



**Health worker-related factors contributing to Delayed HealthCare Service Delivery among Health Workers at the Outpatient department of Luweero Hospital, Luwero District.  
A cross-sectional study.**

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**ABSTRACT**

**Background:**

Delayed health care service delivery significantly affects patient health outcomes. The study aimed to identify health worker-related factors contributing to Delayed HealthCare Service Delivery among Health Workers at the Outpatient department Luweero Hospital, Luwero District.

**Methodology:**

A cross-sectional quantitative descriptive study was conducted among 40 health workers at the Outpatient Department of Luweero Hospital, selected from a population of 45 staff using Krejcie and Morgan's table. Data were collected using structured self-administered questionnaires and analyzed using frequencies and percentages in Microsoft Excel 2016. Purposive sampling was used. Validity was ensured through expert review, reliability through pretesting with 10 respondents, and ethical approval and informed consent were obtained.

**Results:**

Among the 40 respondents, most were aged 29-39 years (42.5%), had certificate-level education (45%), and were nurses (47.5%). Half of the health workers (50%) reported never receiving refresher training. Staffing was a major concern, with 50% describing staff numbers as very few and only 20% reporting adequate staffing. Heavy workload was the main factor affecting motivation for 70% of respondents, while only 7.5% cited good pay and recognition. Teamwork was rated as very good by 50%, though 17.5% described it as poor. Supervision was inadequate, as 42.5% reported that supervisors rarely checked their work or provided feedback. Job satisfaction was generally low, with 45% of respondents reporting dissatisfaction and only 15% indicating satisfaction with their jobs.

**Conclusion:**

Delayed healthcare service delivery at the facility is largely driven by staff shortages, low motivation, inadequate supervision, and poor job satisfaction.

**Recommendation:**

The hospital administration and relevant authorities should recruit more health workers to reduce workload, minimize burnout, and improve the speed of service delivery.

**Keywords:** Health Worker-Related Factors, Heavy Workload, Adequate Staffing, Job Satisfaction

**Submitted:** December 02, 2025 **Accepted:** February 01, 2026 **published:** March 01, 2026

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**BACKGROUND OF THE STUDY**

Delayed health care service delivery significantly affects patient health outcomes. Delays in receiving timely diagnosis, treatment, and follow-up care often result in

disease progression, increased complications, and higher mortality rates (Micallef et al., 2020). Globally, delayed access to health services has led to 25% of patients presenting with worsened disease conditions, 20%



experiencing treatment interruptions, and 15% developing preventable complications (Masutha et al., 2024).

In the United States, delays in health service delivery have resulted in 18% of patients missing follow-up care, 15% increased emergency admissions, and 12% rising out-of-pocket expenditures, indicating negative health and financial consequences for patients (Caraballo et al., 2022). In Asia, delays in care have contributed to 22% of patients developing late-stage complications, 18% maternal and neonatal deaths, and 15% declining trust in health systems, particularly in rural settings (Verma & Dash, 2021).

In Sub-Saharan Africa, delayed health care services have resulted in 27% of patients experiencing avoidable deaths, 20% prolonged suffering, and 16% reduced health-seeking behavior (Yenet et al., 2023). In Malawi, delays have led to increased self-medication (24%), higher maternal mortality (20%), and high dropout rates from follow-up clinics (18%) (Kaimba & Umar, 2025). In Kenya and Tanzania, delayed health care services have contributed to worsening illnesses, poor treatment adherence, maternal and child health complications, and overcrowding in referral hospitals (Seif et al., 2025; Mollel & Mwanswila, 2024).

In Uganda, delayed health care service delivery has been associated with preventable disease progression, increased mortality (18%), and low patient satisfaction (15%) within public health facilities (Kibudde et al., 2022). In Luweero District, delayed access to services continues to compromise timely treatment and patient outcomes, particularly among vulnerable populations. Thus, the study aimed to identify health worker-related factors contributing to Delayed HealthCare Service Delivery among Health Workers at the Outpatient department of Luweero Hospital, Luwero District.

