



The influence of cultural beliefs and practices on latrine access and utilization in Awerial County, South Sudan. A cross-sectional study.

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Page | 1 **Abstract**

Background.

Lack of latrines remains a widespread health and environmental hazard in many developing countries. The study aims to assess the influence of cultural beliefs and practices on latrine utilization in Awerial County, South Sudan.

Methodology.

A Descriptive Analytical study design was utilized for the study. Awerial County was purposively selected based on its low latrine coverage within the state. Systematic random sampling of households was conducted. Quantitative data were collected from 384 community members who were interviewed using a structured household questionnaire. Qualitative data were collected through Focused Group Discussions and Key Informant Interviews. Findings are presented as numerical summaries, tables, and charts.

Results.

Majority of household heads are female 76.3% (293), 66.1% (254), reported that they do not have a latrine in their homes, a significant portion of respondent's lack knowledge (mean 2.02, 29.7%) and resources (49.2%) for latrine usage, cultural beliefs (10.9%) was, perceived as influential, Cultural practices hindering latrine use are rare (0.5%), and responsibilities for latrine maintenance are shared among children, women, men, and others. Pearson correlation coefficient of -0.396 suggests a moderate negative correlation, meaning that as the lack of resources and knowledge about latrine construction increases, the probability of having a latrine decreases. The p-value (Sig. = 0.000) confirms that this result is statistically significant, meaning the observed relationship is unlikely to be due to chance.

Conclusion

The findings from Awerial County underscore the critical interplay between cultural beliefs, gender dynamics, environmental challenges, and the effectiveness of sanitation interventions to address factors like the lack of availability of resources and knowledge for latrine construction.

Recommendation

The study suggests creating campaigns to dispel myths and misconceptions, and providing resources and knowledge for latrine construction as one of the most important approaches to improve sanitation.

Keywords: Cultural beliefs, Sanitation practices, Latrine utilization, Open defecation, Hygiene behavior, Awerial County, South Sudan

Submitted: August 12, 2025 **Accepted:** September 01, 2025 **Published:** September 30, 2025

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Background.

Globally, numerous factors continue to hinder progress in achieving adequate sanitation and hygiene. These include widespread misconceptions about the link between health

and sanitation, institutional and policy weaknesses, inadequate infrastructure, and persistent societal taboos (UN, 2015). In recognition of the critical role sanitation plays in health and development, Agenda 6.2 of the



Sustainable Development Goals (SDGs) aims to eliminate open defecation and ensure universal access to basic sanitation and hygiene by 2030 (United Nations, 2015). Providing improved sanitation has long been identified as a key strategy for preventing diseases associated with poor hygiene, such as diarrhea (Barrington et al., 2025). However, many sanitation initiatives face challenges of community acceptance and long-term sustainability, often leading to project failure after only a few years (Novotny et al., 2020).

Despite significant government efforts to enhance sanitation services, open defecation remains prevalent in many communities, even in areas where toilets are available (Barrington et al., 2025). This persistence is often rooted in deep-seated cultural and social beliefs that shape sanitation behaviors, particularly in rural areas (Trajano Gomes da Silva et al., 2018). Addressing these cultural barriers is therefore essential before introducing sanitation solutions, as interventions that ignore local traditions and beliefs are unlikely to succeed. The installation of latrines alone is not a sustainable solution unless accompanied by behavioral change and positive attitudes toward their use. Accordingly, this study sought to examine the influence of cultural factors on the adoption of sanitary practices in rural communities.

Improving access to and utilization of well-maintained sanitation facilities significantly reduces the risk of human exposure to excreta (Trajano Gomes da Silva et al., 2018). In Sub-Saharan Africa, approximately 88% of child deaths are linked to diarrheal diseases resulting from contact with excreta from poorly maintained sanitation facilities (Azanaw et al., 2024). Adequate and safe sanitation can therefore reduce the burden of disease and ease pressure on health facilities. Nonetheless, global sanitation disparities remain stark. According to WHO/UNICEF (2021), around 3.6 billion people still lack access to safe sanitation, with 14% of the global population practicing open defecation, most of whom live in developing countries. In nations such as Kenya, only 33% of people use sanitary facilities that effectively separate them from excreta, while 9% continue to defecate in the open (WHO/UNICEF, 2023).

Cultural beliefs and practices are increasingly recognized as significant determinants of sanitation adoption and use. The effectiveness of sanitation programs largely depends on how well they align with community cultural norms and gender roles (Robinson et al., 2024). For instance, some cultures demand separate latrines for men and women, or even separate toilets for in-laws, as mixing excreta from different

family members is considered taboo. However, constructing multiple latrines per household can be financially burdensome. Studies also reveal that individuals, particularly at night, resort to open defecation near their homes due to limited access to toilet facilities (Saleem et al., 2019). Improper disposal of human waste poses serious public health risks, as it can contaminate water sources during rainy seasons, leading to waterborne diseases such as dysentery. Although these findings were reported in Kenya, similar cultural dynamics likely influence sanitation practices in other regions.

Therefore, this study aims to assess the influence of cultural beliefs and practices on latrine utilization in Awerial County, South Sudan. Understanding these cultural dimensions is essential for designing effective, acceptable, and sustainable sanitation interventions that promote healthier communities.

