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Factors Influencing Patient Waiting Time in Emergency Department of Khunyangu Sub-County Hospital, Busia Kenya

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Abstract

Background: Waiting time remains an important indicator of quality health services. The emergency department is the most critical area of any hospital. For patients who are in urgent need of hospitalization, delayed admission often leads to exacerbation of the patient's condition and may threaten the patient's life. In recent years, the flow of patients to the Emergency Departments of Western countries has steadily increased thus generating overcrowding and extended waiting times. Developing countries face daily challenges in the Emergency Department through huge exposure to several patients seen per day on average. The study therefore sought to establish factors influencing patient waiting time in the emergency department of Khuyangu Sub-County Hospital, Busia Kenya. Material and Methods: Descriptive cross-sectional research design guided the conduct of this study. Data collection was conducted on 191 patients and healthcare workers over four weeks using an interviewer-administered pretested structured questionnaire. Both descriptive statistics and inferential statistics were used for data analysis. To establish associations between the independent variable and dependent variables, correlations and cross-tabulations were used. Analysis of variance (ANOVA) was used to determine the influence of independent variables on the dependent variable. Findings: The findings demonstrated an R-squared value of 0.368. It was observed that there was a weak positive correlation that was statistically significant (r=.281, N=191, p=.000) between the availability of healthcare workers at their workstations and waiting time. There was a weak positive correlation that was also statistically significant (r=.228, N=191, p=.002) between communication on waiting time in areas where there was no health worker to attend to the patient and the waiting time. Conclusion and recommendations: The findings can be used to develop waiting time guidelines and improve waiting in the ED. This study recommends that hospital management should address the identified causes of delay to enable patients to get timely services. In addition, healthcare workers should be available at their workstations. Additional research is necessary to further evaluate the impact and utility of the emergency department.

Keywords: Emergency Department, Individual Factors, Critically Ill Patients, Health Care Providers

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1.0 Introduction

Waiting time is an important measure of the quality of care in ED. Prolonged waiting time in ED leads to crowding at the emergency department which has become an increasing problem for Hospitals around the world. This has multiple effects, including poor patient outcomes, prolonged pain, patient dissatisfaction, patients leaving without being seen, increased frustration among medical staff, and violence. Emergency department (ED) waiting time is a worldwide issue in all healthcare systems long waiting times are one of the main reasons for complaints among ED

patients. Increased waiting time may considerably decrease patient satisfaction, for example, by fostering frustration and lessening a sense of control. Moreover, excessively long waits may strengthen anxiety and stress for patients and their families, demonstrating disorganization of the process and disrespect for waiting (Fontova-Almató, A., Suñer, Soler, R., & Juvinyà, Canal, D., 2019) (Fontova-Almató *et al.,* 2019).

The unique characteristic of EDs is that the majority of visits are unexpected and unscheduled and require immediate assessment. At times, decisions about treatment need to be made very rapidly and actions need to be taken immediately (Thompson, D. A., Yarnold, P. R., Adams, S. L., & Spacone, A. B., 2016) (Thompson *et al.,* 2016). Unfortunately, emergency departments around the world are notably crowded on a daily basis. Overcrowding in the ED is an international crisis with many EDs noted to have been struggling with overcrowding for more than a decade similarly, in South Africa, Public sector Emergency Departments are under enormous pressure with large patient numbers, understaffing, poor resources and long waiting time in most cases

Studies have shown that patients spend a considerable amount of time in hospitals waiting for services to be delivered by clinicians and other allied health professionals. Patient waiting time is expressed as an arithmetic sum of all sections' waiting time. Delayed access to health care is assumed to negatively affect health outcomes due to delays in diagnosis and treatment plus unforeseen cost implications on the patients and public health system. Uninterrupted movement of patients famously known as patient flow is the index that can be used by health care to evaluate the quality of service provided to patients. Fontova-Almató *et al.,* (2019) state that patient flow represents the ability of the healthcare system to serve patients quickly and efficiently as they move through the stages of care. Any delay or stop at any stage increases waiting hence creating unnecessary delay at the facility which in turn impacts health care outcomes. Dansky and Miles (2017) recommend that at least 90% of patients should be seen within 30 min of their scheduled appointment time. This is, however, not the case in most developing countries, as several studies have shown that patients spend 2-4 hours in the emergency departments before seeing the clinician.

The Kenyan government recognizes that although major strides have been made in health care services in quantitative terms, there are also serious shortcomings in emergency departments that mar patient outcomes including the length of time patients wait to receive health care services. According to the Khunyangu Hospital Audit Report of 2016, there were several gaps within the emergency department that contributed to long waiting times thus interfering with the quality of services provided. The aim of this study, therefore, was therefore to examine the factors that influence waiting time for patients seeking health care services at Khunyangu Hospital. Specifically, this study measured the time it takes a patient to move through the different points of care (different sections) and the factors that influenced the waiting time.

