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Factors influencing the waiting time of clients attending services at Kitgum General Hospital, Kitgum district. A cross-sectional study.

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ABSTRACT

Background:
Patient waiting time remains a persistent challenge worldwide. Waiting time is defined as the total duration a patient spends in a healthcare facility, from registration to receipt of the required service. The study aims to determine the client-related factors and facility-related factors influencing waiting time at Kitgum General Hospital.

Methodology:
The study adopted a descriptive cross-sectional design. Participants were selected through simple random sampling, and data collection was done using self-administered questionnaires, direct observation, and document review. The collected data was first analysed manually using paper and pen tallying, after which the researcher presented it in tables, graphs, and pie charts generated in Microsoft Excel version 2013.

Results:
The highest percentage of 33.3% (N=10) of the respondents was in the age group of 31-40 years. The majority had ever been treated in a facility 17(56.7%). Most respondents arrived at the OPD between 7:00 am and 8:00 am 14(46.7%). Most rated the time spent at the facility as too long, 16(53.3%). The most sought treatment for fever was 12(40.0%). The majority were taken for investigation after seeing the doctor, 22(73.3%). The majority reported that workers were not available 20(68.0%). Most stated that staff shortage was not reported, 16(55.0%). The majority indicated that there was no long diagnostic testing time 19(65.0%). Most respondents reported that guidance to service points was provided 18(60.0%).

Conclusion:
Age and gender were the client-related factors most strongly associated with waiting time. On the facility side, shortage and unavailability of health workers were the main causes of delay.

Recommendations:
To minimise waiting time, the hospital should strengthen staffing, improve triage efficiency, and enhance nurses' training. Clients should also be guided immediately upon arrival to ensure faster service delivery.

Keywords: *Client-related factors, Facility-related factors, Waiting time, Kitgum General Hospital.*
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Background
Patient waiting time remains a persistent challenge worldwide. Waiting time is defined as the total duration a patient spends in a healthcare facility, from registration to receipt of the required service. Waiting time is the length of time between enrolling a patient on a waiting list and the period that a patient waits at each point of service before being treated (Geta and Edessa, 2020). Long waiting time adversely affects the willingness of the patient to return to the facility, which highly affects the utilisation of health services (Galvão, Tiguman, Costa Filho, and Silva, 2020). Patients' long waiting times occur in both developed and developing countries, even though they may vary between countries, within a country, and from one health facility to another in the same geographic area (Aburayya et al, 2020). In Sub-Saharan Africa, in a competitively managed healthcare environment, the long waiting time of patients in an OPD adversely affects the hospital's ability to attract new, increased business (Biya, 2022). Long waiting times in the outpatient department were prevalent in all developed and developing countries (Adebayo, 2019). However, studies in most developing countries show that patients spend 2 – 4 hours in the outpatient departments before seeing the doctor, and this was influenced by factors like overburden of patients, deficiency of hospital staff, inadequate equipment, and long registration processes,

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which were the major causes of patients' delay (Sriram and Noochpoung, 2018).

A study carried out at the outpatient departments in the holy family hospital, Tuckson, Ghana, found that the mean waiting time by records was the highest, 74.5 minutes (Oche and Adamu, 2019). In Ethiopia, the waiting time in the hospitals, particularly in the outpatient department, was lengthy. Studies at Jimma University's specialised hospital indicated patients were forced to wait for an average of 4.5 waiting hours to get service (Aburayya et al, 2020).

In East African countries such as Kenya and Tanzania, patients' delays at outpatient departments were associated with health worker and hospital-related factors such as inadequate staffing, inefficiency, poor coordination, heavy workload, lack of supervision and monitoring, as well as ineffective communication, among others, causing patient dissatisfaction and worsening their health status (Wafula, 2021).

At Kitgum General Hospital, Kitgum district, the problem of long patient waiting times to receive services remains rampant. However, the particular factors influencing the waiting time of clients attending services were not known, as no study has been carried out to identify them, the need for this study. The study aims to determine the client-related factors and facility-related factors influencing waiting time at Kitgum General Hospital.