Methodology.

Research Design.

A descriptive cross-sectional, analytical, and correlational design was used for this study. This is a design which includes surveys and fact-finding enquiries of different kinds, the use of correlation, use of these facts.

Study population and study setting

The Target population consists of household heads or their representatives and key informants from the study area of Awerial County. The Location had a total population of 47,041 people and 8,274 households (NBS, 2021). The study targeted 384 households in all eight Payams of Awerial County. These Payams include Abuyung, Magok, Nile, Puluk, Bunagok, Dor, Alel I, and Alel II. The research was carried out in Awerial County of Lake State. Awerial County is composed of 8 Payams, namely Puluk, Magok, Bunagok, Abuyung, Dor, Nile, Alel I, and Alel II. Awerial County is bordered by Jonglei state to the east, Yirol East and West counties to the north, and Terekeka state to the South. All the Payams in Awerial County are accessible during the dry season, while improved transport facilities, such as quad bikes and tractors, are required during the rainy season to access payams like Abuyung and Magok.

Awerial County lies under coordinates: 6.1266° North and 31.1738° East, with an area of 4,659.10 sq. kilometers and a density of 10.1 (NBS 2021). The area experiences flooding from June to October, and the water table, in most cases, is at an average of 25 meters (Help Ev. Drilling progress Report 2020).



Sample size

A sample size of 384 was determined using the sample size calculation designed by Fisher et al. (1998) as detailed below:

Where: n = Sample size
 Z = Standard Normal Deviate (1.96), which corresponds to a 95% confidence interval. p = Proportion in the direct Population Expected to have a particular characteristic, 50% (0.5) was used as there were no available latrine coverage prevalence estimates for the study location

(Awerial County) $q = 1 - p = 0.5$ d = Degree of accuracy = 0.05

Therefore:

$$n = 1.96^2 \times 0.5 \times 0.5 / (0.05)^2 =$$

384.16

Since the target population (Awerial County) is more than 10,000 Households, 384 were used as the sample size for the study:

A total of 384 household questionnaires were collected during the study. A breakdown of the administrative units, population, and number of households.

Table 1: Study sample size per location

County	Payam	Population	Households (HH)	Sample Size (HH)
Awerial	Abuyung	8,893	1,486	69
	Bunagok	5,901	1,255	58
	Dor	11,064	2,151	100
	Magok	763	151	8
	Nile	2,763	340	15
	Puluk	10,270	1,985	92
	Alal I	5,284	472	23
	Alal II	2,098	434	19
Total		47,041	8,274	384

Source: National Bureau of Statistics 2021.



Sampling Strategies.

Awerial County was selected based on latrine utilization background information available, which ranked Lake state, where Awerial is one of its counties, as the third last out of the 10 States of the Country with the lowest latrine utilization and the persistent cholera outbreak within the County in the last three years from 2020- 2023. The eight Payams formed the sampling frame while households were the sampling units. Within 8,274 households in the eight locations, systematic random sampling of the 384 households was conducted using household data obtained from the National Bureau of Statistics 2021. The respondents from each Payam were obtained by multiplying the percentage of households for each Payam by the total desired sample size (384) divided by one hundred (100). [GK1]

Data collection methods

Both quantitative and qualitative approaches were used for this study.

Quantitative Data Collection Methods

These methods focus on numerical data and measurable trends:

- Structured Questionnaires – Surveys were administered to 384 households to gather statistical data on latrine ownership, usage frequency, and sanitation conditions.
- Observational Checklists – Researchers systematically record latrine conditions, availability, and maintenance practices [GK2] across different payams.
- Secondary Data Analysis – Reviewing health reports, government sanitation records, and NGO intervention data to identify trends and patterns.

Qualitative Data Collection Methods

These methods focus on descriptive, contextual insights:

- Key Informant Interviews – Discussions with local leaders, health workers, and policymakers to understand barriers and community perspectives on latrine utilization.
- Focus Group Discussions (FGDs) – Engaging community members in small group discussions to explore cultural beliefs, hygiene attitudes, and experiences related to latrine use.

Data collection instrument.

Questionnaire.

A structured household questionnaire was designed to collect quantitative data relevant to the objectives of the study from a total of 384 study respondents. The questions in the instruments were divided into various sections in line with the study objectives to provide information relevant to the study. All research instruments were translated into the Dinka language and then back-translated into English to ensure precision in the wording of the questions. The instruments were subsequently revised to eliminate problems in translation and language comprehension. All questions were asked in the Dinka language, as this is the native language used by the respondents; part of the household questionnaire requires the principal investigator to ask questions on various topics to a respondent (pre-coded and un-coded responses were expected), and other questions required the principal investigator to make key observations as indicated in the observation checklist.

Observation checklist.

Observations were used during the study and involved observing latrine use practices and systematically recording the results of those observations using an observation checklist, which was included in the household questionnaire. The key observations made in the study were guided by research questions. For each household that was visited during the study, it was observed whether the household had a latrine or not. Further, the adoption of good latrine hygiene practices by latrine users in the study area was observed and systematically recorded in the observation checklist. This included the cleanliness and privacy of the latrine and the presence of a hand-washing facility near the latrine.