## METHODOLOGY

### Study Design and Rationale

A cross-sectional study design employing a quantitative research method was used to obtain data. The study was descriptive because it assessed the factors contributing to health care service delivery among health workers at the outpatient. The study was cross-sectional because it was carried out at one point in time without further follow-up. Then, quantitative methods involved the use of structured questionnaires to gather numerical data. The design was chosen because it was cost-saving, easier to carry out, and carried out in a shorter time.

### Study Setting and Rationale

The study was conducted at the outpatient department of Luweero Hospital, a public health facility located in Luweero Town Council, Luweero District, in the Central Region of Uganda. The hospital lies approximately 75 kilometers north of Kampala along the Kampala–Gulu highway and serves as the main referral facility for lower-level health centers within the district. Its geographical coordinates are approximately 0°49'00.0"N, 32°29'30.0"E (Latitude: 0.816667; Longitude: 32.491667). Luweero Hospital is a government-owned facility operating under the Ministry of Health (MoH) and supervised by the Luweero District Health Office. It provides a wide range of medical services, including outpatient and inpatient care, maternal and child health services (ANC and PNC), emergency obstetric and surgical care, HIV/AIDS prevention and treatment, laboratory, and timeliness of healthcare service delivery among health workers, including heavy workloads, limited resources, and infrastructural constraints. The hospital is well-structured with several functional wards, including the Outpatient Department (OPD), Medical Ward, Surgical Ward, Maternity Ward, Pediatric Ward, and Emergency Unit, all offering both inpatient and outpatient care. Additionally, it has specialized units such as the HIV/ART Clinic, Laboratory Department, and Pharmacy to support comprehensive service delivery. The hospital serves a catchment population of over 250,000 people and handles an average of 3,500 outpatient visits per month. This site was selected for the study because of the persistent challenges affecting the quality.

### Study Population

The study targeted health workers at the outpatient department of Luweero Hospital, including nurses, midwives, clinical officers, doctors, and laboratory personnel. These health workers were directly involved in outpatient care and played a central role in determining the quality, efficiency, and timeliness of healthcare service delivery.

### Sample Size Determination

The sample size for the study was determined using Krejcie and Morgan's (1970) table, which provides a definite value for estimating sample sizes based on a known population. Luweero hospital at outpatient department has a team of 45 trained health workers providing daily health care services to patients in the Outpatient Department (OPD), Medical



Student's Journal of Health Research Africa

e-ISSN: 2709-9997, p-ISSN: 3006-1059

Vol.7 No. 3 (2025): March 2026 Issue

<https://doi.org/10.51168/sjhrafrica.v7i3.2273>

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Ward, Surgical Ward, Maternity Ward, Pediatric Ward and Emergency Unit, all offering both inpatient and outpatient care as well as the HIV/ART Clinic, Laboratory Department, and Pharmacy to support comprehensive service delivery. According to Krejcie and Morgan's table, for a known population of 45 gives a sample size of 40 respondents is recommended to achieve a 95% confidence level and a 5% margin of error. This sample size was considered sufficient to provide reliable and representative data in line with the study topic. Therefore, a sample of 40 respondents was used.

### Sampling Procedure

The purposive sampling technique was used because it was appropriate for selecting respondents who possess specific knowledge and experience relevant to the study. At Luweero Hospital, health workers were purposively selected from outpatient departments, including consultation rooms, treatment rooms, radiology, pharmacy, laboratory, and administration. This method allowed the inclusion of health professionals such as nurses, midwives, clinical officers, doctors, and laboratory personnel who were directly involved in healthcare service delivery. The selection was based on their roles, availability, and willingness to participate, ensuring that the sample represents various cadres and levels of experience within the hospital. A total of 40 health workers were targeted to provide diverse insights into the factors affecting healthcare service delivery at Luweero Hospital. This approach ensured that only those with relevant experience and understanding of hospital operations contributed to the study, enhancing the validity and relevance of the findings.

### Inclusion Criteria

The study included health workers at the outpatient department of Luweero hospital who were willing to participate, both male and female, and provided informed consent.

### Exclusion Criteria

The study excluded health workers at the outpatient department of Luweero hospital who had consented but later withdrew at the time of data collection, and those who consented but later got very busy in the wards due to emergencies.

