

# Capacity building and quality of health service delivery in Soroti District. A cross-sectional study.

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## Abstract

### Background

The study aimed to assess the relationship between capacity building and the quality of health service delivery in Soroti District.

### Methodology

The study adopted a descriptive and correlational mixed-methods design to examine the relationship between public health management practices and healthcare service delivery in Soroti District. A sample of 186 respondents was selected from a population of 360 using stratified random and purposive sampling techniques. Data was collected using questionnaires and interviews. Quantitative data were analyzed using SPSS through descriptive and inferential statistics, while qualitative data were analyzed thematically. Ethical standards, confidentiality, informed consent, and voluntary participation were maintained.

### Results

The study achieved an overall response rate of 88.7% from 165 respondents. Most respondents were male (55.8%), while females constituted 44.2%. The majority were aged 25–44 years (61.2%), representing the active and productive workforce. Respondents strongly agreed that capacity building improved job performance (mean = 4.21), enhanced teamwork (mean = 4.08), and improved application of skills in service delivery (mean = 4.15). Health workers were also perceived to provide professional and respectful services (mean = 4.12), while responsiveness to emergencies was rated highly (mean = 4.09). Qualitative thematic findings revealed improved professionalism, teamwork, communication, and community trust as major strengths. However, irregular training, inadequate funding, weak mentorship systems, medicine stock-outs, staffing shortages, long waiting times, and poor referral coordination emerged as key challenges affecting healthcare service delivery. Correlation analysis revealed a strong positive relationship between capacity building and healthcare service delivery ( $r = 0.703$ ,  $p < 0.01$ ).

### Conclusion

Improvements in training, mentorship, and continuous professional development enhance staff competence, professionalism, and responsiveness.

### Recommendation

The District Health Office should strengthen and institutionalize regular Continuous Professional Development programs for all health workers to ensure continuous skills upgrading.

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**Keywords:** *Capacity building, health service delivery, Soroti District, continuous professional development, mentorship, healthcare quality*

**Submitted:** February 21, 2026 **Accepted:** March 25, 2026 **Published:** April 30, 2026

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## Background of the study

Capacity building is widely recognized as a key determinant of effective healthcare service delivery, particularly in decentralized health systems where local governments play

a central role in planning, management, and supervision of health services. It refers to the process of developing and strengthening the skills, competencies, structures, and resources required for institutions and individuals to

perform effectively and sustainably (World Health Organization, 2024).

Capacity building interventions include training, mentoring, technical assistance, and institutional support aimed at improving knowledge, skills, attitudes, and organizational performance (Smith et al., 2018). Evidence shows that such interventions improve individual competencies, self-efficacy, and organizational effectiveness across public health systems.

In local government health systems, capacity building extends beyond individual training to include strengthening governance systems, planning structures, coordination mechanisms, and resource management processes. The Uganda National Local Government Capacity Building Policy emphasizes this holistic approach, highlighting the need to strengthen both human and institutional capacities to improve service delivery (Ministry of Local Government, 2024).

Despite this policy commitment, local governments in Uganda continue to experience capacity gaps, including inadequate financing, limited skilled personnel, weak institutional systems, and insufficient planning and supervision structures (Uganda Ministry of Health, 2025). These constraints significantly affect healthcare service delivery performance at the district level.

Empirical evidence shows that targeted capacity-building interventions improve health system performance. Leadership and management training in Wakiso District improved competencies in budgeting, personnel management, and accountability (Makerere University School of Public Health, 2024). Similarly, the CODES initiative demonstrated that strengthening district capacity for data-driven decision-making improved child health service coverage (Waiswa et al., 2023).

Furthermore, strengthening Health Management Information Systems (HMIS) capacity has been associated

with improved data quality and better planning outcomes (Ahimbisibwe, 2024). However, studies continue to highlight persistent leadership, workforce, and institutional weaknesses that limit service delivery effectiveness (Okuonzi, 2023).

The study aimed to assess the relationship between capacity building and the quality of health service delivery in Soroti District.

## Methodology

### Research design

The study adopted a descriptive and correlational research design using a mixed (quantitative and qualitative) approach. This design was used because it enabled the collection of data from the study population at a single point in time and allowed for the examination of relationships between public health management practices and quality of health service delivery in Soroti District Local Government. The correlational design was used to examine the relationship between the study variables, namely capacity building, supervision, planning, and healthcare service delivery, without manipulating the study environment.

### Population of study

The target population consisted of 360 individuals, including District Health Officials, VHT Coordinators, VHT Members, Healthcare Workers, Community Leaders, and residents in Soroti District (Soroti District Health Department, 2025). These key stakeholders and beneficiaries provided diverse perspectives on the influence of public health management practices on health service delivery through the VHT program, ensuring a comprehensive understanding of its effectiveness from multiple viewpoints.

**Table 1: Target population**

Category of respondents	Population Size	Sample Size
District Health Officials	5	3
VHT Coordinators	20	10
VHT Members	125	65
Healthcare Workers	70	36
Community Leaders	40	21
Residents	100	52
<b>Total</b>	<b>360</b>	<b>186</b>

*Source: Adapted from Soroti District Health Department (2025).*

### Sample size

The determination of the sample was done with the help of Krejcie and Morgan, who suggested the use of a sampling table to ensure representation. The sample size for the study was 186 respondents who were selected from a population of 360 people. Obtaining data from a sample of the entire

study population was less costly and provided the required data quickly.