Focus Group Discussion and Key Informant Interview.

A Key Informant Interview (KII) and Focus Group Discussion (FGD) guide was designed to collect qualitative data. This guide contained a list of questions to guide and narrow the discussions to the relevant issues around the research questions. One FGD was purposively sampled, consisting of twelve (12) people (1 Payam director, 2 Payam women leaders, 2 Payam youth leaders, 2 Religious leaders, 1 Payam executive chief, 2 Sub-Chiefs, 1 Payam Health officials) and conducted in each Payam for all eight payams.



KII targeted the county commissioner, the County Health director, the Assistant WASH Commissioner, and the County Executive. During the FGDs and KIIs, the principal investigator was assisted by one data collector to help in language translation, taking notes based on responses from all participants to enable comparison and ensure adequacy of information captured during the interviews. The FGDs and KIIs were to supplement the quantitative data that were collected from the households, as well as obtain background information to determine whether or not the situation in the surveyed areas reflects the general situation within the entire community. Payam leaders, including women and youth leaders from each payam, public health officials, religious leaders, and chiefs, form the key informants for the FGD and KII.

Validity and Reliability

Pretest of the structured questionnaire was done on the Local administration at Wuntith village from the bordering county of Yirol West. This area has the same topography and characteristics similar to HHs in the area of study, and hence, is suitable when it comes to pretesting so that the respondents are not interviewed twice. Issues that may need modification will be addressed before the actual data collection.

Validity

A tool was designed after numerous reviews of relevant studies and literature that concern the study topic to ensure the validity of the research instruments. Content validity was enhanced by consulting Subject Matter Experts (SMEs) who reviewed the content of the research collection instruments in line with the study objectives. Internal validity was strengthened by limiting the study to residents of Awerial County. To make structured questionnaires understandable to the local community, it was translated into the local language for consistent questioning and answering. Research assistants had a 2-day training to comprehend the objectives of the study and how to administer the tools. To boost validity, the pretest of the tools was done in the neighboring county of Yirol.

Reliability.

A sample of thirty-eight (38) questionnaires, which represent 10% was used to test the reliability of research instruments. Test and re-test reliability techniques were more integral to assess how reliable the research instruments

were. The same questionnaires were administered twice to the same participants at different times, and then the correlation between the two sets of results was calculated to see if the scores were similar. A reliability test using Cronbach's alpha was carried out to ascertain whether the dataset was fit for analysis.

Inclusion criteria.

The study targeted adult household heads or their spouses in all Payams. Within each Payam, a pre-defined skipping pattern was used to select households to be sampled for inclusion. This was obtained by taking the total number of households in each Payam based on the National Bureau of Statistics 2021, divided by the sample size in each Payam; hence, for every 21 households, one was sampled for inclusion in the study until the desired size in each Payam was achieved.

Exclusion criteria

The study excluded households for IDPs, children aged less than 18 years, and visitors as household representatives. Households without respondents who met the inclusion criteria or were absent were skipped, and alternative households were sampled for inclusion using a similar skipping pattern.

Data Analysis.

Upon data collection, the questionnaire was sorted out to find whether all had been responded to, questions coded, and analyzed using SPSS software. The data were analyzed quantitatively, and the data involved in this study were reduced to numerical values, tables, graphs, and charts. Descriptive Analysis of the demographic characteristics of the respondents, such as age, gender, education level, and income, was done to determine the frequency of latrine usage and the distribution of different determinants. Correlation Analysis was done to identify the relationships between different variables, such as the correlation between education level and latrine usage. Regression Analysis using regression models to determine the impact of various determinants on latrine utilization.

Ethical considerations.

The study focused on determinants of latrine utilization. Participation in the study was voluntary, informed consent was obtained before data collection, personally identifiable information such as participants' names was not collected,



and maximum confidentiality of information gathered was assured to all participants throughout the study process.

[GK1]Please look at this statement. What he has put in this section sounds more like the rationale rather than the strategies. Please look at this proposal below for your comment.

The assessment in Awerial County, Lakes State, used a mix of practical and context-appropriate sampling strategies to ensure representativeness and accuracy. The **multi-stage cluster sampling** method is most suitable for large rural settings, involving random selection of Payams, villages, and households, yielding about 384 households overall. It is cost-effective and feasible, but requires careful planning and adjustment for design effects. To reflect settlement diversity, **stratified random sampling** can categorize communities

by type (e.g., riverine, market, or IDP areas), while **PPS sampling** ensures larger villages have proportionate representation. For smaller areas, **systematic household sampling** offers a simple alternative, and **purposive sampling** through KIIs and FGDs adds qualitative insights. Establishing **sentinel sites** for periodic monitoring complements these approaches. A **mixed-methods design** combining quantitative and qualitative tools provides the most robust and context-sensitive evidence for sanitation planning in Awerial County.

Operation and Maintenance (O&M) sounds more WASH professional than using maintenance practices.

