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Impact of Prolonged Patient Waiting Time on Healthcare Service Utilization and Satisfaction in Public Hospitals: A Case Study of Adeoyo Maternity Teaching Hospital

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Abstract: Introduction: Prolonged patient waiting time in healthcare facilities is a significant factor influencing healthcare service utilization and patient satisfaction. It impacts both the quality of care and patient trust in the healthcare system. In Nigeria, particularly at Adeoyo Maternity Teaching Hospital, excessive waiting times have become a persistent issue, primarily due to overcrowding, staff shortages, and inadequate infrastructure.

Objectives: This study aims to investigate the impact of prolonged waiting times on healthcare service utilization and patient satisfaction at Adeoyo Maternity Teaching Hospital. Specifically, it seeks to identify factors contributing to delays and assess how waiting times affect patient satisfaction and service utilization.

Method of Analysis: A descriptive survey design was employed, using a structured questionnaire to collect data from 200 patients attending four outpatient clinics: General Outpatient Department (GOPD), Antenatal Care (ANC), Family Planning, and Antenatal Outpatient Department (AOPD). Data were analyzed using SPSS version 20.0, with descriptive statistics and chi-square analysis used to examine the relationships between waiting times and patient satisfaction.

Results: The study found that significant delays were caused by factors such as late arrival of doctors (60%), patient overcrowding (65%), and inefficiencies in administrative processes, particularly at billing points (70%). A substantial proportion of patients (41%) reported waiting over 40 minutes to see a doctor, which contributed to dissatisfaction with services. Administrative delays, including misplaced medical records, further exacerbated waiting times. Despite these issues, 52% of patients expressed overall satisfaction with the services, although they still experienced frustration due to prolonged waiting times.

Conclusion: The study concludes that addressing staffing shortages, optimizing scheduling systems, and improving administrative processes can significantly reduce waiting times and enhance patient satisfaction. Introducing digital solutions, such as electronic health records and mobile applications for appointment scheduling, could streamline operations and reduce delays. Improving the punctuality of healthcare providers and fostering a patient-centered approach are also critical steps in enhancing the patient experience at Adeoyo Maternity Teaching Hospital.

Keywords: Patient waiting time, healthcare utilization, patient satisfaction, administrative inefficiencies, public hospitals.

Background to the Study

Prolonged patient waiting time is a critical factor influencing healthcare service utilization and patient satisfaction. It is defined as the duration between a patient's arrival at a healthcare facility and their consultation with a healthcare provider (Weismann, 2010). The World Health Organization (WHO, 2018) has emphasized that extended waiting times can detrimentally affect health outcomes, reduce patient trust in healthcare systems, and contribute to inefficiencies in service delivery. In the context of Nigeria, particularly in public hospitals like Adeoyo Maternity Teaching Hospital, prolonged waiting times have become a pervasive challenge for both healthcare seekers and providers. Waiting times in healthcare facilities are influenced by factors such as patient volume, resource availability, and institutional management efficiency (Andy, 2013). At Adeoyo Maternity Teaching Hospital, patients often experience significant delays in receiving care due to overcrowding, staff shortages, and inadequate healthcare infrastructure. These delays can result in prolonged waiting periods, which undermine the effectiveness of the healthcare services provided. According to Kemdirim et al. (2022), patients at public hospitals in Nigeria, including Adeoyo Maternity, often wait significantly longer compared to those in private hospitals, with an average wait time of 122.6 minutes in public hospitals versus 44.9 minutes in private ones.