METHODOLOGY

Study design and rationale

The study employed a descriptive cross-sectional design using a quantitative approach. This design was appropriate because it allowed data collection from respondents at a single point in time to describe characteristics such as age, gender, education level, and occupation. The descriptive nature of the design made it possible to present findings as they were, without manipulation of variables.

Study setting and rationale

The research was conducted at the Outpatient Department (OPD) of Kitgum General Hospital, located in Kitgum District in northern Uganda, about 435 kilometres from Kampala, the capital city. The hospital provides a wide range of health services, including outpatient care, maternal and child health, laboratory diagnostics, emergency services, HIV/AIDS management, and family planning. This setting was chosen because the problem of prolonged patient waiting time had been observed at this hospital.

Study population

The study included 60 male and female patients above 18 years attending services at OPD, Kitgum General Hospital, Kitgum District.

Sample size determination

The sample size was determined by the statistical formula of Keish and Leslie (1965)

$$n = \frac{Z^2 p\,(1-P)}{d^2}$$

Where n was the sample size

Z was the standard normal deviation at 95% confidence level (i.e., 1.96)

P was the proportion of the target population (which was 50% or 0.5)

d was the acceptable degree of error (in this case, 5% or 0.05)

$n = (1.96)^2 \times 0.5 \times 0.5/0.05^2 = 384.16 = 384$

Since the total population of respondents involved was less than 10,000 (33), the following formulae will apply.

Sample size estimation (*nf*) was calculated as follows;

nf = the desired sample size (when the population was less than 10,000)

n = the desired sample size (when the population was more than 10,000)

N = the estimate of the population size

nf = n

N = 33 (Average number of male and female patients above 18 years attending services at OPD, Kitgum General Hospital)

$$nf = \frac{n}{\frac{1+n}{N}} = \frac{384}{\frac{1+384}{33}} = \frac{384}{1+11.6} = \frac{384}{12.6} = 30.4 \approx 30$$

Therefore, the sample size was 30 respondents.

Sampling procedure

The researcher utilized a simple random sampling procedure to obtain the sample size for the study. The researcher gave all potential respondents who met study criteria an opportunity to participate in the study by picking papers from an enclosed box, and any respondent who picked a paper with the word YES written on it was requested to participate in the study. An equal number of 30 YES and NO papers were put in the box to prevent bias. This continued until the total of 30 respondents was achieved.

Inclusion and exclusion criteria

The study included only male and female patients above 18 years attending services at OPD, at Kitgum General Hospital, who were in good enough condition to participate, not busy with health workers, did not have language barriers, and were willing to voluntarily consent to participate in the study.

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The study excluded male and female patients below 18 years, those who were above 18 years attending services at OPD but were too ill to participate, those who were busy with health workers, those with language barriers, as well as those who refused to voluntarily consent to participate in the study.

Study variables

The independent variables for the study included:

- Patient-related factors
- Health facility-related factors

The dependent variable for the study included:

- Waiting time of clients attending services

Research instruments

Data was collected using an approved semi-structured interview guide, which consisted of both open and closed-ended questions. This tool has been selected because the study involves mixed groups of respondents, whereby some respondents may be literate while others may be illiterate and thus unable to read, write, and understand English used to develop the questionnaire.

Data collection procedure

The researcher was accompanied and introduced to the respondents by the In-charge of OPD. The researcher then administered interview guides to patients at the OPD after explaining the purpose. This improved efficiency and confidentiality during data collection.

Data management and analysis

Data management included editing data before leaving the area of study to ensure there were no mistakes or blank fields, and any found were to be corrected before leaving. The collected data was first analysed manually using paper and pen tallying, after which the researcher presented it in tables, graphs, and pie charts generated in Microsoft Excel version 2013.

Quality assurance: validity and reliability

The interview guide was pretested among 6 male and female patients above 18 years attending services at OPD, St. Joseph's Hospital, Kitgum, to enable the researcher to assess its validity, clarity, accuracy, and reliability, and make the necessary adjustments.