### Study Variables

#### Dependent Variable

The outcome variable in this study referred to the main aspect being affected, which was not directly manipulated. In this case, it was health care service delivery.

### Independent Variable

The independent variables were the factors that contributed to the outcome and could be analyzed: Health worker-related factors such as level of training, workload, motivation, supervision, communication, teamwork, job satisfaction, and availability of support systems.

### Research Instrument and Rationale

The self-administered questionnaire was used for this study, and it was written in English. This questionnaire consisted of three sections: Section (A) on socio-demographic data, Section (B) on health worker-related factors. Each section contained closed-ended questions to capture respondents' views in line with the study objectives.

### Data Collection Procedure

After approval of the proposal by the Institutional Research Committee, an introductory letter was obtained from the Dean, School of Nursing and Midwifery, Mildmay, Uganda. This letter was presented to the Hospital Director of Luweero Hospital, where the purpose of the study was explained. Upon receiving permission, an introduction was made to the health workers, and interaction with respondents commenced for data collection.

Data was collected over four days by sampling 10 respondents per day to reach the required sample size of 40 participants. Verbal permission and written informed consent were obtained after explaining the purpose of the study and assuring confidentiality. Each respondent was given a questionnaire to complete independently in a separate area within the facility premises to ensure privacy during the process.

### Data Management

At the end of each day of data collection, all completed questionnaires were reviewed to ensure accuracy and completeness. The questionnaires were coded and stored in a locked cabinet with restricted access. Electronic records were saved on a password-protected computer to maintain confidentiality and data security.



### Data Analysis

Collected data was first checked, sorted, and coded, then entered into Microsoft Excel (2016 version) for analysis, and findings were summarized using descriptive statistics such as frequencies and percentages, and presented in tables, bar graphs, and pie charts for easy interpretation.

### Quality Assurance Validity

The questionnaire was designed according to the study objectives and reviewed by the research supervisor to ensure that it measures the contributing factors to delayed healthcare service delivery.

### Reliability

The tool was first pre-tested with 10 health workers at the outpatient department, Luweero hospital. Adjustments were made to refine unclear questions, as this ensured consistency and reliability before using the tool in the main study.

### Ethical Considerations

After approval of the proposal by the Institutional Research Committee, an introductory letter was obtained from the Dean, School of Nursing and Midwifery, Mildmay, Uganda. The letter was presented to the Hospital Director to seek permission to conduct the study. Confidentiality was ensured through the use of numeric codes instead of participants' names, and participants were reminded of their right to withdraw at any time without penalty. Anonymity was maintained throughout the data analysis process, and written informed consent was obtained after providing a full explanation of the study. The study registration number is NSIN No: Jul24/U080/DME/009.

## RESULTS

### Demographic information of respondents

**Table 1 shows the demographic information of respondents n=40**

Variable	Response	Frequency(n)	Percentage (%)
Age	18-28 years	10	25
	39-39 years	17	42.5
	40 years and above	13	32.5
level of education	Certificate	18	45
	Diploma	14	35
	Bachelor's and above	8	20
cadre	Nurse	19	47.5
	Midwife	11	27.5
	Doctor	7	17.5
	Lab clinician	3	7.5
How often do you receive refresher training for your work	Regularly	5	12.5
	Sometimes	15	37.5
	Never	20	50

Table 1 shows that nearly half 17 (42.5%) of the respondents were aged 29–39 years, while the least 10 (25%) were aged 18–28 years. The majority, 18 (45%) of the respondents had attained a certificate level of education, whereas the least, 8 (20%) had bachelor's and above qualifications. In terms of cadre, most 19 (47.5%) of the respondents were nurses, followed by 11 (27.5%) who were midwives, and the least 3 (7.5%) were lab clinicians. Regarding refresher training, the majority of 20 (50%) of the respondents reported that they

never receive refresher training for their work, while only 5 (12.5%) reported receiving it regularly.