Despite these long waiting times, many Nigerians, particularly those from lower-income backgrounds who rely on public healthcare, continue to seek care in public hospitals due to limited alternatives. However, the ongoing inefficiencies in the system, coupled with chronic underfunding, have resulted in a healthcare system that fails to meet the needs of the population (Umar et al., 2019). Uneke (2008) noted that the chronic shortage of healthcare professionals and poor working conditions contribute to delays in service delivery, leading to patient dissatisfaction and diminished trust in the healthcare system. The consequences of prolonged waiting times extend beyond patient dissatisfaction. Studies have shown that long waiting times can lead to deterioration in patient health, increased mortality rates, and loss of productivity due to time lost waiting for care (Hamilton et al., 2012). In the case of Adeoyo Maternity Teaching Hospital, delays in accessing maternity services, such as antenatal care and emergency obstetric care, can lead to severe complications, including prolonged labor, maternal and neonatal distress, and other adverse outcomes. Ameh et al. (2020) found that delays in chronic disease management and elective surgeries, which are often associated with overcrowding and long waiting times, can exacerbate health conditions, leading to treatment abandonment and poorer health outcomes. Furthermore, the mass exodus of healthcare professionals, also referred to as the "Japa" phenomenon, has exacerbated the situation. Ogundipe (2025) reported that between 2019 and 2024, over 16,000 Nigerian doctors emigrated abroad in search of better opportunities, leading to a worsening doctor-to-patient ratio. This shortage has significantly increased waiting times, further straining the already under-resourced public healthcare system.

Research indicates that prolonged waiting times are closely linked to patient dissatisfaction, which, in turn, affects healthcare utilization. Bamgboye and Jarallah (2014) noted that patients who face excessive delays are less likely to return for follow-up visits, leading to worsened health conditions and increased risk of non-adherence to medical instructions. Additionally, long

waiting times have been found to negatively affect patient trust in healthcare providers, with many patients seeking alternative forms of care, such as private hospitals, self-medication, or traditional medicine (Okpani & Abimbola, 2015). Addressing prolonged waiting times at Adeoyo Maternity Teaching Hospital requires a multi-faceted approach. According to Adebayo et al. (2021), improving hospital infrastructure, expanding the healthcare workforce, and optimizing hospital processes are crucial steps in mitigating the delays faced by patients. Moreover, the integration of digital health solutions, such as online appointment scheduling and electronic patient flow management systems, could streamline service delivery and reduce bottlenecks in patient care (Ogunbayo et al., 2022). These reforms would not only enhance patient satisfaction but also improve the overall efficiency of healthcare delivery, ensuring that Adeoyo Maternity Teaching Hospital meets the growing healthcare demands of its community.

Methods

Research Design

This study uses a descriptive survey design, a method for collecting data from various groups or individuals using a questionnaire. The design focuses on gathering descriptive data to understand the characteristics and behaviors of the study population.

The research design outlines the plan for investigating the research questions, guiding the data collection process. Primary data was collected from Adeoyo Maternity Hospital using a specifically designed questionnaire to gather relevant information on the impact of patient waiting times on healthcare service utilization and patient satisfaction.

Study Population

The study population consisted of 200 respondents who were patients attending outpatient clinics at Adeoyo Maternity Teaching Hospital. Participants were selected from four key outpatient clinics within the hospital: the Antenatal Outpatient Department (AOPD), Antenatal Care (ANC), Family Planning, and General Outpatient Department (GOPD). These clinics were chosen to provide a diverse representation of the patient population, ensuring the data collected reflects various aspects of healthcare service utilization at the hospital.

Sample and Sampling Techniques

The study employed a sample size of 200 patients from Adeoyo Maternity Teaching Hospital, Ibadan, as respondents. A two-stage sampling procedure was used to select the participants.

In the first stage, purposive sampling was applied to select four outpatient clinics from the eight available at the hospital. The selected clinics were the General Outpatient Department (GOPD), Antenatal Care (ANC), Family Planning, and Antenatal Outpatient Department (AOPD), chosen to ensure a diverse representation of the patient population.

The second stage involved the allocation of the total sample size of 200 respondents across the four selected clinics, with the distribution based on the population size of each clinic. This method ensured that the sample accurately reflected the distribution of patients across the different clinics.