Ethical considerations

A letter of introduction was obtained from the Principal, Florence Nightingale School of Nursing and Midwifery, introducing the researcher to the administration of Kitgum General Hospital and seeking permission to carry out the study. After permission was granted, the medical director introduced the researcher to the person in charge of OPD, who, in turn, introduced the researcher to the respondents. Respondents were assured of maximum confidentiality, and only numbers instead of names will be used to identify the respondents. The study only commenced after the objectives of the study had been well explained to participants, and they had consented to participate in the study.

RESULTS

The results were presented as narratives, in tables, charts, and figures. There were 30 respondents with 100% response rate.

Socio-Demographic Characteristics

Table 1: Socio-demographic characteristics of the participants (n =30)

Demographic factors	category	Frequency	Percentage (%)
Age group(years)	10-20	3	10.0
	21-30	8	26.7
	31-40	10	33.3
	41-50	5	16.7
	51-above	4	13.3
Educational level	None	5	16.7

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	Primary	13	43.3
	Secondary	8	26.7
	Tertiary	4	13.3
Employment status	Self-business	12	40.0
	Employed	11	36.7
	Farmers	7	23.3

From table 1, the highest percentage of 33.3% (N=10) of the respondents were in the age group of 31-40 years. The least number was 3(10%) respondents in the age group 10-20 years. Most of the respondents had attained a primary level of education, 43.3% (N=13), followed by those who had attained secondary level, having 26.7% (N=8) of the respondents. Those who had not gone to school completely were 16.7% (N=5). And the least number of respondents were those with a tertiary level of education, 13.3% (N=4). Forty per cent of the respondents were doing self-business, which was the highest. The least number were those who were farmers, taking only 23.3% (N=7) of the respondents.

Client-related factors influencing waiting time.

Table 2: Summary of client-related factors influencing waiting time (n =30)

Variable	**category**	**Frequency**	**Percentage (%)**
Ever been treated at a facility	Yes	17	56.7
	No	13	43.3
Time of arrival at OPD	7:00 am – 8:00 am	14	46.7
	8:00 am – 10:00 am	8	26.7
	10:00 am – 12:00 pm	5	16.6
	12:00 pm – 2 pm	3	10.0
Rating of time spent	Too long	16	53.3
	Long	11	36.7
	Short	3	10.0
	Too short	0	0.0
Medical condition	Fever	12	40.0
	Cough	7	23.3
	Diarrhoea	5	16.7
	Unknown	6	20.0
Taken for investigation after seeing Dr	Yes	22	73.3

	No	8	26.7

From table 2, the majority of respondents had ever been treated in a facility, 17(56.7%), while the least had not, 13(43.3%). Most respondents arrived at the OPD between 7:00 am and 8:00 am, 14(46.7%), whereas the fewest arrived between 12:00 pm and 2:00 pm, 3(10.0%). The majority rated the time spent at the facility as too long, 16(53.3%), while the least rated it as too short, 0(0.0%). Most respondents sought treatment for fever 12(40.0%), while the fewest reported diarrhoea 5(16.7%). The majority were taken for investigation after seeing the doctor, 22(73.3%), compared to the least who were not, 8(26.7%).

Health facility factors influencing the waiting time of clients attending services.

Table 3: Summary of health-related factors influencing waiting time (n=30)

Variable	Category	Frequency	Percentage (%)
Availability of workers	Available	10	32.0
	Not available	20	68.0
Staff shortage reported	Yes	14	45.0
	no	16	55.0
Long diagnostic testing time	Yes	11	35.0
	no	19	65.0
Guidance to service points	Provided	18	60.0
	Not provided	12	40.0

From table 3, the majority of respondents reported that workers were not available 20(68.0%), while the least indicated availability 10(32.0%). Most respondents stated that staff shortage was not reported 16(55.0%), whereas the least reported it 14(45.0%). The majority indicated that there was no long diagnostic testing time 19(65.0%), while the least reported a long testing time 11(35.0%). Most respondents reported that guidance to service points was provided 18(60.0%), compared to the least who said it was not 12(40.0%).