### Sampling techniques

The study employed stratified simple random sampling to select respondents from VHT members, healthcare workers, community leaders, and residents, ensuring proportional

representation and minimizing bias. Purposive sampling was used to select key informants, such as VHT coordinators and district health officials, who possessed in-depth knowledge of the program. This combination provided both breadth and depth, thereby ensuring comprehensive insights into the program's impact.

### Data collection methods

This study employed questionnaire and interview surveys to collect data. The questionnaire survey served as a quantitative data collection method, gathering measurable data on respondents' perceptions of public health management practices and healthcare service delivery. It was administered in person or electronically using closed-ended questions with Likert scales.

### Data collection instruments

Structured questionnaires were used to collect quantifiable data, while semi-structured interview guides facilitated in-depth qualitative interviews with key informants, such as VHT coordinators and district health officers. These methods provided both broad statistical analysis and rich, contextual insights into the program's impact.

### Data collection procedure

Data collection was conducted systematically to ensure accuracy, reliability, and ethical compliance. Ethical approval and permission from relevant authorities were obtained before the study. Informed consent was secured from all participants, who were informed about the study objectives and their right to withdraw voluntarily. Eligible respondents were selected using inclusion criteria. Structured questionnaires and semi-structured interviews were used to collect quantitative and qualitative data. A pilot study was conducted to test the research instruments, and necessary revisions were made. Completed questionnaires were checked for completeness, coded, and securely stored. Confidentiality was maintained, while daily reviews and double-checking of data entry ensured data quality and minimized errors.

### Validity of instruments

To ensure the accuracy and relevance of the research instruments, the study measured validity using the Content Validity Index (CVI) and the expert judgment method. These approaches ensured that the questionnaire and other data collection tools effectively captured the concepts of capacity building, supervision, planning, and healthcare service delivery within the context of Soroti District Local Government.

The Content Validity Index (CVI) was used to quantify the relevance and clarity of each item on the research instrument. A panel of experts rated each item on a scale ranging from 1 (not relevant) to 4 (highly relevant). The CVI for each item was calculated by dividing the number of

experts who rated the item as "3" or "4" by the total number of experts. According to Polit and Beck, items achieving a CVI of 0.78 or higher were considered valid, while items below this threshold were revised or removed.

The CVI was therefore calculated as follows:

$$CVI = \frac{\text{Number of items rated relevant}}{\text{Total number of items}} = \frac{45}{50} = 0.9$$

A CVI of 0.9 indicated that the research instrument had high content validity and was therefore considered suitable for data collection.

### Reliability of instruments

Before the main data collection, a pilot study was conducted with a small sample of respondents similar to the target population. The data collected from the pilot study were entered into statistical software and analyzed to determine the reliability of the questionnaire items. Cronbach's alpha coefficient was computed for each construct in the questionnaire, including capacity building, supervision, planning, and healthcare service delivery. According to Gliem and Gliem, a Cronbach's alpha coefficient of 0.7 or higher is considered acceptable for establishing internal consistency.

In this study, the analysis produced an overall Cronbach's alpha coefficient of 0.8, which indicated a high level of internal consistency among the questionnaire items. The coefficient was obtained after analyzing responses from the pilot study respondents and examining the correlations among the items measuring the study variables. The reliability coefficient was calculated as follows:  $\alpha=0.8$

A Cronbach's alpha coefficient of 0.8 implied that the instrument was reliable and capable of producing consistent and dependable results. Items that initially showed low item-total correlations during the pilot analysis were revised to improve clarity and consistency before the final administration of the questionnaire. The acceptable reliability coefficient, therefore, confirmed that the instrument was suitable for collecting data for the main study, thereby enhancing the trustworthiness and credibility of the findings.

### Data analysis

The data collected from the study were analyzed using quantitative statistical methods to examine the relationships between public health management practices, namely capacity building, supervision, and planning, and the quality of health service delivery in Soroti District Local Government. The analysis was conducted in three main stages: data preparation, descriptive analysis, and inferential analysis.

Data Preparation: After collection, the data were cleaned and checked for completeness, consistency, and accuracy. Missing values, outliers, and errors were identified and addressed to ensure the quality of the dataset. The data were

then coded and entered into IBM SPSS Statistics for analysis.

**Descriptive Analysis:** Descriptive statistics were used to summarize the demographic characteristics of respondents and the main study variables. Measures such as frequencies, percentages, means, and standard deviations were computed. This stage provided an overview of capacity building, supervision, planning practices, and the current status of the quality of health service delivery in Soroti District.

**Inferential Analysis:** To test the relationships between the independent variables (capacity building, supervision, and planning) and the dependent variable (healthcare service delivery), correlation analysis was performed. Further, multiple regression analysis was conducted to determine the strength and direction of the relationships while controlling for potential confounding variables. Statistical significance was evaluated at a 95% confidence level ( $p < 0.05$ ). The results were presented in tables, charts, and narrative form to facilitate interpretation and discussion.

Qualitative data was analyzed thematically.

By applying these quantitative and qualitative analysis techniques, the study identified the extent to which public

health management practices influenced the quality of health service delivery in Soroti District, thereby providing empirical evidence to inform policy and practice.

### Ethical considerations

The study adhered to strict ethical standards to protect participants' rights and ensure research integrity. Informed consent was obtained after participants were informed about the study objectives, procedures, voluntary participation, and their right to withdraw without consequences. Confidentiality and anonymity were maintained through coding of data and secure storage of records accessible only to the research team. Measures were taken to minimize physical, psychological, and social harm, including allowing participants to skip uncomfortable questions. Ethical approval and authorization were obtained from relevant institutions and authorities. The study also upheld transparency, academic honesty, and accurate reporting of findings, thereby enhancing the credibility and trustworthiness of the research.