RESULTS

Table 2 Response rate

Instruments	Targeted	Conducted/Returned	Percentage
Questionnaires	384	384	100%
Interview guides	12	09	75%
Total	396	393	99%

Source: Primary data (2023)

Table 2 shows that out of 384 questionnaires distributed, 384 were returned, giving a response rate of 100% in addition, out of 12 interviews, 09 were conducted, giving a response

rate of 75%. “The overall response rate was 99% which is above the recommended two-thirds (67%) response rate” (Mugenda & Mugenda, 2023).

Background Characteristics.

Figure 1: Age Distribution of Respondents

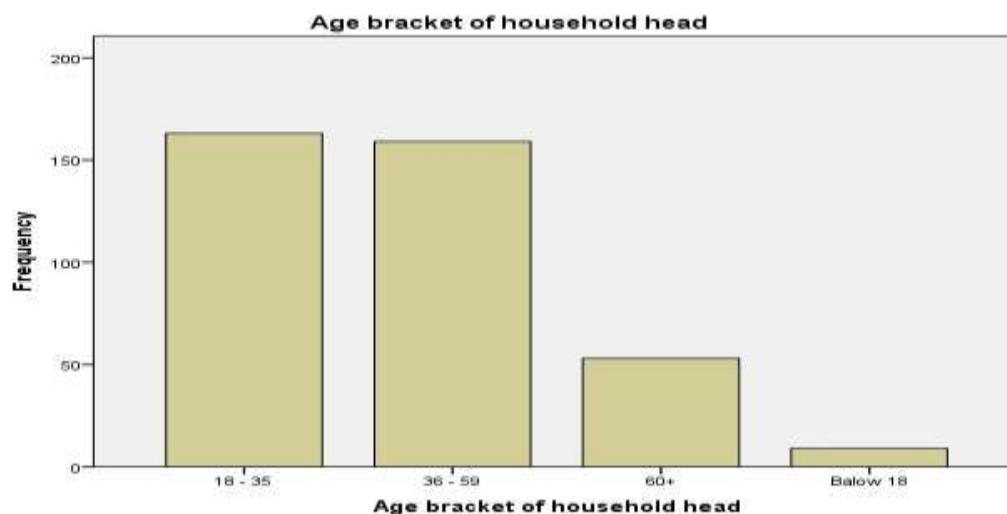


Figure 1 shows that the largest segment, comprising 42.4% (n = 163), was found in the age range of 18 to 35 years. Following closely, 41.4% (n = 159) of the respondents were 36 to 59 years old. Participants aged 60 and above constituted 13.8% (n = 53) of the sample, while those under

18 years represented a minimal proportion of 2.3% (n = 9). This distribution highlights a predominance among younger and middle-aged individuals among the respondents, suggesting that the majority are likely to be in their productive years.

Figure 2: The education level of the participant.

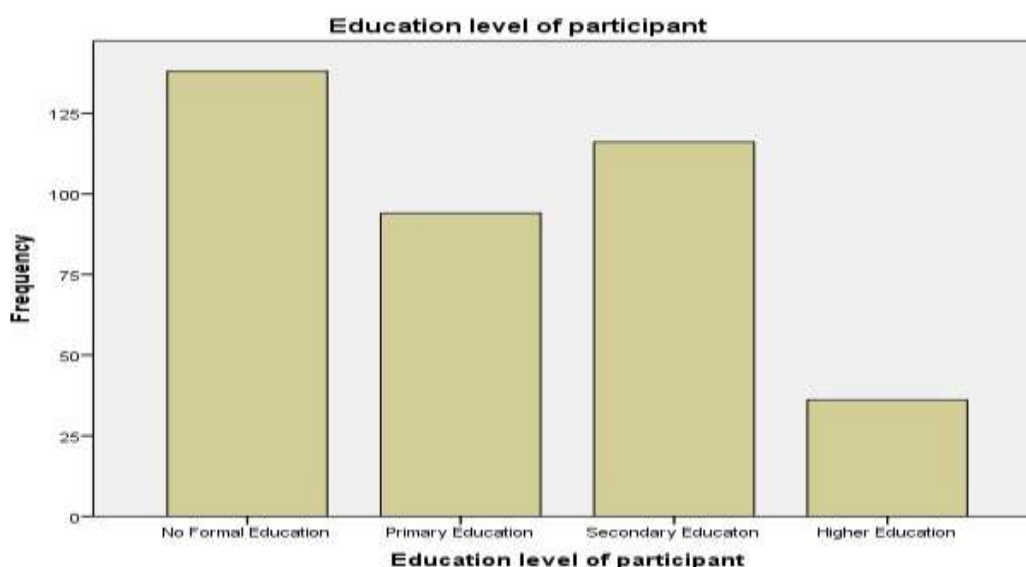




Figure 2 indicates a diverse distribution among the participants, with a total sample size of 384. Of these, 35.9% (n = 138) reported having no formal education, representing the largest group. Participants with primary education comprised 24.5% (n = 94) of the sample, while those who completed secondary education accounted for 30.2% (n = 116). Lastly, individuals with higher education constituted

9.4% (n = 36) of the respondents. This distribution suggests a significant proportion of the sample lacks formal education, while there is a notable representation of individuals with secondary education, indicating variations in educational levels among the population in Awerial County.

