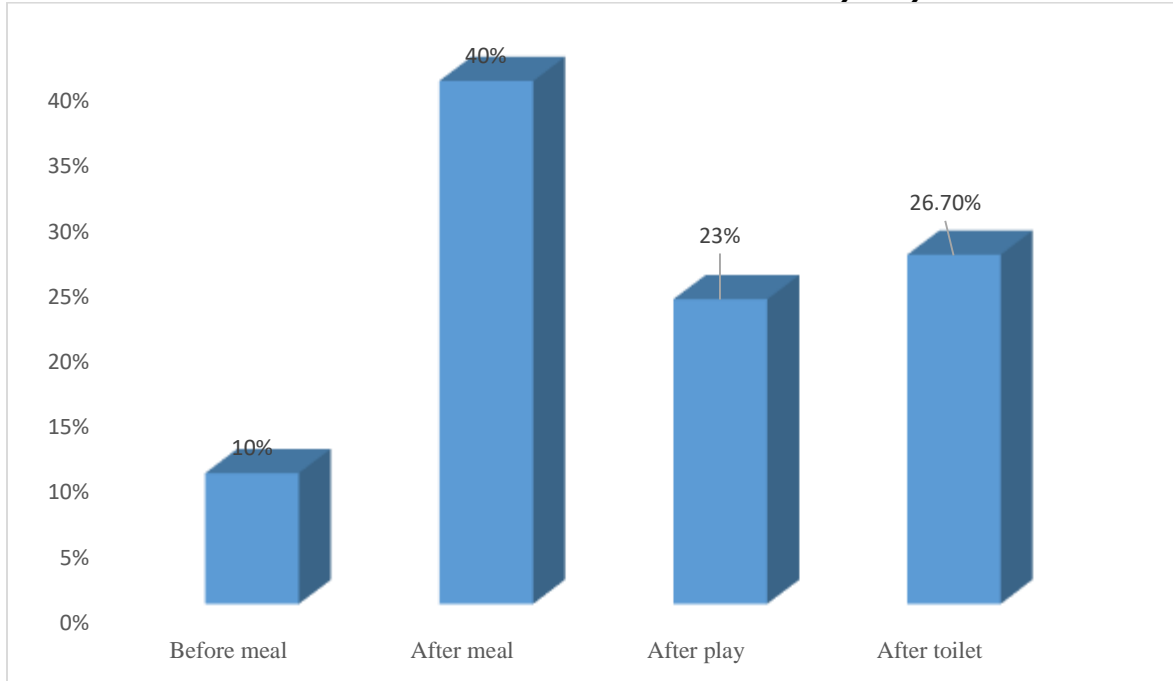
Table 4 revealed that 29 (96.7%) reported that unclean hands are a means of transmitting germs.

Table 5: Showing the distribution of respondents who need to clean their hands properly

Variables	Frequency (N)	Percentage (%)
Clean water only	7	23.3
Clean water and soap	23	76.7
Total	30	100.0

Table 5 indicates that 23(76.7%) said they needed both clean water and soap to wash their hands properly, and only 7(23.3%) needed clean water only.

Figure 1: A bar graph showing the number of sampled clients seeking medical services who knew when their hands became visibly dirty



Source: field survey

Figure 1 explains that 40% indicated that hands become visibly dirty after meals, 26.7% reported that hands become visibly dirty after using the toilet, 23% reported that hands become visibly dirty after playing, and only 10% reported that hands become visibly dirty before meals.

Attitudes towards hand washing among patients seeking health care services

Table 6: Showing the distribution of responses on attitudes towards hand washing among patients seeking health care services.

VARIABLES	FREQUENCY (N)	PERCENTAGE (%)
Do human faeces contain germs?		
Yes	27	90
No	3	10
Total	30	100.0
Does poor hand washing expose one to germs?		
Yes	30	100
No	0	0
Total	30	100.0
Do you think only water is enough for washing hands?		
Yes	11	36.7
No	19	63.3
Total	30	100.0
Is hand washing with soap needed after sneezing or coughing		
Yes	28	93.3
No	2	6.7
Total	30	100.0
If you fail to wash your hands, will they transmit infections?		
Yes	24	80
No	6	20
Total	30	100.0

Table 6 represents, majority, 27(90%) of sampled patients reported that human faeces contain germs, only 3(10%) reported that human faeces do not contain germs. All the respondents (100%) reported that poor hand washing exposes one to germs. 19(63.3%) reported that only water is

not enough for hand washing, and 11(36.7%) said only water was enough for hand washing. 28(93.3%) of respondents reported that hand washing with soap is needed after coughing or sneezing. 24(80%) of respondents agreed that failure to wash hands can transmit infectious agents.