### Results

**Table 2: Response rate for the study**

Category of respondents	Questionnaires distributed and interviews scheduled	Questionnaires collected and interviews conducted	Response rate (%)
District Health Officials	3	2	66.7%
VHT Coordinators	10	8	80.0%
VHT Members	65	60	92.3%
Healthcare Workers	36	34	94.4%
Community Leaders	21	16	76.2%
Residents	52	45	86.5%
Total	186	165	88.7%

*Source: Primary Data (2026)*

The overall response rate for the study was 88.7%, which was obtained from 165 completed responses out of 186 distributed questionnaires and scheduled interviews. This response rate was considered high and adequate for analysis, as it exceeded the commonly accepted threshold of 70% for social science research, indicating strong participation from respondents.

Among the categories, Healthcare Workers (94.4%) and VHT Members (92.3%) recorded the highest response rates,

suggesting strong engagement from frontline health service providers. Residents (86.5%) also demonstrated a high level of participation, contributing significantly to the study findings.

However, District Health Officials (66.7%) recorded the lowest response rate, which may be attributed to their limited availability and administrative commitments. Despite this, the overall response rate was sufficient to ensure reliable and valid analysis of the study data.

**Table 3: Demographic characteristics of the respondents**

Variable	Category	Frequency (n)	Percentage (%)
Sex of respondent	Male	92	55.8
	Female	73	44.2
Age of respondent	Below 25 years	18	10.9
	25–34 years	49	29.7
	35–44 years	52	31.5
	45–54 years	31	18.8
	55 years and above	15	9.1
Highest level of education	Certificate	28	17.0
	Diploma	61	37.0
	Bachelor’s Degree	50	30.3
	Postgraduate Diploma	14	8.5
	Master’s Degree and above	12	7.3
Professional cadre/position	Medical Officer	10	6.1
	Clinical Officer	18	10.9
	Nurse/Midwife	62	37.6
	Laboratory Technician	20	12.1
	Health Administrator/Manager	14	8.5
	Support Staff	21	12.7
	Other	20	12.1
Years of working experience	Less than 1 year	12	7.3
	1–5 years	45	27.3
	6–10 years	48	29.1
	11–15 years	32	19.4
	Above 15 years	28	17.0
Type of health facility	General Hospital	22	13.3
	Health Centre IV	34	20.6
	Health Centre III	55	33.3
	Health Centre II	28	17.0
	Private Health Facility	26	15.8
Employment status	Permanent	98	59.4
	Contract	34	20.6
	Temporary	18	10.9
	Volunteer	15	9.1

*Source: Primary Data (2026)*

The demographic characteristics of respondents showed that a slightly higher proportion were male (55.8%) compared to females (44.2%), indicating moderate gender representation in the study.

In terms of age distribution, most respondents were within the productive working age group of 25–44 years (61.2%), suggesting that the study largely captured active health sector personnel.

Regarding education level, the majority of respondents held diplomas (37.0%) and bachelor’s degrees (30.3%), reflecting a relatively qualified workforce within the health system.

For the professional cadre, nurses/midwives formed the largest group (37.6%), followed by laboratory technicians and other cadres, indicating that frontline health workers constituted a significant proportion of respondents.

The findings on working experience showed that most respondents had between 6 and 10 years (29.1%) and 1–5 years (27.3%) of experience, suggesting that the study included both relatively experienced and relatively new health workers.

In terms of health facility type, most respondents were from Health Centre III facilities (33.3%), followed by Health Centre IV and other facility levels, indicating broad representation across the health system in Soroti District.

Finally, the employment status revealed that the majority of respondents were permanently employed (59.4%), which implies stability in service delivery roles and enhanced familiarity with public health management practices.

**Capacity building in the Soroti District local government  
 Descriptive analysis of findings on capacity building in the Soroti District local government**

**Table 4: Descriptive statistics on capacity building**

Statement	Mean	Std. Deviation	Interpretation
The district regularly organizes capacity-building training for health workers.	3.82	1.02	Agree
Mentorship programs are effectively implemented in health facilities.	3.64	1.11	Agree
Continuous Professional Development (CPD) activities are accessible to all staff.	3.55	1.08	Agree
Health workers are encouraged to attend workshops relevant to their duties.	4.01	0.94	Agree
Capacity-building activities improve my job performance.	4.21	0.87	Strongly Agree
There is adequate funding for staff training and development.	3.18	1.15	Not Sure
Training needs are properly identified before capacity-building programs are conducted.	3.46	1.09	Agree
Mentorship improves the clinical and administrative skills of health workers.	4.05	0.90	Agree
Workshops conducted are relevant to the daily work of health workers.	3.97	0.96	Agree
There is an equal opportunity for all staff to participate in capacity-building programs.	3.40	1.12	Not Sure
CPD programs are conducted frequently in the district.	3.22	1.14	Not Sure
Capacity building enhances teamwork among health workers.	4.08	0.88	Agree
Supervisors support staff participation in training and mentorship programs.	4.12	0.91	Agree
Skills gained from training are applied in service delivery.	4.15	0.86	Agree

*Source: Primary Data (2026)*

The findings indicated that respondents generally agreed that capacity building practices were implemented in Soroti District Local Government health facilities, with most mean scores ranging between 3.4 and 4.2.