2.0 Methodology

2.1 Study design

A descriptive cross-sectional research design was adopted in this study. This design is relevant in identifying the characteristics of observed phenomena. adult patients who sought health care services at the Emergency Department of Khunyangu sub-County Hospital. Data was also collected from healthcare workers who provided direct care to patients in the Emergency Department of Khunyangu sub-County Hospital. Data for this study was collected at one point in time from 3rd April to 25th May 2018The sampling unit in this study was the patients seeking care. A sample is part of the target population that has been procedurally selected to represent it. Systematic sampling which is a

probability method of sampling provided all the study participants an equal opportunity to participate in the study. The researcher used the register at the ED where the patients are triaged and entered as they arrive at the ED for identification of every nth patient for inclusion in the study. In a month a total of 400 patients are seen in the ED, therefore an average of (14 patients) per day. The sampling interval was calculated by dividing the population size (400) by the desired sample size (191) giving 2.09, therefore the nth (sampling interval) for this study was every 2nd patient seen in the ED during the period of the study. Health workers included in the Emergency Department were purposively selected for inclusion in the study.. Qualitative data was collected from healthcare workers using a key informant interview schedule. Ethical approval was obtained from the Masinde Muliro University of Science and Technology and the National Commission of Science and Technology. The raw data was cleaned, coded, and entered into the spreadsheet as soon as the data was generated. Data analysis was done using SPSS version 26.0. Quantitative data collected through questionnaires was analyzed using descriptive statistics such as frequency counts and percentages. Correlation and multiple regression analysis were carried out to estimate the effects of independent variables on the dependent variable.

3.0 Results

3.1 Socio-demographic Characteristics of Respondents

This information comprised of gender, age distribution, marital status, education level and occupation of the patients, the results show that the majority of patients seen at this facility are females (n=108, 56.5%). The majority of the respondents were between 25-31 years (n=67, 35.1%). It was also observed that the majority of the respondents were married (n=122, 63.9%). Additionally, the majority of the respondents (n=61, 31.9%) had finished secondary school and 36.6% (n=70) indicated that they were unemployed. See the summary in Table 1

Table 1: Socio-demographic Characteristics N=191

Socio-demographic characteristics		n	%
Gender	Male	83	43.5
	Female	108	56.5
Age in years	18-24	38	19.9
	25-31	67	35.1
	32-38	33	17.3
	39-45	30	15.7
	46-52	14	7.3
	53-59	7	3.7
	Above 60	2	1.0
Marital status	Single	53	27.7
	Married	122	63.9
	Widow	3	1.6
	Separated	13	6.8
Education level	Illiterate	22	11.5
	Finished primary school	52	27.2
	Finished secondary school	61	31.9
	Finished vocational school	33	17.3
	Finished bachelor degree	22	11.5
	Others	1	0.5
Occupation	Unemployed	70	36.6
	Government employed	27	14.1
	Labour employed	14	7.3
	Non-government employed	29	15.2

	Agriculture	28	14.7
	Student	18	9.4
	Others	5	2.6

3.2 Patient Waiting Time

On average patients take 55.3 minutes at the ED. With regard to the waiting time at the different sections, the longest waiting time is at the clinician's area (13.1 minutes) as shown in Table 2

Table 2: Average Waiting Time at Different Service Points

Service Point	Average Waiting Time (Minutes)
Records Office	5.8
Nursing station	7.8
Clinicians' area	13.1
Pharmacy	5.5
Average time spent at the facility	55.3

3.3 Patient rating of waiting time at service points

Respondents were asked to rate their waiting time at various points in the office. A summary of the findings is found in Table 3.

Table 3: Waiting Time at Various Sections

How would you rate the waiting time at each of these points?	Appropriate		Fairly long		Too long	
	N	%	N	%	n	%
Records Office	54	28.3	112	58.6	25	13.1
Nursing office	76	39.8	66	34.6	49	25.7
Doctors room	44	23.0	92	48.2	55	28.8
Pharmacy	25	13.1	71	37.2	95	49.7

Respondents were also asked how they thought the patient waiting time could be reduced and the majority of the respondents (n=103, 53.9%) reported that improving staff availability at their stations would help, some (n=58, 30.4%) said that increasing staff per shift could help control, while a few (n=16, 8.4%) said that increasing service points would help reduce waiting time

3.4 Overall Computed Waiting Time

The overall computed waiting time mean score was calculated by getting a mean score from all the total responses from the four Likert scale items. The overall mean score was 1.9 (±0.317) (±SD). This score was used to rank respondents on the overall perception of waiting time. The overall computation revealed that generally, the majority of the respondents (n=102, 53.4%) found the waiting time to be too long (see Figure 1).