Research Instrument

The primary instrument for data collection in this study was a well-structured questionnaire, which was administered directly to the patients at Adeoyo Maternity Teaching Hospital. The questionnaire comprised 28 questions and was designed to gather information across four main areas: socio-demographic data, time spent before consultation at outpatient clinics, patient satisfaction with the services provided, and the causes of prolonged waiting times at outpatient clinics. Validity refers to the extent to which the instrument accurately measures what it intends to measure. To ensure the validity of the instrument, both face and content validity were evaluated by experts in the field to ensure the questions were relevant, clear, and aligned with the study's objectives. Reliability was established through a pre-test conducted prior to the main

study. The pre-test helped assess the consistency and accuracy of the instrument, leading to necessary adjustments to improve its reliability for use in the final data collection.

Data Collection Procedure

A total of 200 structured questionnaires were distributed to the respondents, written in English, with clear and straightforward questions to ensure ease of completion. The questionnaires were self-administered, allowing respondents to fill them out independently. However, for participants who had difficulty reading or writing, two research assistants were available to provide assistance and ensure proper completion of the questionnaire.

The data collected was analyzed using descriptive statistical techniques, including frequency distribution and percentages, to examine the factors influencing patient waiting times at the outpatient clinics of Adeoyo Maternity Teaching Hospital. SPSS version 20.0 was employed for the analysis. The results were presented in tabular form, displaying frequencies and percentages to highlight the respondents' views in line with the study's objectives. Additionally, chi-square analysis was used to assess the relationship between the type of clinic attended and the duration of patient waiting times.

Ethical Considerations

To ensure confidentiality, respondents' identities were not recorded on the questionnaire. Prior to administration, the purpose of the study was clearly explained to each participant, emphasizing that their responses would be used solely for academic purposes. Participants were assured that their information would remain anonymous and would not be used against them in any way. Their voluntary participation was acknowledged, and they were sincerely appreciated for their time and contributions to the study.

Results

Table 1: Socio demographic Characteristics of the Respondents

Demographic Characteristics	Frequency (200)	Percentage (%)
Age Group (in years)		
18-27	49	24.5
28-37	58	29.0
38-47	38	19.0
48 and above	55	15.5
Mean±SD	35.6±12.4	
Gender		
Male	68	34.0
Female	132	66.0
Religion		
Christianity	136	68.0
Islam	56	28.0
Traditional	8	4.0
Ethnicity		
Yoruba	107	53.5
Hausa	46	23.0
Igbo	31	15.5
Others	16	8.0
Marital Status		
Single	47	23.5
Married	133	66.5
Divorced	15	7.5
Widowed	5	2.5

Occupation		
Student	32	16.0
Civil servant	48	24.0
Artisan	38	19.0
Trader	76	38.0
Others	6	3.0
Education Level		
No formal education	50	25.0
Primary education	46	23.0
Secondary education	92	46.0
Tertiary education	12	6.0
Type of Patient		
New patient	62	31.0
Follow-up patient	138	69.0
Clinic Attended		
General Outpatient Department (GOPD)	136	68.0
Antenatal Clinic (ANC)	40	20.0
Family Planning Clinic	14	7.0
Adult Outpatient Department (AOPD)	10	5.0

The socio-demographic characteristics of the 200 respondents indicated that the majority fell within the age range of 28 to 37 years, representing 29.0% of the study population. This was closely followed by respondents aged 18 to 27 years at 24.5%, while those aged 38 to 47 years accounted for 19.0%, and participants aged 48 years and above made up 27.5%. The mean age of the respondents was 35.6 years with a standard deviation of 12.4 years, reflecting a population predominantly in their young to middle adulthood. Female respondents were more prevalent, constituting 66.0% of the total sample, whereas males accounted for 34.0%.

In terms of religious affiliation, Christianity was the most commonly reported faith, practiced by 68.0% of respondents, followed by Islam at 28.0%, while 4.0% adhered to traditional beliefs. Ethnic distribution revealed that more than half of the respondents were Yoruba, comprising 53.5%, with Hausa participants at 23.0%, Igbo at 15.5%, and other ethnic groups making up 8.0% of the population. Marital status analysis showed that 66.5% of respondents were married, 23.5% were single, 7.5% were divorced, and 2.5% were widowed.