Hand washing practices of patients seeking medical services

Table 7: Showing the distribution of responses on hand washing practices of patients seeking medical services

VARIABLES	FREQUENCY (N)	PERCENTAGE (%)
Do you wash your hands in the morning?		
Yes	17	56.7
No	13	43.3
Total	30	100
If yes, what materials do you use?		
Water and soap	20	66.7
Water only	10	33.3
Total	30	100
For how long do you wash your hands at a time?		
Less than 30 seconds	13	43.3
30 seconds to 1 minute	16	53.3
I don't know	1	3.4
Total	30	100
Do you wash your hands with water and soap before & after any contact in the hospital?		
Yes	17	56.7
No	13	43.3
Total	30	100

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Table 7 shows that 17(56.7%) of the respondents wash their hands in the morning, and only 13(43.3%) said they don't wash their hands in the morning. 20(66.7%) Said they use water and soap and 10(33.3%) said they use water only. 16(53.3%) reported that they take about 30 seconds to 1 minutes on washing their hands, 13(43.3%) take less than 30

second washing their hands, and only (3.4%) do not know. 17(56.7%) wash their hands with water and soap before & after any contacts in the hospital, and 13(43.3%) don't wash their hands with water and soap before & after any contacts in the hospital.

Figure 2: A pie chart showing the distribution of responses on When do you wash your hands after reaching the hospital

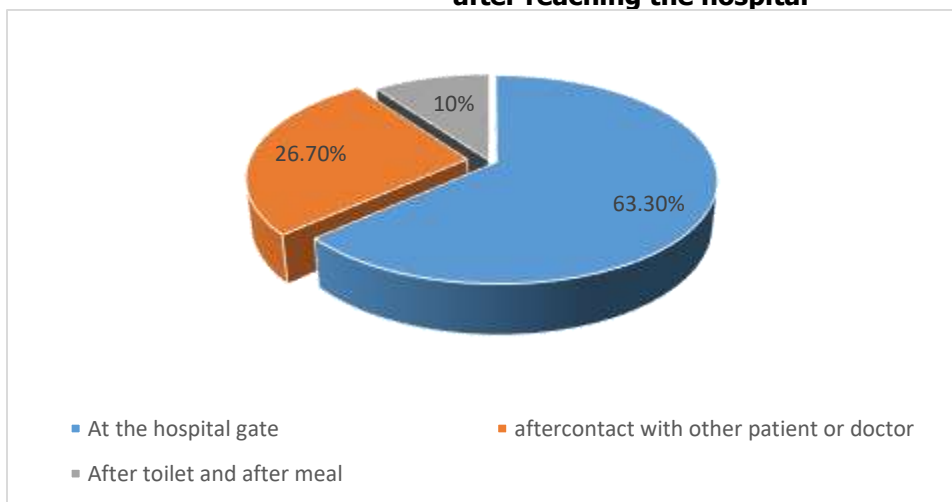


Figure 2, the majority (63.3%) of respondents wash their hands at the hospital gate either at entry into the hospital or when exiting the hospital, 10% wash after using the toilet and after a meal, and 26.7% wash their hands after contact with another patient or doctor. These results imply that generally, patients seeking medical services in Apac hospital have good hand washing practices. This is a positive implication of the hospital's efforts in infection prevention and control.

Discussion

Level of knowledge and awareness about hand washing

Overall, patients seeking medical services in Apac hospital demonstrates a positive level of knowledge and awareness about hand washing as indicated by scores of their response that majority 27(90%) of respondents had information on the hand washing using the soap, 25(83.3%) of the respondents reported that health workers normally advised them to wash their hands when they come to hospital and 29(96.7%) reported that unclean hands are a way of transmitting germs. This result is in agreement with a study in Nigeria where over 70.6% of children's caregivers had good knowledge of materials used in hand washing and the importance of hand washing in the prevention of diarrheal diseases. (Alphonsus et al, 2017).