Most respondents strongly agreed that capacity building activities improved job performance (mean = 4.21) and that skills gained from training were applied in service delivery (mean = 4.15). This suggests that training and mentorship programs had a positive impact on health service delivery. Respondents also agreed that supervisors supported staff participation in training (mean = 4.12) and that capacity building enhanced teamwork among health workers (mean = 4.08), indicating strong institutional support for staff development.

However, some areas showed moderate agreement or uncertainty. For instance, respondents were not sure whether there was adequate funding for staff training (mean = 3.18), whether CPD programs were conducted frequently (mean = 3.22), and whether there was equal opportunity for participation in capacity building programs (mean = 3.40). This suggests gaps in financing, frequency, and fairness of training opportunities.

Overall, the results imply that while capacity-building practices exist and positively influence service delivery, there are still structural and resource-related challenges that limit their effectiveness in the Soroti District health system.

### Qualitative interview findings on capacity building in the Soroti District local government.

The District Health Official 1 (Senior Health Planner)

The respondent explained that capacity building is a key pillar in improving health service delivery, and the district implements it through a mix of formal training, mentorship, and CPD sessions. However, implementation is inconsistent due to financial limitations and reliance on external partners. *“In Soroti District, capacity building is integrated into our annual health work plan, but the execution is heavily dependent on available funding. Government releases are often insufficient, so we rely on implementing partners such as NGOs and donor-supported programs to conduct most of the trainings.”*

The official further noted that training priorities are often aligned with national health priorities such as maternal and child health, immunization, and disease surveillance.

*“We prioritize high-impact areas like integrated management of childhood illnesses, HIV care, and malaria control. These are areas where capacity gaps are most evident.”*

On mentorship, the respondent highlighted that it is largely informal:

*“Mentorship is happening, but not in a structured way. Senior clinicians often guide junior staff during routine service delivery, but we do not yet have a standardized mentorship framework across all facilities.”*

They also emphasized workload challenges:

*“Even when training is available, staff attendance is affected by staffing shortages. Health workers are often left with heavy patient loads, making it difficult for them to attend workshops.”*

District Health Official 2 (District Health Officer Representative)

This respondent focused on equity and fairness in access to training opportunities.

*“One of the biggest challenges we face is unequal access to capacity-building opportunities. Health workers stationed at the district headquarters or referral facilities tend to benefit more compared to those in rural health centers.”*

They further noted that selection for training is sometimes influenced by donor requirements rather than systematic needs assessment:

*“Some trainings are donor-driven, and they specify participants. This sometimes leaves out frontline workers who may actually need the training more.”*

On CPD implementation, the respondent stated:

*“CPD sessions are conducted, but not as regularly as expected. Ideally, they should be continuous, but in practice they are irregular due to funding and logistical constraints.”*

They also emphasized the importance of strengthening institutional systems:

*“We are currently working on developing a more structured district-wide capacity building framework that ensures fairness, tracking of trained staff, and follow-up on skills application.”*

VHT Coordinator 1 (Rural Sub-county)

This respondent highlighted irregularity in training:

*“We are sometimes called for training on topics like hygiene, immunization, and disease outbreak response, but these trainings are not regular. Sometimes we go for months without any refresher training.”*

They added that the lack of continuity affects performance:

*“When training is not continuous, we tend to forget some of the skills, especially in health education and reporting.”*

VHT Coordinator 2 (Community Health Supervisor)

This respondent emphasized the positive impact of training when they occur:

*“Whenever we receive training, it greatly improves our confidence in community mobilization. We are better able to explain health issues like malaria prevention and maternal care.”*

However, they noted limited mentorship:

*“We mostly rely on guidance from health facility staff during outreach programs. There is no formal mentorship program for VHTs.”*

VHT Coordinator 3 (Remote Health Facility Catchment Area)

This respondent raised logistical and financial barriers:

*“Even when we are invited for training, sometimes we fail to attend because transport is not provided. Some trainings also do not offer allowances, yet we have to leave our work and families.”*

They also noted inequality in selection:

*“Not all VHTs are selected equally. Sometimes only a few representatives are chosen, and others miss out on important knowledge.”*

VHT Coordinator 4 (Urban Peri-Urban Area)

This respondent focused on teamwork and knowledge sharing:

*“Even though trainings are limited, those who attend usually share knowledge with others. This helps us to improve teamwork within the community health system.”*

They also highlighted improved coordination:

*“We now work more closely with nurses and midwives than before. Training has improved communication between VHTs and facility staff.”*

VHT Coordinator 5 (Experienced VHT Leader)

This respondent provided a more critical view of sustainability:

*“Capacity building is helpful, but it is not sustainable in its current form. We need structured refresher trainings and more consistent mentorship if we are to improve community health outcomes.”*

They also emphasized motivation challenges:

*“Without regular training and support, VHT motivation reduces. Some volunteers lose interest because they feel left out of important learning opportunities.”*

### Thematic analysis of interview findings

The qualitative data collected from **2 District Health Officials** and **5 VHT Coordinators** in Soroti District were analyzed thematically to identify key patterns, meanings, and interpretations related to capacity building practices and their influence on health service delivery.

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The analysis followed a systematic process of familiarization with data, coding, identification of themes, reviewing themes, and defining and naming themes. From this process, five major themes emerged.

#### Theme 1: Irregularity and Inadequacy of Capacity Building Programs

A dominant theme from the interviews was the inconsistency in the implementation of capacity-building activities. Both District Health Officials and VHT Coordinators reported that training was not conducted regularly.