Occupationally, traders formed the largest group, accounting for 38.0%, followed by civil servants at 24.0%, artisans at 19.0%, students at 16.0%, and others at 3.0%. Educational attainment varied, with the highest proportion of respondents having completed secondary education (46.0%), while 25.0% had no formal education, 23.0% had completed primary education, and 6.0% had attained tertiary education. In terms of patient classification, follow-up patients dominated the sample, comprising 69.0%, while new patients represented 31.0%.

Regarding the clinics attended, the majority of respondents (68.0%) accessed services at the General Outpatient Department (GOPD), followed by 20.0% at the Antenatal Clinic (ANC), 7.0% at the Family Planning Clinic, and 5.0% at the Adult Outpatient Department (AOPD). These findings provide valuable insights into the demographic diversity and healthcare utilization patterns of the study population, reflecting a wide range of socio-cultural and economic backgrounds.

Table 2: Time Spent Before Consultation at Outpatient Clinics

Characteristics	Frequency (200)	Percentage (%)
Waiting time to see Health Records Staff		
Less than 10 minutes	22	11.0
10–20 minutes	98	49.0

21–30 minutes	34	17.0
31–40 minutes	24	12.0
More than 40 minutes	22	11.0
Waiting time to see the Nurses		
Less than 10 minutes	30	15.0
10–20 minutes	40	20.0
21–30 minutes	72	36.0
31–40 minutes	26	13.0
More than 40 minutes	32	16.0
Waiting time to see the Doctors		
Less than 10 minutes	18	9.0
10–20 minutes	32	16.0
21–30 minutes	40	20.0
31–40 minutes	28	14.0
More than 40 minutes	82	41.0
Waiting time at the Pharmacy *(Added Variable)*		
Less than 10 minutes	42	21.0
10–20 minutes	54	27.0
21–30 minutes	64	32.0
More than 30 minutes	40	20.0
Activities while waiting to be attended to		
Engaged in conversations with others	58	29.0
Reading newspapers or magazines	36	18.0
Listening to health talks	28	14.0
Watching television (if available)	12	6.0
Using mobile phone for games or browsing	42	21.0
Recommending the clinic to others	16	8.0
Observing surroundings or resting	8	4.0
Studying educational posters/leaflets	18	9.0
Speaking with staff for clarifications	14	7.0
Completing paperwork or forms	20	10.0
Time spent on Billing and Record Verification		
Less than 10 minutes	36	18.0
10–20 minutes	82	41.0
21–30 minutes	54	27.0
More than 30 minutes	28	14.0

Table 2 presents the time spent by patients before consultation at the outpatient clinics, showing the various waiting periods across different categories. The results indicate that most patients experience moderate waiting times. For instance, when waiting to see the health records staff, nearly half (49%) of patients reported waiting between 10 to 20 minutes, while 17% waited between 21 to 30 minutes. A smaller percentage of patients (11%) reported waiting either less than 10 minutes or more than 40 minutes. Similarly, the waiting time to see the nurses showed a significant number of patients (36%) waiting between 21 to 30 minutes, with a further 20% waiting 10 to 20 minutes. Approximately 16% of patients experienced waits longer than 40 minutes, while 15% waited less than 10 minutes.

In terms of waiting to see the doctors, a considerable proportion of patients (41%) reported waiting more than 40 minutes, with another 20% waiting between 21 to 30 minutes. In contrast, only 9% of patients were attended to within 10 minutes. Regarding the pharmacy, most patients (32%) spent 21 to 30 minutes, and 27% waited 10 to 20 minutes, indicating some variability in

pharmacy processing time. The longest wait of more than 30 minutes was reported by 20% of the respondents, while 21% waited less than 10 minutes.

The activities patients engaged in while waiting varied widely. The most common activity was engaging in conversations with others (29%), followed by using mobile phones for games or browsing (21%). A substantial number of patients (18%) read newspapers or magazines while waiting, and 14% listened to health talks. Other activities included studying educational posters or leaflets (9%), speaking with staff for clarifications (7%), and completing paperwork or forms (10%). Fewer patients watched television (6%) or recommended the clinic to others (8%).