Figure 3: Gender of the respondent's household heads

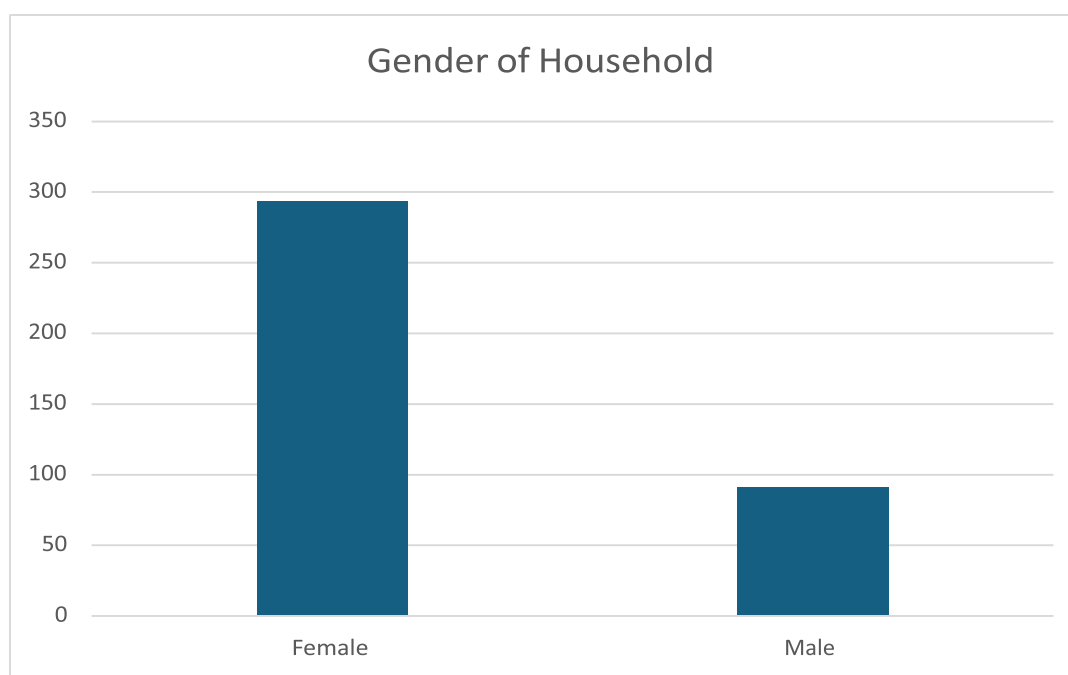


Figure 3 reveals a total sample size of 384 participants. The data indicate that the majority of household heads are female, comprising 76.3% (n = 293) of the sample. In contrast, male household heads represent only 23.7% (n = 91) of the respondents. This substantial disparity

underscores a predominance of female-headed households within the studied population, reflecting potential socio-cultural dynamics in Awerial County, where women may play a significant role in household leadership.

Figure 4: The household size of the respondents

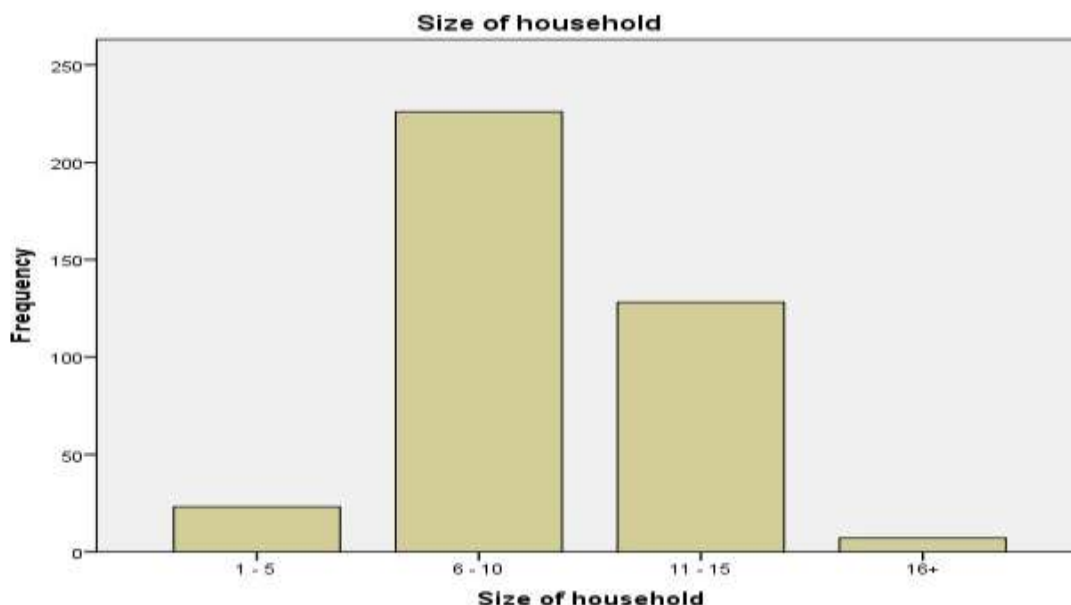


Figure 4 indicates the household size among the respondents, illustrating a total sample of 384 participants. The majority of households, comprising 58.9% (n = 226), consist of 6 to 10 members. Additionally, 33.3% (n = 128) of the respondents belong to households with 11 to 15 members. Conversely, a smaller segment of the population, 6.0% (n = 23), reports household sizes ranging from 1 to 5

members, while only 1.8% (n = 7) have 16 or more members. This distribution indicates that most households in the study are relatively large, with a significant concentration of families having between 6 and 15 members, suggesting a tendency towards larger family units in Awerial County.