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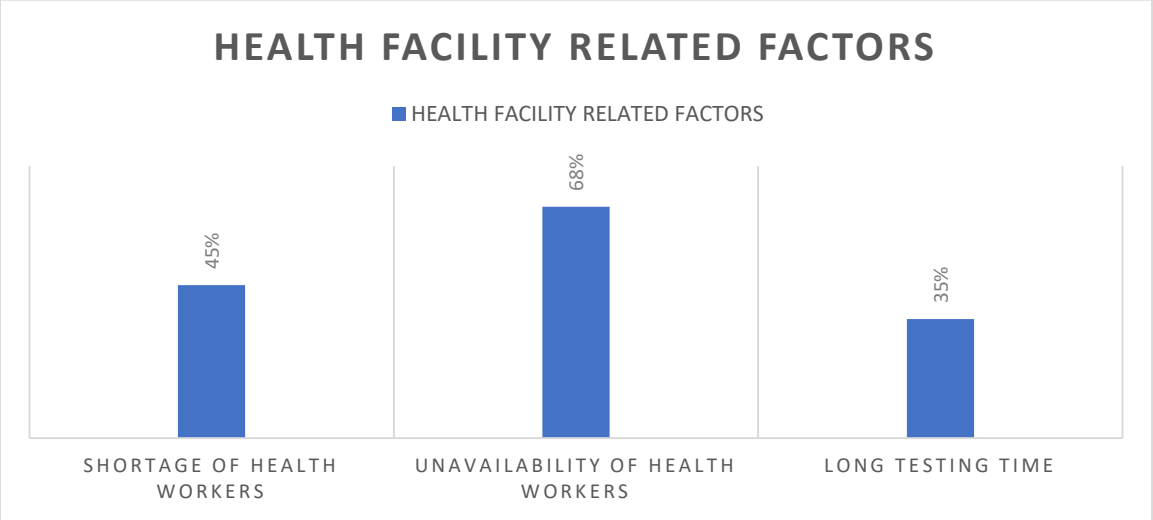
Figure 1: major health facility-related causes of long waiting time for clients (n=30)



From Figure 1, the majority of the respondents reported the unavailability of health workers (68%), followed by the shortage of health workers (45%). The least factor reported by the respondents was the long testing time (35%).

Discussion

Client-related factors influencing waiting time.

Most infants (63.5%) received five or more meals per day, while fewer (15.6%) received only one to two meals. This indicates that the majority of caregivers provide sufficient meal frequency to meet infants' nutritional needs, which supports growth and development. The majority of respondents (73.3%) were taken for investigation after seeing the doctor, while fewer (26.7%) were not. This suggests that most patients received appropriate follow-up care and diagnostic assessments, which are essential for accurate diagnosis and effective treatment. A similar finding was reported by Galvão et al. (2020) in Brazil, who noted that delays in outpatient departments were influenced by factors such as marital status, illness severity, and the availability of attendants or support persons. Strengthening coordination between consultation and diagnostic services can reduce waiting times and improve patient flow and quality of care in outpatient settings.

Health facility factors influencing the waiting time of clients attending services.

Most respondents indicated that staff shortage was not reported (55.0%), while a smaller proportion (45.0%) reported staff shortage. This suggests that although staffing levels may be adequate in some departments, there are still instances where shortages affect service delivery. This finding aligns with Lee et al. (2019), who, in a nationwide study on factors affecting mortality during waiting time for kidney transplantation in Korea, noted that delays in outpatient departments were influenced not only by staff shortages but also by factors such as inadequate customer care skills, staff inexperience, inefficiency among available personnel, lack of adequate space, and poor triage systems. These factors collectively contribute to prolonged waiting times and reduced quality of care, emphasising the need for efficient staffing and workflow management in healthcare facilities.

The majority of respondents reported no long diagnostic testing time (65.0%), while a smaller proportion (35.0%) experienced delays in testing. This suggests that diagnostic services are generally efficient, though some delays still occur for certain patients. These factors highlight that while diagnostic services may function smoothly for most patients, operational and patient-related challenges can still cause occasional testing delays.

Conclusion

On client-related factors, most respondents had previously sought treatment from the facility, arrived early in the morning, and rated the waiting time as long or too long. The majority were taken for investigation after seeing the doctor, showing that patient flow and diagnostic coordination affect service duration.