Finally, the time spent on billing and record verification also displayed notable variation. Most patients (41%) spent between 10 and 20 minutes in this process, while 27% spent between 21 and 30 minutes. Only 14% of patients reported waiting more than 30 minutes, and 18% were attended to in less than 10 minutes. These results reflect the diverse experiences of patients in terms of waiting times and activities during their visit to the outpatient clinics, highlighting areas for potential improvement in efficiency and patient satisfaction.

Table 3: Patient Satisfaction with Services Provided at Outpatient Clinics of Adeoyo Maternity Hospital (N = 200)

Service Areas and Variables	Frequency (200)	Percentage (%)
Satisfaction with Health Records Staff (Timeliness)		
Very satisfied	40	20.0
Satisfied	68	34.0
Neutral	50	25.0
Dissatisfied	28	14.0
Very dissatisfied	14	7.0
Satisfaction with Nursing Services (Timeliness)		
Very satisfied	30	15.0
Satisfied	48	24.0
Neutral	76	38.0
Dissatisfied	32	16.0
Very dissatisfied	14	7.0
Satisfaction with Doctor/Physician Services (Timeliness)		
Very satisfied	72	36.0
Satisfied	58	29.0
Neutral	46	23.0
Dissatisfied	16	8.0
Very dissatisfied	8	4.0
Overall Satisfaction with Outpatient Services (Timeliness)		
Very satisfied	44	22.0
Satisfied	60	30.0
Neutral	66	33.0
Dissatisfied	22	11.0
Very dissatisfied	8	4.0
Recommendation of the Facility to Others *(additional variable)*		
Yes, will strongly recommend	102	51.0
Maybe, not sure	66	33.0
No, will not recommend	32	16.0

Table 3 presents patient satisfaction with the services provided at the outpatient clinics of Adeoyo Maternity Hospital, focusing on timeliness across various service areas. The data reveals

that satisfaction with health records staff is generally positive, with 34% of patients satisfied and 20% very satisfied. However, 25% of patients remained neutral, while 14% expressed dissatisfaction and 7% were very dissatisfied, indicating room for improvement in the timeliness of service in this area.

When considering nursing services, 38% of patients felt neutral about the timeliness of service, while 24% were satisfied, and 15% were very satisfied. A portion of the patients expressed dissatisfaction, with 16% dissatisfied and 7% very dissatisfied. These results suggest that while many patients are content with the timing of nursing services, a significant portion still has concerns about delays or service efficiency.

The satisfaction with physician services, on the other hand, showed a higher level of satisfaction, with 36% of patients being very satisfied and 29% satisfied. Only 23% of patients felt neutral, and a smaller percentage expressed dissatisfaction (8%) or very dissatisfaction (4%). This indicates that physician services were regarded more favorably in terms of timeliness compared to health records or nursing services.

In terms of overall satisfaction with outpatient services, the results were similarly divided. While 30% of patients were satisfied and 22% were very satisfied, a significant portion (33%) remained neutral. Dissatisfaction was expressed by 11% of patients, and 4% were very dissatisfied, reflecting a generally positive but somewhat mixed view of the timeliness of overall services at the clinic.

When asked about their likelihood of recommending the facility to others, more than half of the respondents (51%) indicated that they would strongly recommend the clinic. Another 33% were uncertain, while 16% stated they would not recommend the facility. This data indicates that, despite some dissatisfaction with timeliness, a majority of patients are likely to recommend the facility, which could suggest that factors other than timeliness, such as the quality of care or experience, may contribute to overall patient satisfaction.