Figure 5: Presence of latrines in the households

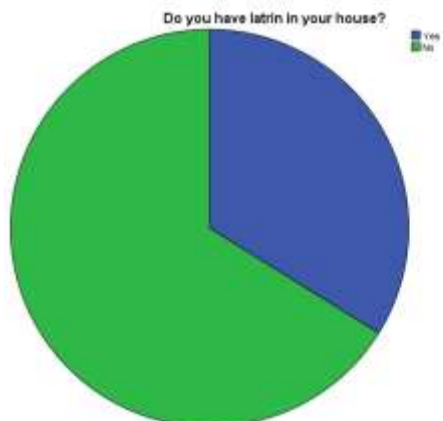




Figure 5 indicates a significant majority, 66.1% (n = 254), reported that they do not have a latrine in their homes. In contrast, only 33.9% (n = 130) indicated that they do possess a latrine. This stark contrast highlights a critical issue of

inadequate sanitation facilities within the community, suggesting that the lack of access to latrines may pose significant public health concerns in Awerial County.

Table 3: Descriptive statistics on cultural beliefs and practices.

Variable	Category	Mean	Median	Mode	SD	%
Cultural beliefs	Lack of Knowledge	2.02	2.00	2	.902	29.7
	Lack of Resources					49.2
	Cultural believes					10.9
	Others					10.2
Do you have a latrine in your house?	Yes	1.66	2.00	1	.474	33.9
	No					66.1
Lack of resources for no latrine	Yes	1.64	1.00	1	1.695	59.8
	No					29.3
	Unsure					10.9
Lack of knowledge of no latrine	Yes	1.78	2.00	2	1.595	42.1
	No					49.0
	Unsure					8.9
How important is it to use a latrine	Important	.86	1.00	0	.853	44.0
	Not Important					25.5
	Very Important					30.5
Cultural practices hindering the use of the latrine	Yes	2.05	2.00	2	1.022	.5
	No					99.5
Who is responsible for maintaining the latrine?	Children	2.42	2.00	1	1.174	28.6
	Women					28.1

	Men					15.4
	Shared					27.9
	Responsibility					
Other reasons for no latrine	Yes					21.4
	No	1.88	2.00	2	.545	69.0
	Unsure					9.6

The data presents descriptive statistics on cultural beliefs and latrine-related behaviors reveals that

A significant portion of respondents lack knowledge (mean 2.02, 29.7%) and resources (49.2%) for latrine usage, with many also perceiving cultural beliefs (10.9%) as influential. Regarding latrine access, 66.1% do not have a latrine, largely due to lack of resources (59.8%) and knowledge (42.1%). Most respondents consider using a latrine important (mean 0.86, 44% prioritize it highly), though some view it as less critical. Cultural practices hindering latrine use are rare (only 0.5%), and responsibilities for latrine maintenance are shared among children, women, men, and others. Additionally, 21.4% cite other reasons for not having a latrine, with a majority (69%) indicating no additional reasons. Overall, the data reflect substantial barriers to latrine use, primarily centered around a lack of resources and knowledge.

The findings were supported by an interviewee who had this to say;

“Lack of knowledge on how to construct a latrine that cannot easily collapse during the rainy season and lack of resources for constructing improved latrines have been the main reasons for not having a latrine in this community.”

When responders were asked whether there exist traditional beliefs and practices that act as barriers to latrine utilization in their community, 61% disagreed, 28% agreed, and 11% were not sure. The obtained mean value for the statement was 3.77, which is above average, while the standard deviation was 0.986, implying that some respondents gave varying responses.

Overall, the results indicate that the availability of latrines has been affected by a lack of resources and knowledge for constructing latrines, with few cultural myths towards latrine use.

Table 4 Correlations for cultural beliefs and practices

		Lack of Resources for latrine construction	Availability of latrine
Lack of Resources for latrine construction.	Pearson Correlation	1	-.396**
	Sig. (2-tailed)		.000
	N	384	384
Availability of latrine	Pearson Correlation	-.396**	1
	Sig. (2-tailed)	.000	
	N	384	384
**. Correlation is significant at the 0.01 level (2-tailed).			



The correlation analysis presented in the table indicates a statistically significant negative relationship between the availability of resources and knowledge for latrine construction and the likelihood of having a latrine in one's house. The Pearson correlation coefficient of -0.396 suggests a moderate negative correlation, meaning that as the lack of resources and knowledge about latrine construction increases, the probability of having a latrine decreases. The p-value (Sig. = 0.000) confirms that this result is statistically significant, meaning the observed relationship is unlikely to be due to chance. With $N = 384$, the sample size is sufficient to support reliable conclusions.