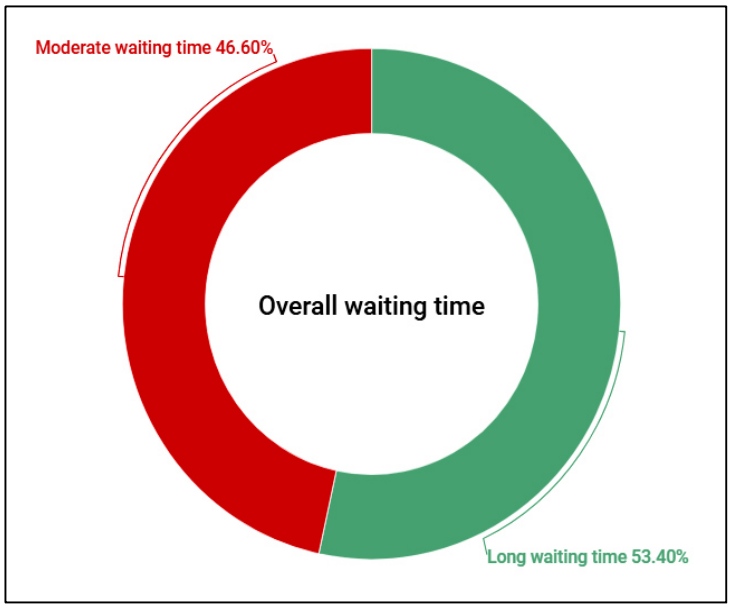

Figure 1. Overall Computed Waiting Time

3.5 Association of Socio-demographic Characteristics/Individual Factors with Overall Computed Waiting Time

Results from the chi-square statistics showed that there was an association between overall computed waiting time and occupation. The variables occupation ($\chi 2(df=6) = 14.147$, $p=0.028$) was statistically significant while the rest of the socio-demographic variables were not statistically significant. A summary of the finding is in Table 4

Table 4: Association between Socio-demographic Characteristics and Overall Computed Waiting Time

		Computed Overall Waiting Time				
		Long		Moderate		
Socio-demographic Characteristics		**N**	**%**	**N**	**%**	**$\chi 2$, p**
Gender	Male	39	20.4	44	23.0	2.428
	Female	63	33.0	45	23.6	P=0.119
Age	18-24 years	23	12.0	15	7.9	1.648
	25-31 years	35	18.3	32	16.8	P=0.949
	32-38 years	16	8.4	17	8.9	
	39-45 years	17	8.9	13	6.8	
	46-52 years	7	3.7	7	3.7	
	53-59 years	3	1.6	4	2.1	
	Above 60 years	1	0.5	1	0.5	
Marital status	Single	27	14.1	26	13.6	7.370
	Married	71	37.2	51	26.7	P=0.061
	Widow	0	0.0	3	1.6	
	Separated	4	2.1	9	4.7	
Education level	Illiterate	14	7.3	8	4.2	10.463
	Finished primary school	33	17.3	19	9.9	P=0.063
	Finished secondary school	34	17.8	27	14.1	

	Finished vocational school	12	6.3	21	11.0	
	Finished bachelor degree	8	4.2	14	7.3	
	Others	1	0.5	0	0.0	
Occupation	Unemployed	42	22.0	28	14.7	14.147
	Government employed	8	4.2	19	9.9	P=**0.028**
	Labour employed	5	2.6	9	4.7	
	Non-government employed	13	6.8	16	8.4	
	Agriculture	20	10.5	8	4.2	
	Student	11	5.8	7	3.7	
	Others	3	1.6	2	1.0	

3.6 Healthcare Workers' Related Factors Influencing Waiting Time

Results showed that the majority of the respondents (n=58, 30.4%) disagreed that the clinician spent enough time when examining them. The majority (n=69, 36.1%) also disagreed that there were enough medical personnel in the emergency department, moreover, the majority (n=58, 30.4%) disagreed that nurses showed good communication skills. When probed further, the majority (n=77, 40.3%) cited that the pharmacist didn't explain the medicines clearly. In addition, the majority (n=84, 44%) disagreed that there was enough registration staff in the emergency room. With regards to the waiting time for receiving OPD cars/ registration, the majority (n=71, 37.2%) disagreed that it was appropriate for the. Finally, the majority (n=54, 33.5%) disagreed that the waiting time for getting the prescribed drugs from the pharmacy was appropriate for them. A summary of the findings is in Table 5.