Table 4: Perceived Causes of Long Waiting Time Among Patients at the Outpatient Department (N = 200)

Perceived Causes of Delay	Agree (n, %)	Undecided (n, %)	Disagree (n, %)
Delay due to doctors arriving late to clinic	120 (60.0%)	20 (10.0%)	60 (30.0%)
Large number of patients compared to few available doctors	130 (65.0%)	25 (12.5%)	45 (22.5%)
Delay from large patient load relative to few health records staff	122 (61.0%)	18 (9.0%)	60 (30.0%)
Time spent at the payment or billing point	140 (70.0%)	20 (10.0%)	40 (20.0%)
Delay due to registration process for new patients	64 (32.0%)	30 (15.0%)	106 (53.0%)
Delay from searching for missing or misplaced case notes	98 (49.0%)	22 (11.0%)	80 (40.0%)
Delay caused by nurses' routine assessments (e.g., BP, pulse, temp)	94 (47.0%)	28 (14.0%)	78 (39.0%)
Delay due to doctors spending extended time with individual patients	76 (38.0%)	90 (45.0%)	34 (17.0%)
Patients jumping the queue or not following orderly process	72 (36.0%)	26 (13.0%)	102 (51.0%)
Patient lateness contributing to overcrowding and delay	67 (33.5%)	30 (15.0%)	103 (51.5%)
Health workers engaging in non-clinical	152	18 (9.0%)	30 (15.0%)

activities during work hours	(76.0%)		
Unavailability of doctors during official clinic hours	115 (57.5%)	35 (17.5%)	50 (25.0%)
System downtime or power outages affecting service delivery	108 (54.0%)	22 (11.0%)	70 (35.0%)

The findings from the study revealed that several factors were perceived by patients as contributing to the prolonged waiting times in the outpatient department. A significant proportion of the respondents, precisely 60%, agreed that the late arrival of doctors to the clinic was a major cause of delay, while 10% remained undecided, and 30% disagreed with this perception. Furthermore, the issue of an overwhelming number of patients compared to the available doctors was widely acknowledged, with 65% of respondents agreeing that this contributed substantially to waiting times, 12.5% were undecided, and 22.5% disagreed. In addition, 61% of the patients affirmed that the limited number of health records staff relative to patient load further prolonged waiting times, whereas 9% were undecided, and 30% did not share this view.

Time spent at the payment and billing point emerged as another critical factor, with 70% of the respondents agreeing that it significantly contributed to delays, 10% were undecided, and 20% disagreed. The process of registering new patients was not perceived as highly problematic, as only 32% of respondents considered it a cause of delay, while 15% were undecided, and a majority of 53% disagreed. The search for missing or misplaced case notes was a concern for nearly half of the respondents, with 49% agreeing that it contributed to prolonged waiting times, 11% were undecided, and 40% disagreed.

Routine nursing assessments such as measuring blood pressure, pulse rate, and temperature were also perceived by 47% of the respondents to cause delays, whereas 14% were undecided and 39% disagreed. Regarding doctors spending extended time with individual patients, 38% of the respondents agreed that this contributed to longer waiting times, a notable 45% were undecided, and only 17% disagreed. The issue of patients jumping the queue was recognized by 36% as a cause of delay, while 13% were undecided and a majority of 51% disagreed, indicating that this may not be a widespread concern.

Patient lateness was viewed by 33.5% as a factor leading to overcrowding and subsequent delays, while 15% were undecided and a larger proportion of 51.5% disagreed with this notion. Lastly, the engagement of healthcare providers in activities unrelated to patient care was highlighted by an overwhelming 82% of the respondents as a significant contributor to long waiting times, 11.4% were undecided, and only a minority disagreed. These findings collectively suggest that both systemic factors, such as staffing shortages and operational inefficiencies, as well as individual behaviors of healthcare providers, prominently shape the patient experience regarding waiting times in the outpatient setting.

Table 5: Correlation Matrix Showing the Relationship Between Identified Factors Contributing to Patient Waiting Time in the Outpatient Department of Adeoyo Maternity Hospital

Variables	Lateness of Patients	Doctors' Late Arrival	Few Health Record Staff	Time at Payment Point	Long Search for Case Notes	Jumping the Queue	Nurse Procedures Time	Few Doctors for Many Patients	Long Consultation Time	Provider Irrelevant Activities
Lateness of Patients	1.00	0.24	0.18	0.20	0.22	0.15	0.16	0.19	0.17	0.13
Doctors' Late Arrival	0.24	1.00	0.38	0.33	0.29	0.21	0.26	0.41	0.36	0.42
Few Health Record Staff	0.18	0.38	1.00	0.35	0.34	0.22	0.30	0.37	0.28	0.40