Discussion of findings

The findings from Awerial County present a nuanced picture of the demographic factors affecting latrine utilization and access to sanitation facilities within the community. The predominant age distribution, with a significant proportion of respondents being young to middle-aged, suggests a population that is likely engaged in productive activities, which could influence sanitation behaviors and household decision-making processes. The educational disparities highlighted, where a considerable percentage of individuals lack formal education, point to potential barriers to understanding the health implications of inadequate sanitation, which may contribute to the observed high rates of latrine absence.

The predominance of female-headed households, comprising 76.3% of the sample, raises important socio-cultural considerations. This demographic detail suggests a need to tailor sanitation interventions to the unique needs and perspectives of women, who may have different priorities and challenges related to latrine access, security, and maintenance. Given that these households often have larger family sizes, as evidenced by 58.9% consisting of 6 to 10 members, there may be increased competition for resources and space, complicating efforts to install adequate sanitation facilities.

The alarming statistic that 66.1% of respondents lack a latrine reflects critical public health concerns. This lack of access can lead to increased exposure to diseases associated with inadequate sanitation, such as diarrheal illnesses, which have been well-documented in similar contexts. The significant negative correlations found between latrine presence and factors like the age of the household head, household size, and education level suggest that as these factors increase, the likelihood of having a latrine decreases.

This implies that older individuals and households of greater size may face more challenges in installing and maintaining latrines, potentially due to limited financial resources, space constraints, or entrenched cultural beliefs.

Positive correlations with government and NGO support indicate that external assistance plays a vital role in enhancing latrine access. This underscores the importance of community engagement and institutional support in sanitation programs. The correlation analysis presented indicates a statistically significant negative relationship between the availability of resources and knowledge for latrine construction and the likelihood of having a latrine in one's house. This reinforces the need for comprehensive educational initiatives. Efforts to reshape cultural attitudes and provide better information about the importance of latrines are essential for increasing usage.

The advocacy for community awareness initiatives by nearly 39.7% of respondents speaks to a collective recognition of the need for education on sanitation practices. This suggests an opportunity for stakeholders and policymakers to engage the community actively, fostering awareness and training programs that not only promote latrine construction but also facilitate behavioral changes necessary for sustained sanitation improvements.

The findings of the research in Awerial County align closely with the broader literature on the influence of cultural beliefs and practices on latrine utilization. As highlighted by the United Nations. (2015), misconceptions about sanitation and health, combined with institutional shortcomings and societal taboos, create barriers to the adoption of sanitation solutions. The high rates of open defecation reported in Awerial, where 66.1% of respondents lack access to proper latrines, resonate with global trends. The Sustainable Development Goals (United Nations Development Programmes, 2015).) aim to eradicate open defecation and ensure universal access to sanitation by 2030, yet as shown in this research, significant obstacles remain rooted in local cultural and social contexts.

In rural areas, cultural beliefs regarding sanitation can significantly influence behavior and acceptance of latrine installation. The literature by Bowling, J.M. (2020) stresses that cultural sensitivities must be addressed before implementing sanitation solutions, as inappropriate measures are likely to be rejected by the community. Similarly, findings in Awerial suggest that installing latrines alone is not adequate; sustainable behavioral change and



positive attitudes towards latrine use are essential for long-term effectiveness.

The literature also discusses the gender dynamics that affect sanitation access, emphasizing that women often face additional barriers, including decision-making power and safety issues related to latrine use (Leontsini, E., et al. 2021). The predominance of female-headed households in Awerial may further complicate sanitation access and decision-making processes, as evidence suggests that women have a heightened preference for private latrine facilities yet often lack control over resource allocation. This aligns with the study findings, which indicate that cultural and gender issues play a significant role in sanitation acceptance and usage.

Moreover, the identified lack of adequate government support and infrastructure further reinforces the findings discussed in the literature regarding the inefficacy of sanitation projects that do not account for local belief systems and community engagement (Azene, Z.N., et al., 2021). The data reflecting government efforts in Awerial echo trends noted in various countries, where public health interventions falter without addressing the underlying cultural context.

Conclusion

The findings from Awerial County underscore the critical interplay between cultural beliefs, gender dynamics, environmental challenges, and the effectiveness of sanitation interventions, aligning with and contributing to the existing body of literature. The study concluded that a number of factors affect latrine use, among the factors are the availability of resources and knowledge for latrine construction, and the likelihood of having a latrine in one's house.

Recommendation.

The study suggests creating campaigns to dispel myths and misconceptions as one of the approaches to improve sanitation/latrine utilization.

Provision of latrine construction tools and teaching community techniques on how to construct latrines suitable for their terrain (lowland area), considering these factors have a great influence on latrine usage.

Acknowledgement

This dissertation work has been made possible due to the contributions of many people. I am grateful to all those

individuals who contributed directly or indirectly to the completion of this dissertation. Firstly, special thanks go to my Thesis Supervisor.

Dr. Denis Mubiru for his consistency, guidance, and support given to me at various stages of this dissertation. I wish to thank the County Commissioner (Hon. Philip Mawut) of Awerial County of South Sudan, where I did my research, Key informants, and my respondents of the Eight Payams of Awerial County for their contribution and their willingness to freely discuss with me during data collection. Lastly, my thanks go to my beloved wife, Mary Kiden Abdalla, for her support and encouragement during my struggle in developing this report, and above all, I give thanks to the almighty God for his protection and guidance throughout our lifetime.