Table 5: Influence of Health Care Provider Factors on Computed Overall Waiting Time

Healthcare workers-related factors		**Total**	**Computed overall waiting time**				**χ2, p**
			Long		**Moderate**		
			n	**%**	**N**	**%**	
The clinician spent enough time when examining you	Strongly disagree	47(24.6%)	32	16.8	15	7.9	8.391
	Disagree	58(30.4%)	24	12.6	34	17.8	P=0.078
	Neutral	38(19.9%)	19	9.9	19	9.9	
	Agree	44(23.0%)	24	12.6	20	10.5	
	Strongly agree	4(2.1%)	3	1.6	1	0.5	
There were enough medical personnel in ED	Strongly disagree	57(29.8%)	28	14.7	29	15.2	1.290
	Disagree	69(36.1%)	40	20.9	29	15.2	P=0.863
	Neutral	33(17.3%)	17	8.9	16	8.4	
	Agree	29(15.2%)	15	7.9	14	7.3	
	Strongly agree	3(1.6%)	2	1.0	1	0.5	
From your experience, nurses showed good communication skills	Strongly disagree	14(7.3%)	5	2.6	9	4.7	10.140
	Disagree	58(30.4%)	24	12.6	34	17.8	**P=0.038**
	Neutral	48(25.1%)	26	13.6	22	11.5	
	Agree	50(26.2%)	32	16.8	18	9.4	
	Strongly agree	21(11.0%)	15	7.9	6	3.1	
From your past experience, pharmacists explained the medicines clearly	Strongly disagree	28(14.7%)	16	8.4	12	6.3	1.727
	Disagree	77(40.3%)	42	22.0	35	18.3	P=0.786
	Neutral	24(12.6%)	10	5.2	14	7.3	
	Agree	45(23.6%)	24	12.6	21	11.0	
	Strongly agree	17(8.9%)	10	5.2	7	3.7	

From your experience, there was enough registration staff in ED	Strongly disagree	63(33.0%)	31	16.2	32	16.8	4.487
	Disagree	84(44.0%)	46	24.1	38	19.9	P=0.344
	Neutral	25(13.1%)	17	8.9	8	4.2	
	Agree	16(8.4%)	6	3.1	10	5.2	
	Strongly agree	3(1.6%)	2	1.0	1	0.5	
The waiting time for receiving OPD card/registration is appropriate for you,	Strongly disagree	37(19.4%)	21	11.0	16	8.4	2.954
	Disagree	71(37.2%)	37	19.4	34	17.8	P=0.566
	Neutral	45(23.6%)	23	12.0	22	11.5	
	Agree	36(18.8%)	21	11.0	15	7.9	
	Strongly agree	2(1.0%)	0	0.0	2	1.0	
The waiting time for getting the prescribed drugs from pharmacy is appropriate for you	Strongly disagree	37(19.4%)	20	10.5	17	8.9	0.801
	Disagree	64(33.5%)	32	16.8	32	16.8	P=0.938
	Neutral	35(18.3%)	19	9.9	16	8.4	
	Agree	44(23.0%)	24	12.6	20	10.5	
	Strongly agree	11(5.8%)	7	3.7	4	2.1	

Results from the chi-square statistics showed that there was an association between overall computed waiting time and only one healthcare provider-related facility factor. The results showed that there was an association between respondents' responses on nurse communication and overall computed waiting time ($\chi2(df=4) =10.140$, $p=0.038$), the rest of the factors were not significant (see Table 5).

3.6 Health facility Related Factors

The study also assessed health facility-related factors and findings revealed that the majority of the respondents (n=58, 30.4%) disagreed that signage was well done to ease getting directions, many (n=81, 42.4%) also disagreed that physical design facilitated good patient flow, while the majority (n=54, 28.3%) disagreed that emergency department registration process was easily accessible. A summary of the finding is in Table 6.