### Health Worker-Related Factors Contributing to Delayed HealthCare Service Delivery among Health Workers at outpatient department in Luweero Hospital, Luweero District

**Figure 1 shows description of the number of staff in your facility, n=40**

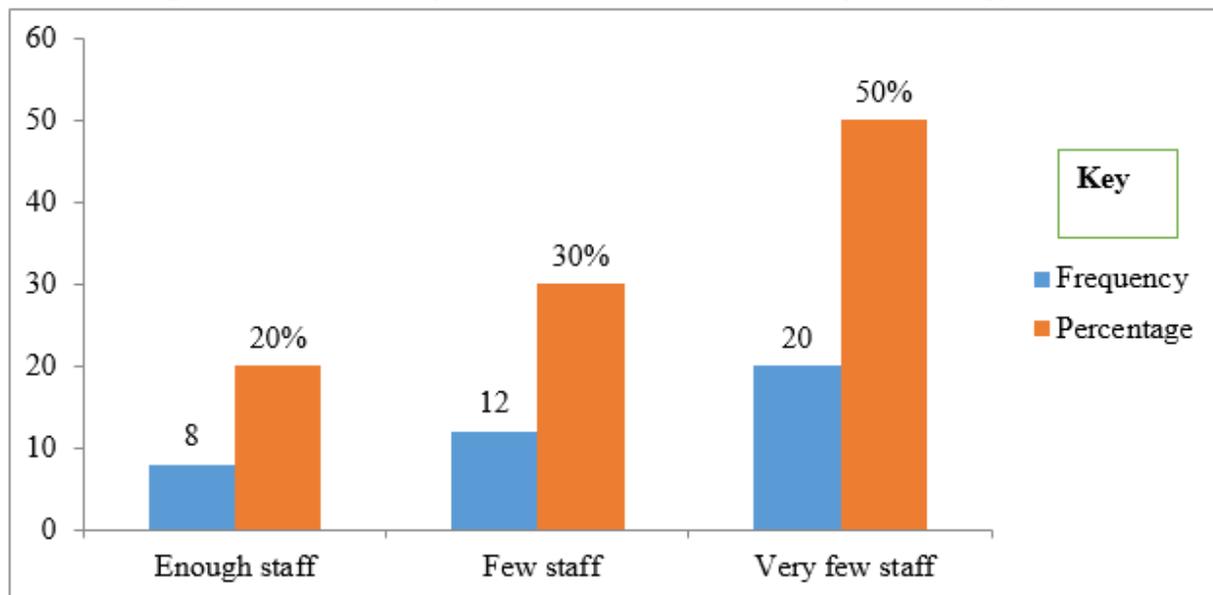


Figure 1 shows that half 20(50%) of the respondents described the number of staff in their facility as very few, while the least 8(20%) described it as being enough.

**Table 2 shows other Health Worker-Related Factors Contributing to Delayed HealthCare Service Delivery among health workers at the outpatient department in Luweero Hospital, Luweero District, n=40**

Variable	Response	Frequency(n)	Percentage (%)
What affects respondents' motivation at work	Good pay and recognition	3	7.5
	Heavy workload	28	70
	Lack of support	9	22.5
How is teamwork among staff in the facility	Very good	20	50
	Fair	13	32.5
	Poor	7	17.5
How often do supervisors check work and give feedback	Often	9	22.5
	Sometimes	14	35
	Rarely	17	42.5
Satisfaction with the job as a health worker	Satisfied	6	15
	Neutral	16	40
	Not satisfied	18	45



Table 2 shows that the majority, 28 (70%) of the respondents reported that their motivation at work was mostly affected by heavy workload, while the least 3 (7.5%) stated good pay and recognition as the main factor. Half 20 (50%) of the respondents rated teamwork among staff in their facility as very good, whereas only 7 (17.5%) said it was poor. Regarding supervision, 17 (42.5%) of the respondents mentioned that supervisors rarely checked their work and gave feedback, while 9 (22.5%) said it happens often. On job satisfaction, the majority, 18 (45%) of the respondents reported being not satisfied with their job, while the least 6 (15%) indicated they were satisfied.