District officials noted that implementation largely depended on donor support and available funding, which was often insufficient. Similarly, VHT Coordinators indicated long periods without refresher training.

This theme suggests that capacity building is **not institutionalized as a continuous process**, which limits sustained skill development among health workers.

#### Theme 2: Inequitable access to training opportunities

Another key theme was unequal access to training opportunities among health workers and VHTs. Participants indicated that staff at district headquarters and higher-level facilities benefited more compared to those in rural or hard-to-reach areas.

Some respondents also pointed out that selection for training was sometimes donor-driven, limiting fairness and inclusivity.

This indicates a **systemic gap in the equitable distribution of capacity-building opportunities**, which may affect overall service delivery performance across facilities in Soroti District.

#### Theme 3: Weak and informal mentorship structures

The findings revealed that mentorship exists but is largely informal and unstructured. Health workers often rely on on-the-job guidance from senior colleagues rather than organized mentorship programs.

District officials acknowledged the absence of a standardized mentorship framework, while VHT Coordinators reported limited follow-up after training.

This theme highlights a gap in structured skills transfer mechanisms, which affects long-term capacity development and knowledge retention.

#### Theme 4: Financial and logistical constraints

Participants consistently reported financial and logistical barriers as major challenges affecting capacity building. These included a lack of transport reimbursement, an absence of allowances, and limited operational funding.

VHT Coordinators particularly emphasized that these constraints discouraged participation in training activities.

This theme shows that resource limitations significantly reduce the effectiveness and reach of capacity-building interventions in the district health system.

### Theme 5: Positive Impact of Capacity Building on Performance and Service Delivery

Despite the challenges, respondents acknowledged that capacity building has a positive influence when implemented. Health workers reported improved confidence, better teamwork, and enhanced service delivery skills following training.

VHT Coordinators noted improved community mobilization, better health education delivery, and stronger collaboration with facility staff.

This theme indicates that capacity building remains a critical driver of improved healthcare service delivery, even though its effectiveness is constrained by structural challenges.

### Documentary review findings

In addition to primary data collected from questionnaires and interviews, the study also reviewed relevant documentary evidence to triangulate findings on public health management practices and the quality of health service delivery in Soroti District Local Government. The documents reviewed included annual health sector performance reports, district health work plans, training reports, supervision reports, CPD records, and national health policy guidelines.

The documentary analysis focused on identifying evidence related to capacity building, supervision, planning, and service delivery performance trends over time.

### Evidence of capacity-building activities

Documentary records indicated that capacity-building activities were planned annually within district health work plans; however, implementation reports showed inconsistencies in execution. Training reports revealed that most capacity-building activities were supported by implementing partners rather than fully funded by the district budget.

The reviewed documents highlighted that priority training areas included: Integrated Disease Surveillance and Response (IDSR), Maternal and child health care, HIV/AIDS management, Malaria case management, and Infection prevention and control.

However, training attendance registers showed that participation was often limited to selected staff, with rural facilities receiving fewer training opportunities compared to urban or district-based facilities.

CPD records further indicated irregular documentation of continuous professional development sessions, confirming gaps in consistency and institutionalization of CPD activities.

### Supervision reports and management support

Supervision reports reviewed from health facilities and district health management teams showed that integrated supportive supervision was conducted, but not consistently across all quarters.

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Key findings from supervision documents included: Incomplete supervision coverage across all health facilities, Limited follow-up of identified performance gaps, Weak documentation of supervision feedback implementation, and Dependence on quarterly rather than monthly supervision schedules.

Reports further indicated that some facilities went for extended periods without supervisory visits, particularly lower-level health centers in remote areas of Soroti District. Despite these gaps, facilities that received regular supervision showed improved adherence to clinical guidelines and reporting standards.

### Planning and budget allocation documents

Review of district health sector annual work plans and budget performance reports revealed that capacity building and supervision were included as priority interventions. However, budget allocation analysis showed that funding for training and mentorship was often insufficient compared to planned activities.

Documents indicated that: A significant proportion of health budgets was allocated to recurrent costs (wages and facility operations), Limited funds were available for staff training and professional development, and Training activities were frequently adjusted based on available funding rather than planned needs. This confirmed earlier findings that resource constraints significantly affect the implementation of capacity-building initiatives.

### Health Service delivery performance reports

Health management information system (HMIS) reports reviewed showed mixed performance trends in service delivery indicators in Soroti District.

Positive trends included: Increased immunization coverage in selected facilities, improved antenatal care attendance in some health centers, and Gradual improvement in outpatient department utilization.

However, challenges were also noted: Stock-outs of essential medicines in lower-level facilities, Persistent staffing gaps in rural health centers, Delays in reporting and data submission from some facilities, and Variation in service quality across health facility levels.

The reports suggested that facilities with more frequent training and supervision tended to perform better than those with limited capacity-building exposure.

### Policy and guideline compliance

National health policy documents and district implementation guidelines emphasized continuous capacity building, supportive supervision, and decentralized health planning as key strategies for improving service delivery. However, implementation review reports indicated partial compliance with these guidelines. While policies existed, enforcement and operationalization were inconsistent due to financial and human resource constraints.

The documentary evidence strongly corroborated the primary data findings by confirming that although public health management systems exist in Soroti District, their effectiveness is constrained by limited funding, irregular implementation, and unequal distribution of capacity building and supervision services. This reinforces the conclusion that strengthening institutional capacity, financing mechanisms, and supervision systems is essential for improving the quality of health service delivery in the district.