Similarly, a study conducted in India revealed that caregivers, especially mothers, knew how important hand washing is in the prevention of communicable diseases, and 38% and 24.92% of respondents believed that hand washing practice can prevent diarrhoea and ARIs among children, respectively. (Vasudevan, 2024).

From this current study, the presence of some misconceptions, particularly regarding the cleanliness of hospital objects, suggests that there is still some knowledge gap among some patients, which is related to a study conducted in a Health Care Centre in Raichur, India which indicated that knowledge on hand hygiene was moderate (117 out of 144, 81.3%) among the total study population, Only 18.8% of participants (27 out of 144) had poor knowledge regarding hand hygiene (Nair et al, 2014).

Patient attitude towards hand washing

According to these research findings, the unanimous agreement (100%) on the importance of having hand-washing facilities at the hospital is a critical finding. Also, 90% of sampled respondents reported that human faeces contain germs, demonstrating a good level of understanding about the potential health risks associated with faecal matter. This study's results also revealed that 63.3% of respondents believe that water is not enough for hand-washing. Generally, the findings demonstrate a positive attitude towards hand washing and hygiene practices among the sampled patients seeking medical services in Apac Hospital.

Hand washing practice among clients

The study results revealed that the majority of respondents (56.7%) reported that they wash their hands in the morning, which is a positive indication of good hygiene practice. Among those who wash their hands in the morning, a significant majority (64.7%) reported using water and soap. This is considered the most effective way to remove germs and dirt from the hands. However, findings from this study conducted show that the rates of compliance in our hospital are still very low, as only 29.7% of the HCWs claimed to have actually performed hand washing on an average of 81 to 100% of situations, and an alarming 42.7% of them could not even remember to wash hands.

There are areas of improvement, particularly in terms of health education on hand washing techniques, duration, and the importance of consistent hand hygiene practices in healthcare settings. It underscores the need for ongoing education, reinforcement, and monitoring of hand hygiene practices, which is in agreement with the previous research findings.

Conclusion

Overall, clients seeking health care services in Apac hospital demonstrated a positive level of knowledge and awareness about hand washing, with low indicators of the need for awareness regarding the importance of cleaning and disinfecting hospital objects.

The analysis also revealed a positive attitude, behaviour/practices towards hand washing, and a relatively good culture of hand hygiene practices. However, there are still some areas where health education and reinforcement of proper hand washing techniques can be beneficial, particularly emphasising the use of water and soap after performing certain activities, thus promoting good hand washing practices.

Recommendation

This study recommends the provision of these basic needs as well as educational sessions to further drive the importance of hand washing to the clients, which will go a long way in improving their attitude towards hand hygiene. I believe this would curb preventable infections, reducing hospital stays and costs.

WHO and MoH should formulate more policies and guidelines concerning hand washing, and ensure IEC materials reach the lower health care units.

Improving and maintaining hand washing facilities in healthcare settings remains crucial for patients' safety. It's also a concern that a significant number of the respondents admitted not following hand-washing practices. This highlights a potential area for improvement in compliance with hand hygiene protocols in healthcare settings.

Apac General Hospital and community leaders should formulate policies that incorporate the hospital as a centre

for promoting hand washing programs for clients seeking health care services.

The hospital should also put in place enough hand washing facilities, such as water and soap at all entrances to hospital care points, to enable effective hand washing practices among clients and health workers.

The MoH should ensure IEC materials reach the lower health care units.

The WHO and the MoH should formulate more policies and guidelines concerning hand washing.

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List of Abbreviations

ARIs:	Acquired	Respiratory
	Infections.	
MoH:	Ministry of Health.	
OPD:	Outpatient Department.	
SPSS:	Statistical Package for Social	
	Sciences.	
WASH:	Water, Sanitation, and Hygiene.	
WHO:	World Health Organisation	

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Conflict of interest

The author did not declare any conflict of interest

Data availability

Data is available upon request

Author contribution

Esther Auma collected data and drafted the manuscript of the study

Margaret Odongwen supervised the study

Dens Obong supervised the study.

Ronald Awoi supervised the study.

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