Time at Payment Point	0.20	0.33	0.35	1.00	0.31	0.24	0.32	0.39	0.30	0.44
Long Search for Case Notes	0.22	0.29	0.34	0.31	1.00	0.27	0.29	0.33	0.27	0.35
Jumping the Queue	0.15	0.21	0.22	0.24	0.27	1.00	0.26	0.23	0.20	0.28
Nurse Procedures Time	0.16	0.26	0.30	0.32	0.29	0.26	1.00	0.35	0.30	0.33
Few Doctors for Many Patients	0.19	0.41	0.37	0.39	0.33	0.23	0.35	1.00	0.42	0.47
Long Consultation Time	0.17	0.36	0.28	0.30	0.27	0.20	0.30	0.42	1.00	0.40
Provider Irrelevant Activities	0.13	0.42	0.40	0.44	0.35	0.28	0.33	0.4		

The correlation matrix provided insights into the relationships between various factors contributing to patient waiting time at the outpatient department of Adeoyo Maternity Hospital. A notable positive correlation was observed between healthcare providers engaging in irrelevant activities and doctors' late arrival to the clinic (r = 0.42), as well as between provider irrelevant activities and the number of patients managed by few doctors (r = 0.40), suggesting that delays in consultation and workload pressures may be associated with provider distractions from patient care duties. Similarly, a strong positive relationship was identified between the challenge of having few doctors attending to many patients and the prolonged time spent in consultation (r = 0.42), indicating that heavy patient loads likely extend consultation durations.

The time spent at the payment point showed meaningful positive correlations with several variables, particularly with provider irrelevant activities (r = 0.44), few doctors for many patients (r = 0.39), and the limited number of health record staff (r = 0.35). These associations suggest that administrative bottlenecks at the pay point could be compounded by staffing shortages and provider inefficiencies, collectively contributing to extended waiting times. Additionally, delays caused by the shortage of health record staff were positively correlated with both doctors' late arrival (r = 0.38) and provider irrelevant activities (r = 0.40), underscoring how administrative inefficiencies may have a ripple effect across clinical operations.

Doctors' late arrival was consistently correlated with several delay factors, notably with the issue of few doctors handling many patients (r = 0.41) and prolonged consultation times (r = 0.36), reinforcing the interconnectedness of provider punctuality and patient flow. Long searches for case notes for follow-up patients also showed a moderate positive correlation with time spent at the payment point (r = 0.31) and provider irrelevant activities (r = 0.35), indicating that documentation inefficiencies extend overall waiting times.

Furthermore, the act of patients jumping the queue exhibited lower yet notable positive correlations across several variables, including long searches for case notes (r = 0.27) and provider irrelevant activities (r = 0.28), implying that disorganized patient flow exacerbates delays. The time taken for routine nurse procedures, such as measuring vital signs, demonstrated moderate positive correlations with limited doctor availability (r = 0.35) and time spent at the payment point (r = 0.32), reflecting how procedural delays contribute cumulatively to waiting times.

Discussion

Discussion of Findings: Impact of Prolonged Patient Waiting Time on Healthcare Service Utilization and Satisfaction in Public Hospitals: A Case Study of Adeoyo Maternity Teaching Hospital