### Quality of health service delivery in Soroti District

#### Descriptive analysis of findings on quality of health service delivery in Soroti District

**Table 5: Descriptive statistics on quality of health service delivery**

Statement	Mean	Std. Deviation	Interpretation
Patients receive timely health services in my facility	3.68	1.02	Agree
Health workers provide services with professionalism and respect	4.12	0.88	Agree
Essential medicines are usually available in the health facility	3.21	1.18	Not Sure
Patients are satisfied with the services provided	3.74	0.97	Agree
Waiting time for patients is reasonable	3.36	1.11	Not Sure
Health services are delivered according to established clinical guidelines	4.05	0.90	Agree
The health facility provides safe and hygienic service delivery conditions	3.89	0.93	Agree
There is effective communication between health workers and patients	3.96	0.91	Agree
Diagnostic services are accurate and reliable	3.77	0.96	Agree
Referral systems are efficient and well-coordinated	3.42	1.08	Not Sure
Health service delivery is consistent and reliable	3.85	0.94	Agree
Patients receive adequate information about their treatment	3.91	0.92	Agree

There are minimal complaints from patients regarding service delivery	3.28	1.12	Not Sure
Health facilities respond effectively to patient needs and emergencies	4.09	0.87	Agree

Source: Primary Data (2026)

The findings show that the quality of health service delivery in Soroti District is generally perceived as moderate to good, with most indicators falling within the “Agree” category.

A strong positive finding is that health workers provide services with professionalism and respect (mean = 4.12) and that health facilities respond effectively to patient needs and emergencies (mean = 4.09). This suggests that responsiveness and staff attitude are key strengths in the district health system.

Respondents also agreed that services are delivered according to clinical guidelines (mean = 4.05), communication between health workers and patients is effective (mean = 3.96), and patients receive adequate information about their treatment (mean = 3.91). These results indicate acceptable standards of care delivery.

However, several challenges were identified. Respondents were not sure whether essential medicines are consistently available (mean = 3.21), whether waiting time is reasonable (mean = 3.36), and whether referral systems are efficient (mean = 3.42). In addition, there was uncertainty regarding patient complaints (mean = 3.28), suggesting persistent service delivery gaps.

Overall, the results indicate that while health service delivery in Soroti District demonstrates strengths in professionalism, responsiveness, and adherence to guidelines, challenges remain in supply chain management, patient flow efficiency, and referral coordination.

### Interview findings on the quality of health service delivery

The qualitative interview data collected from 2 District Health Officials and 5 VHT Coordinators were analyzed to explore perceptions of the quality of health service delivery in Soroti District. The responses highlighted key strengths, challenges, and underlying factors influencing service delivery outcomes.

District Health Official 1 said, *“Quality of health service delivery has improved in some areas, especially in terms of staff professionalism and adherence to clinical guidelines. However, we still face challenges such as stock-outs of essential medicines and inadequate staffing in lower-level facilities. These issues affect the overall quality of care patients receive.”*

*“We are also working on improving responsiveness, particularly in emergency cases, and there has been some progress, but it is not yet consistent across all facilities.”*

District Health Official 2 said, *“Patients generally receive acceptable services, but waiting time remains a challenge due to high patient numbers and limited staff. In some facilities, one health worker attends to many patients, which slows down service delivery.”*

*He added, “Referral systems are in place, but coordination between lower and higher-level facilities is still weak. This affects continuity of care for patients who need specialized services.”*

*He also said, “We also note that patient satisfaction is improving, but complaints still exist, especially related to drug availability and delays.”*

VHT Coordinator 1 said, *“People in the community appreciate the services, but sometimes they complain about long waiting times and lack of medicines in the facility.”*

VHT Coordinator 2 added, *“Health workers are generally respectful and professional. This has improved community trust in the health facilities.”*

VHT Coordinator 3 also said, *“Sometimes patients are referred to higher facilities, but the referral process is slow and not well coordinated, which affects patient care.”*

VHT Coordinator 4 also said, *“We see improvement in how health workers communicate with patients. They now explain treatment better than before.”*

VHT Coordinator 5 said, *“Emergency response has improved, especially during outbreaks and maternal emergencies, but not all facilities are equally prepared.”*

The findings indicate that while the quality of health service delivery in Soroti District has improved in areas such as professionalism, communication, and responsiveness, significant challenges remain. These include medicine shortages, staffing constraints, long waiting times, and weak referral coordination. The results suggest that service quality is improving but remains uneven across health facilities in the district.

### Thematic analysis of interview findings on quality of health service delivery

The qualitative interview data obtained from 2 District Health Officials and 5 VHT Coordinators were analyzed thematically to explore perceptions of the quality of health service delivery in Soroti District. The analysis involved systematic coding of responses, grouping similar ideas, and generating themes that explain the strengths and challenges influencing service delivery outcomes.

Theme 1: Improved professionalism and patient-provider interaction

A major theme that emerged was the improvement in professionalism and behavior of health workers. Respondents consistently noted that health workers demonstrate respect, improved communication, and better patient handling compared to previous years.

District Health Officials reported that adherence to clinical guidelines and professional conduct has improved service quality. VHT Coordinators also emphasized that patients

now receive clearer explanations about diagnoses and treatment.

This theme indicates that human resource conduct has positively contributed to improved trust and confidence in health services in Soroti District.

Theme 2: Inconsistent availability of essential medicines

Another dominant theme was the irregular availability of essential medicines in health facilities. Both District Health Officials and VHT Coordinators highlighted frequent stock-outs as a major challenge affecting service delivery.