On the health facility side, shortage of hospital staff and unavailability of health workers were the most common factors identified. Another factor identified by some of the clients was the long diagnostic test time, such as laboratory, X-rays, and ultrasound procedures. Regarding these findings, both client—related and health facility-related factors contribute to longer client waiting times at the

hospital. To reduce the clients' waiting time, both of these factors need to be addressed concurrently.

Limitations of the study

Small size limits generalizability.
Waiting time was based on self-report and observation. By this, there could be bias due to personality.
Limitations on factors that reduce the validity and reliability of this research's results, e.g., being a cross-sectional study at a point in time, lack of follow-up of respondents.

Recommendations.

Following the research findings reported, the researcher hereby recommends as follows: -
The Ministry of Health (MoH) should recruit and deploy more health workers to health facilities to address staff shortages and ensure that patients receive timely services, especially during peak hours.
The hospital administration should strengthen coordination between doctors, laboratory personnel, and other diagnostic departments to minimise delays in investigations and improve patient flow.
The hospital management should introduce or reinforce a triage and appointment system to prioritise patients according to urgency, reduce overcrowding, and enhance service efficiency in the Outpatient Department.

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Abbreviations

HIV: Human Immunodeficiency Virus
MoH: Ministry of Health
OPD: Outpatient Department.
KONOS: Key Output and Outcome Indicators for the Health Sector

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.

Source of funding

The study was not funded.

Conflict of interest

The author did not declare any conflict of interest.

Data availability

Data availability

Author contribution

Patrick Wokorach collected data and drafted the manuscript of the study
John Anywar supervised the study

Author biography

Patrick Wokorach is a student of a diploma in Nursing at Florence Nightingale School of Nursing and Midwifery.
John Anywar is a supervisor at Florence Nightingale School of Nursing and Midwifery.

References

1. Aburayya, A., Ashurideh, M., Albqaeen, A., Alawadhi, D., and Ayadeh, I. (2020). An investigation of factors affecting patients' waiting time in primary health care centres: An assessment study in Dubai. Management Science Letters, 10(6), pp.1265-1276.https://doi.org/10.5267/j.msl.2019.11.031
2. Adebayo, T.T. (2019). Reducing Patient Waiting-Time: A Practical Approach. Library Philosophy and Practice, pp.1-32.
3. Biya, M., Matebu, G., Bezawit, B., Kiddus, Y. (2022). Waiting time and its associated factors in patients presenting to outpatient departments at Public Hospitals of Jimma Zone, Southwest Ethiopia. BMC Health Services Research (2022) 22:107. https://doi.org/10.1186/s12913-022-07502-8
4. Galvão TF, Tiguman GMB, Costa Filho DBd, Silva MT. (2020). Waiting time and medical consultation length in the Manaus metropolitan region, Brazil: a cross-sectional, Population-based study, 2015. Epidemiologia e Serviços de Saúde. 2020; 29:e2020026. https://doi.org/10.5123/S1679-49742020000400014
5. Lee, S., Yoo, K.D., An, J.N., Oh, Y.K., Lim, C.S., Kim, Y.S., and Lee, J.P. (2019). Factors affecting mortality during the waiting time for kidney transplantation: A nationwide Population-based cohort study using the Korean Network for Organ Sharing (KONOS) Database. PloS one, 14(4), p.e0212748.w1 https://doi.org/10.1371/journal.pone.0212748
6. Oche MO, Adamu H (2019). Determinants of Patient Waiting Time in the General Outpatient

Department of a Tertiary Health Institution in North Western Nigeria.

7. Sriram S, Noochpoung R. (2018). Determinants of hospital waiting time for outpatient care in India: how demographic characteristics, hospital ownership, and ambulance arrival affect waiting time. Int J Community Med Public Health. 2018; 5:2692-8. https://doi.org/10.18203/2394-6040.ijcmph20182601
8. Wafula, B.R. (2021). Factors Associated with Patient Waiting Time at a Medical Outpatient Clinic: A Case Study of University of Nairobi Health Services. International Journal of Innovative Research in Medical Science (IJIRMS) Volume 06, Issue 12, December 2021,

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