## DISCUSSION

The purpose of this study objective was to determine the health worker-related factors contributing to delayed healthcare service delivery among health workers at Luweero Hospital, Luweero District and the following were the findings as explained below; The findings of the study showed that half 20 (50%) of the respondents described the number of staff in their facility as few citing staff shortages caused by poor recruitment, transfers or absenteeism which agrees with the problem statement of this study. This is linked to the study problem statement of delayed service delivery, thus implying that inadequate staffing levels increase workload and waiting time, leading to delays in patient care. (Phatsen et al., 2023). This study aligns with a study done in Malaysia by Jarrar et al. (2023) which showed that 58% of nurses cited staff shortages and fatigue as major causes of delayed care provision.

It was found that 28 (70%) of the respondents reported that their motivation at work was mostly affected by heavy workload. This was potentially due to overwork with minimal support or incentives, and this supports the purpose of this study, thus demonstrating that low motivation among staff negatively affects morale and productivity, resulting in slower healthcare service delivery. These study findings are in line with a study conducted in Thailand by Phatsen et al. (2023) which revealed that workload significantly affected service delivery, with 63% of health workers reporting that high patient numbers and limited staff led to burnout and reduced service efficiency.

Regarding supervision, 17 (42.5%) of the respondents mentioned that supervisors rarely checked their work and gave feedback. This seemed to be due to weak management follow-up systems or supervisors being overwhelmed by administrative duties. This means that inadequate

supervision and feedback reduce accountability and performance improvement, thus prolonging patient service time. This is in disagreement with a study conducted in South Africa by Rotheram-Borus et al. (2023) where 41% of respondents indicated that supportive supervision improved accountability and reduced errors during service provision.

## CONCLUSION

The study established that delayed healthcare service delivery at the facility is mainly caused by critical health-worker and hospital-related challenges. Staffing shortages, low motivation, inadequate supervision, and poor job satisfaction significantly reduced the efficiency of health workers, increasing patient waiting time.

## RECOMMENDATION

The hospital administration and relevant authorities should recruit more health workers to reduce workload, minimize burnout, and improve the speed of service delivery. Management should introduce regular supportive supervision, recognition programs, and incentives to boost morale and accountability among health workers.

## ACKNOWLEDGEMENT

I thank God from the bottom of my heart as I express my sincere, deepest gratitude to his endless grace for enabling me to accomplish this research and this course. My sincere appreciation goes to my supervisor, Ms. Nansereko Hasifa, for the time she has given to my research through her technical support, guidance, and direction during the development of this research work. I also thank the management of Mildmay Uganda School of Nursing and Midwifery, tutors, and non-teaching staff, and also appreciate the management of Luweero General Hospital in Luweero District for accepting me to conduct my research there. May God richly bless them all.

## LIST OF ABBREVIATIONS

<b>AIDS:</b>	Acquired Immune Deficiency Syndrome
<b>OPD:</b>	Outpatient Department
<b>ANC:</b>	Antenatal Care
<b>ART:</b>	Antiretroviral Therapy
<b>EOC:</b>	Emergency Obstetric Care
<b>HIV:</b>	Human Immunodeficiency Virus
<b>HMIS:</b>	Health Management Information System
<b>MCH:</b>	Maternal and Child Health



**MOH:** Ministry of Health  
**PNC:** Postnatal Services  
**DHCSD:** Delayed health care service delivery  
**UHPAB:** Uganda Health Professions Assessment Board

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### SOURCE OF FUNDING

The study had no funding.

### CONFLICT OF INTEREST

The authors declare no conflict of interest.

### DATA AVAILABILITY

Data is available upon request from the author.

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### AUTHOR CONTRIBUTIONS

**LJM:** Collected data.

**HM:** supervised the study.

**IM:** supervised the study.

**JFN:** supervised the study.

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**Student's Journal of Health Research Africa**  
**e-ISSN: 2709-9997, p-ISSN: 3006-1059**  
**Vol.7 No. 3 (2025): March 2026 Issue**  
<https://doi.org/10.51168/sjhrafrica.v7i3.2273>  
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#### **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](mailto:studentsjournal2020@gmail.com)**  
**WhatsApp: +256 775 434 261**  
**Location: Scholar's Summit Nakigalala, P. O. Box 701432,**  
**Entebbe Uganda, East Africa**