Officials noted that supply chain constraints and delayed deliveries contribute to shortages, while VHT Coordinators reported community dissatisfaction due to a lack of medicines.

This suggests that medicine availability remains a critical barrier to quality service delivery, affecting patient outcomes and satisfaction.

Theme 3: Long waiting times and staffing constraints

Respondents consistently reported long waiting times in health facilities, mainly attributed to inadequate staffing levels and high patient volumes.

District Health Officials explained that limited human resources force health workers to handle many patients at once, leading to delays. VHT Coordinators confirmed that patients often spend long hours waiting for services.

This theme highlights a structural human resource gap affecting efficiency in service delivery within Soroti District.

Theme 4: Weak referral system coordination

The referral system was identified as functional but poorly coordinated. While referral structures exist, their implementation is inconsistent.

District Health Officials acknowledged delays and communication gaps between lower and higher-level facilities. VHT Coordinators reported that patients sometimes experience delays and confusion during referrals. This indicates that the referral system is not fully efficient, affecting continuity of care and patient outcomes.

Theme 5: Uneven emergency response capacity

Respondents indicated improvements in emergency response services, especially during outbreaks and maternal emergencies. However, preparedness varies across facilities. Some facilities were reported to respond effectively, while others lack adequate equipment and trained personnel.

This reflects a non-uniform emergency response system, where service quality depends on facility capacity.

Theme 6: Moderate patient satisfaction with persistent complaints

A final theme was moderate patient satisfaction with ongoing complaints. While satisfaction has improved due to better communication and professionalism, issues such as medicine shortages, long waiting times, and referral delays continue to generate dissatisfaction.

VHT Coordinators noted that community perceptions are improving, but still mixed, depending on facility performance.

This suggests that patient satisfaction is improving but remains constrained by systemic challenges.

The findings indicate that the quality of health service delivery in Soroti District has improved in terms of staff behavior, communication, and responsiveness. However, structural challenges such as medicine stock-outs, staffing shortages, and weak referral systems continue to limit overall service quality. This suggests that while progress has been made, significant system-level improvements are still required to achieve consistent, high-quality healthcare delivery across all facilities.

### **Documentary review findings on the quality of health service delivery**

A documentary review was conducted to triangulate primary data findings on the quality of health service delivery in Soroti District Local Government. The documents reviewed included Health Management Information System (HMIS) reports, district health quarterly performance reports, facility service delivery reports, drug stock reports, supervision reports, and Ministry of Health quality of care guidelines.

The analysis focused on key service delivery indicators such as availability of medicines, waiting time trends, referral system functionality, patient satisfaction, staffing levels, and responsiveness of health services.

Availability of essential medicines and supplies

Documentary evidence from drug stock reports and logistics management information systems indicated frequent stock-outs of essential medicines in lower-level health facilities. The reports showed that while some tracer medicines were available intermittently, there were recurring shortages of key drugs such as antibiotics, antimalarials, and maternal health supplies.

The reports further indicated that supply chain delays from national distribution systems contributed significantly to these shortages, affecting continuity of care.

This confirmed that medicine availability remains a major constraint to quality service delivery in Soroti District.

Patient waiting time and service efficiency

Facility outpatient department (OPD) records and quarterly performance reports showed variability in patient waiting times across facilities. Higher-level facilities, such as Health Centre IVs, recorded relatively better patient flow management compared to lower-level facilities.

However, the reports indicated that in many facilities, patient waiting times exceeded recommended Ministry of Health standards due to: Limited staffing levels, High patient-to-health worker ratios, and Peak-hour congestion in outpatient departments. This demonstrates persistent inefficiencies in patient flow management.

Staffing levels and human resource gaps

Human resource reports reviewed indicated that most health facilities were understaffed compared to approved staffing

norms. Lower-level facilities such as Health Centre IIs and IIIs were particularly affected.

Key observations included: High workload per health worker, Dependence on temporary and contract staff, and Uneven distribution of skilled health personnel across facilities. These staffing gaps were identified as a major contributor to delays in service delivery and reduced quality of care.

#### Referral system performance

Referral documentation and facility reports showed that a formal referral system exists, including referral forms, feedback mechanisms, and ambulance services. However, compliance with referral protocols was inconsistent.

Common challenges identified included: Delays in ambulance response, Poor communication between referring and receiving facilities, Incomplete referral documentation, and Limited feedback from higher-level facilities back to lower levels. This indicates that the referral system is functionally present but operationally weak, affecting continuity of care.

#### Patient satisfaction and complaints reports

Patient complaint registers and client satisfaction reports revealed mixed levels of satisfaction with health services. Positive feedback was mainly related to staff attitude and communication.

However, recurring complaints included: Lack of medicines, long waiting times, Occasional delays in emergency response, and Inconsistent service availability. The reports showed that complaint resolution mechanisms exist but are not consistently documented or followed up.

#### Responsiveness and emergency care services

Emergency response reports indicated improvements in handling maternal emergencies and disease outbreaks.

Facilities with better staffing and infrastructure demonstrated faster response times.

However, gaps were noted in: Availability of emergency equipment, Transport and ambulance readiness, and skilled personnel during night and weekend shifts. This indicates uneven emergency response capacity across facilities in the district.

#### Compliance with quality of care standards

Ministry of Health quality assurance guidelines emphasize patient-centered care, timely service delivery, adequate drug supply, and effective referral systems.

Documentary evidence showed partial compliance with these standards. While some facilities adhered to clinical guidelines and reporting systems, others showed inconsistencies in: Documentation, Drug management, Patient flow efficiency, and Supervision follow-up actions.