List of abbreviations.

AIDS	Acquired Immune Deficiency Syndrome
FGD	Focused Group Discussions
HIV	Human Immune Deficiency Virus
KII	Key Informant Interviews
MDG	Millennium Development Goals
MoH	Ministry of Health
NGOs	
NBS	Non-Governmental Organizations
National Bureau of Statistics	
TB	Tuberculosis
UN	United Nations
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
VIP	Ventilated Improved Pit
WHO	World Health Organization

Source of funding

The study was not funded.

Conflict of interest.

There is no conflict of interest.

Availability of data.

Data used in this study are available upon request from the corresponding author.

Author's contribution.

BOJ designed the study, conducted data collection, cleaned and analyzed data, and drafted the manuscript. DM & SK



supervised all stages of the study from conceptualization of the topic to manuscript writing and submission.

Ethical approval.

Participation in the study was voluntary, informed consent was obtained before data collection, personally identifiable information such as participants' names was not collected, and maximum confidentiality of information gathered was assured to all participants throughout the study process.

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References

1. Dreifelbis, R., Hulland, K.R.S., Ram, P.K., Unicom, L., Winch, P.J., Leontsini, E., et al. (2021). The Integrated Behavioral Model for Water, Sanitation, and Hygiene: A framework for developing and accessing behavior change interventions in contexts with limited infrastructure.
2. Guo, A., Kayser, G., Bartram, J., & Bowling, J.M. (2020). A cross-sectional study conducted in Ethiopia, Kenya, Mozambique, Rwanda, Uganda, and Zambia examining water, sanitation, and hygiene practices in rural health care facilities. *American Journal of Tropical Medicine and Hygiene*, 102(4), 1033–1042. <https://doi.org/10.4269/ajtmh.17-0208>
3. Mugenda, O. M., & Mugenda, A. G. (2003). Research methods: Quantitative and qualitative approaches. Acts Press.
4. United Nations. (2015). Transforming our world: The 2030 agenda for sustainable development. UN General Assembly. Retrieved from Refworld. <https://doi.org/10.18356/84e5e905-en>
5. World Health Organization & United Nations Children's Fund. (2023). *Progress on household*

drinking water, sanitation, and hygiene 2000–2023: Special focus on inequalities. WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP). <https://www.who.int/publications>

6. United Nations Children's Fund. (2022). *Sanitation statistics: Insights into global and regional trends*. UNICEF. Retrieved from <https://data.unicef.org/topic/water-and-sanitation/sanitation/>
7. Azanaw, J., Malede, A., Yalew, H. F., & Worede, E. A. (2024). Determinants of diarrhoeal diseases among under-five children in Africa (2013–2023): A comprehensive systematic review highlighting geographic variances, socioeconomic influences, and environmental factors. *BMC Public Health*, 24(1), 2399. <https://doi.org/10.1186/s12889-024-19962-0>
8. Barrington, D. J., Sindall, R. C., Chinyama, A., Morse, T., Sule, M. N., Beale, J., Kativhu, T., Krishnan, S., Luwe, K., Malolo, R. D., Mcharo, O., Odili, A. C., Ravndal, K. T., Rose, J., Shaylor, E., Wozel, E., Chikweza, F., & Evans, B. E. (2025). The persistence of failure in water, sanitation, and hygiene programming: A qualitative study. *BMJ Global Health*, 10(2). <https://doi.org/10.1136/bmjgh-2024-016354>
9. Robinson, H. J., Barrington, D., Evans, B., Hutchings, P., & Narayanaswamy, L. (2024). An analysis of gender inclusion in Water, Sanitation and Hygiene (WASH) projects: Intention vs. reality. *Development Policy Review*, 42(2), e12741. <https://doi.org/10.1111/dpr.12741>
10. Saleem, M., Burdett, T., & Heaslip, V. (2019). Health and social impacts of open defecation on women: A systematic review. *BMC Public Health*, 19, 158. <https://doi.org/10.1186/s12889-019-6423-z>
11. Trajano Gomes da Silva, D., Dias, E., Ebdon, J., & Taylor, H. (2018). Assessment of recommended approaches for containment and safe handling of human excreta in emergency settings. *PLoS ONE*, 13(7), e0201344. <https://doi.org/10.1371/journal.pone.0201344>



Student's Journal of Health Research Africa
e-ISSN: 2709-9997, p-ISSN: 3006-1059
Vol.6 No. 9 (2025): September 2025 Issue
<https://doi.org/10.51168/sjhrafrica.v6i9.2170>
Original Article

PUBLISHER DETAILS:

Student's Journal of Health Research (SJHR)

(ISSN 2709-9997) Online

(ISSN 3006-1059) Print

Category: Non-Governmental & Non-profit Organization

Email: studentsjournal2020@gmail.com

WhatsApp: +256 775 434 261

Location: Scholar's Summit Nakigalala, P. O. Box 701432,
Entebbe Uganda, East Africa