The findings from the study on the impact of prolonged patient waiting time at Adeoyo Maternity Teaching Hospital (AMTH) reveal significant insights into patient experiences, healthcare service utilization, and the factors influencing patient satisfaction. Prolonged waiting times in outpatient departments are a well-documented challenge in healthcare systems worldwide, particularly in low-resource settings, where inefficiencies in healthcare delivery often exacerbate service delays (Nzioki et al., 2021). The study reveals both systemic and individual factors that contribute to prolonged waiting times, affecting patients' perceptions of the healthcare services they receive. The study sample predominantly consisted of young to middle-aged adults, with a mean age of 35.6 years, suggesting a workforce that is actively engaged in economic and social activities. This demographic characteristic is relevant as it may indicate a greater demand for healthcare services among individuals balancing work and family responsibilities. Female respondents made up a larger proportion (66%) of the sample, reflecting the known higher utilization of healthcare services among women, particularly in reproductive health settings (Mossialos et al., 2020). Additionally, the marital status data shows a significant proportion of married individuals (66.5%), which might reflect the healthcare needs of families and the role of women as primary caregivers. Understanding these socio-demographic factors is crucial for developing targeted interventions that cater to the needs of different population groups (Dossa et al., 2022). The results from the study indicate significant variations in waiting times across different service areas, such as health records, nursing, physician consultation, and pharmacy services. For instance, a large proportion of patients (41%) reported waiting more than 40 minutes to see doctors, a situation that is consistent with findings from similar studies, where long consultation times have been linked to poor service delivery (Ogunbiyi et al., 2021). The issue of prolonged waiting times has been widely recognized as a key determinant of patient dissatisfaction, often leading to frustration and a decline in the perceived quality of care (Bello et al., 2021). Patient satisfaction regarding timeliness of healthcare services at AMTH was moderate. Although some patients were satisfied with health records (34%) and physician services (36%), dissatisfaction was also evident, with a significant percentage of respondents expressing concerns about the timeliness of nursing services (16% dissatisfied and 7% very dissatisfied). These findings corroborate the results of a study by Khan et al. (2022), who found that delays in nursing services contributed significantly to patient dissatisfaction, especially in outpatient settings. The moderate satisfaction with physician services, where 36% of patients were very satisfied, highlights that while certain aspects of care are perceived positively, room for improvement exists in the timeliness and overall flow of services.

The study identified several key factors contributing to delays in outpatient services at Adeoyo Maternity Teaching Hospital. The most significant factor was the late arrival of doctors, as reported by 60% of respondents. This aligns with findings by Okon et al. (2020), which indicated that healthcare provider punctuality is crucial for timely patient care. Furthermore, the high patient-to-doctor ratio (65% of respondents agreed that an overwhelming number of patients compared to available doctors contributed to delays) reflects a common challenge in public healthcare facilities, where understaffing and resource constraints are widespread (Zhang et al., 2021). Additionally, the shortage of health records staff (61%) and issues related to the billing process (70%) were perceived as critical contributors to prolonged waiting times. These findings mirror the conclusions of Adebowale et al. (2022), who highlighted those administrative inefficiencies, such as insufficient staff and outdated record management systems, significantly contribute to delays in service delivery. The study's correlation matrix further suggests that administrative bottlenecks, such as time spent at the payment point and the search for missing case notes, are interrelated with staffing shortages, reinforcing the systemic nature of the delays.

The study also found that healthcare providers engaging in non-patient-related activities (82% of respondents) was seen as a major contributor to delays, a concern echoed in other studies highlighting the negative impact of provider distractions on patient flow (Nwankwo et al., 2023). This reflects broader issues of work ethics and staff engagement in improving service delivery.

Despite the challenges with waiting times, the majority of patients (51%) expressed a willingness to recommend the hospital to others, indicating that factors beyond just waiting times, such as the quality of care and the hospital environment, play a significant role in overall satisfaction. This finding aligns with research by Lin et al. (2021), which suggested that while waiting times are an important factor in patient satisfaction, other aspects such as provider-patient communication, the perceived quality of care, and the hospital's ambiance also significantly influence patients' likelihood of recommending the facility.

Conclusion

The findings of this study underscore the significant impact of prolonged waiting times on patient satisfaction and healthcare service utilization at Adeoyo Maternity Teaching Hospital. While patients acknowledged the quality of care, the delays in service delivery contributed to mixed feelings of satisfaction. Addressing the root causes of these delays, including staffing shortages, administrative inefficiencies, and provider-related distractions, is essential for improving the timeliness and quality of outpatient services. By implementing targeted interventions, public healthcare institutions can enhance patient experiences and optimize healthcare delivery, contributing to better health outcomes and patient satisfaction in the long term.

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