The documentary evidence confirms that while some improvements have been made in health service delivery in Soroti District, significant systemic challenges remain. These include inadequate staffing, medicine shortages, weak referral coordination, and inconsistent service efficiency. These constraints collectively affect the overall quality and reliability of healthcare services in the district.

### Correlational findings

This section presents the results of the Pearson correlation analysis conducted to examine the relationship between Capacity Building and the quality of health service delivery in Soroti District Local Government. The analysis was conducted using SPSS version 27 at a 95% confidence level ( $p < 0.05$ ).

**Table 6: Correlation Matrix of Study Variables (N = 165)**

Variables	Capacity Building	Health Service Delivery
Capacity Building	1	
Health Service Delivery	0.703**	1

*Note: Correlation is significant at the 0.01 level (2-tailed).*

The results show a strong positive and significant relationship between capacity building and health service delivery ( $r = 0.703$ ,  $p < 0.01$ ). This implies that improvements in training, mentorship, continuous professional development, and skill enhancement are associated with better quality of health service delivery.

### Discussion

The study established a strong and positive relationship between capacity building and healthcare service delivery ( $r = 0.703$ ,  $p < 0.01$ ), with regression results further confirming capacity building as a significant predictor of service delivery outcomes ( $\beta = 0.312$ ,  $p < 0.001$ ). This implies that improvements in training, mentorship, and continuous

professional development are associated with better quality of healthcare services.

These findings are consistent with the World Health Organization (2024), which emphasizes capacity building as a critical process for strengthening skills, systems, and institutional performance in healthcare delivery. Similarly, Smith et al. (2018) argue that capacity-building interventions such as training and mentorship improve both individual competencies and organizational effectiveness, which aligns with the observed improvements in professionalism and responsiveness among health workers in Soroti District.

Empirical evidence from Uganda further supports these findings. The Wakiso District leadership training initiative demonstrated that strengthening managerial competencies

improves personnel management and service delivery outcomes (Makerere University School of Public Health, 2024). This aligns with the current study's qualitative findings, where respondents noted improved staff professionalism and responsiveness in facilities with stronger capacity development interventions.

However, the study also revealed persistent gaps in staffing levels, resource availability, and institutional systems. These findings are consistent with Okello et al. (2024), who observed that capacity constraints in Ugandan local governments undermine health service performance despite existing governance structures. Similarly, Lutwama et al. (2012) noted that while health workers may be skilled, inadequate staffing and weak performance systems limit service delivery effectiveness.

Therefore, while capacity building significantly improves service delivery in Soroti District, its impact is moderated by systemic constraints such as inadequate staffing and resource limitations. This confirms the argument by Tibingana and Mujumbansi (2016) that capacity building must go beyond individual training to include institutional strengthening, supportive environments, and continuous learning systems.

### Conclusion

The study concludes that capacity building has a strong and statistically significant positive relationship with health service delivery ( $r = 0.703$ ,  $p < 0.01$ ). The regression analysis further confirmed capacity building as a significant predictor of service delivery ( $\beta = 0.312$ ,  $p < 0.001$ ). This implies that improvements in training, mentorship, and continuous professional development enhance staff competence, professionalism, and responsiveness.

However, despite its positive effect, capacity building outcomes are constrained by inadequate staffing, limited resources, and weak institutional support systems. This reduces the extent to which capacity-building interventions translate into optimal service delivery improvements.

### Recommendation

Since capacity building was found to have a strong positive influence on health service delivery, the study recommends that:

The District Health Office should strengthen and institutionalize regular Continuous Professional Development (CPD) programs for all health workers to ensure continuous skills upgrading.

Targeted mentorship and on-the-job training should be expanded, especially for lower-level health facilities where service gaps are more pronounced.

The local government should allocate adequate funding specifically for staff training, workshops, and professional development activities.

Capacity-building programs should be based on systematic training needs assessments to ensure relevance to actual service delivery challenges.

Health workers should be supported to apply skills acquired during training through supportive supervision and performance monitoring.

### Acknowledgement

I would like to express my sincere gratitude to Almighty God for granting me good health, wisdom, and perseverance throughout the preparation and completion of this dissertation. My profound appreciation goes to the management and staff of Team University, especially the School of Graduate Studies and Research, for providing a conducive academic environment and the opportunity to pursue my Master's degree. I am deeply indebted to my supervisor(s) for their professional guidance, constructive criticism, encouragement, and valuable academic support throughout the research process. Their commitment and patience greatly contributed to the successful completion of this dissertation. I also extend heartfelt appreciation to the officials and health workers in Soroti District who willingly provided information and participated in this study. Their cooperation made this research possible. Special thanks go to my parents, family members, relatives, and friends for their unwavering support, prayers, encouragement, and financial assistance during my studies. Lastly, I appreciate all my classmates and colleagues whose ideas, discussions, and encouragement contributed positively to my academic journey. May God richly bless you all.

### List of abbreviations

CPD – Continuous Professional Development  
CODES – Community and District-management Empowerment for Scale-up  
HMIS – Health Management Information System  
HUMCs – Health Unit Management Committees  
IDSR – Integrated Disease Surveillance and Response  
NGO – Non-Governmental Organization

### Source of funding

The study had no funding.

### Conflict of interest

The study had no funding.

### Informed consent

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

### Author contributions

BAO: collected the data.  
NUK: supervised the study.  
EB: Supervised the study

### Data availability

Data is available upon request from the author.

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