Table 6: Influence of Health Facility Factors on Computed Overall Waiting Time

Health facility factors		**Total**	**Computed Overall Waiting Time**				**χ2, p**
			Long		**Moderate**		
			n	**%**	**N**	**%**	
Signage was well done thus ease getting direction	Strongly disagree	53(27.7%)	26	13.6	27	14.1	4.161
	Disagree	58(30.4%)	29	15.2	29	15.2	P=0.385
	Neutral	32(16.8%)	20	10.5	12	6.3	
	Agree	37(19.4%)	23	12.0	14	7.3	
	Strongly agree	11(5.8%)	4	2.1	7	3.7	
The physical design facilitates good patient flow	Strongly disagree	36(18.8%)	19	9.9	17	8.9	4.017
	Disagree	81(42.4%)	43	22.5	38	19.9	P=0.404
	Neutral	46(24.1%)	29	15.2	17	8.9	
	Agree	21(11.0%)	8	4.2	13	6.8	
	Strongly agree	7(3.7%)	3	1.6	4	2.1	
Emergency Department registration process was easily accessible	Strongly disagree	54(28.3%)	30	15.7	24	12.6	6.938
	Disagree	40(20.9%)	21	11.0	19	9.9	P=0.139
	Neutral	37(19.4%)	25	13.1	12	6.3	
	Agree	49(25.7%)	23	12.0	26	13.6	
	Strongly agree	11(5.8%)	3	1.6	8	4.2	

Results from the chi-square statistics showed that there was no association between overall computed waiting time and all health-related facility factors. The results were; Signage was well done thus ease getting direction ($\chi2$ (df=4) =4.161, p=0.385), Physical design facilitates good patient flow ($\chi2(df=4)$ =4.017, p=0.404) and Emergency Department registration process ($\chi2(df=4)$ =6.938, p=0.139).

4.0 Discussion

4.1 Socio-Demographic Characteristics of Respondents

The majority of the respondents in this research, 35.1% (n=67), were between the ages of 25 and 31, which is younger than the mean age of 45 found in a comparable survey conducted in Karachi, Pakistan (Jawaid *et al.,* 2009). More than half of the study individuals in our research were under the age of 40, which may have had an impact on the lower mean age we found. More than one-half 56.5% (n=108) of the respondents were females. Nearly two-thirds of the respondents were married 63.9% (n=122) while 27.7% (n=53) were single and 6.8% (n=13) separated. Most of the patient's education was completed in secondary school 31% (n=61). The majority of respondents 36% (n=70) were unemployed. The study chi-square statistics revealed that employment was connected with the total calculated waiting time (P = 0.028), but the other socio-demographic factors were not statistically significant. These findings are similar to other studies done in Northwest Ethiopia and other developing countries (Taye *et al.,* 2014).

4.2 Waiting time in Emergency Department

The length of stay/waiting time of a patient is defined as the time spent in the emergency department (ED) before being admitted to the hospital or released. One important component of measuring health care is the quality of patient satisfaction (Cassarino *et al*., 2019). It has been observed that patients are least satisfied when waiting times are longer than expected, relatively satisfied when waiting times are perceived as equal to expectations and highly satisfied when waiting times are shorter than expected. According to the results, it was revealed that there was too much time waiting at various points in the emergency department as evident from the results which show at the records office and doctor's office they waited fairly long (58.6% and 48.2% respectively) while 49.7% stated they take too long at the pharmacy. In contrast, Ibadan and India's results showed high levels of satisfaction with the services that were evaluated (Prasanna *et al.,* 2009). Hospital and socio-cultural environments, as well as the accessibility of medical resources, may all contribute to this discrepancy.

Similar discoveries were observed in Malaysia, where four primary factors were shown to be the cause of excessive waiting times: human resources, equipment availability, registration procedure, and an excess of patients (Labonte, 2004). The presence of too many patients with few doctors was cited by the majority of respondents (80.2%) as the cause for their prolonged stay in the clinic. This is highly expected given that the population has grown multiple times without a corresponding growth in the number of healthcare professionals. The overall computed waiting time mean score was also computed for this study using the Likert scale. It revealed that the majority of the respondents (53.4%) found that the waiting time was too long. This is the same as a study conducted by Cassariono *et al*. (2019) where according to their results, the waiting time at the records office was viewed as too long. This was calculated to be 78.6% of the outcome from the respondents in reference to the Records office/department.

In relation to how to reduce the patient waiting time, 53.9% which are the majority of the respondent stated that improving staff availability at the station/points of service would ease the log. Generally, from the results the respondent had faith that any action to reduce the waiting time was applicable, e.g., increasing staff per shift (30.4%) and increasing service points (8.4%). The present research focuses on designing effective work shift plans that make the most use of existing resource capacity, with the goal of lowering patient waiting time and levelling resource use to the greatest extent feasible. In a study by Sinreich *et al*. (2012), there was a mean

reduction of between 20% and 45% in patient waiting time by adjusting the work shifts of various staff in various departments. These long waiting times could be a reflection of what happens in most developing countries, where there is a dearth of healthcare workers, resulting in a low staff-patient ratio. Patients in developing countries experience long waiting times because of the imbalance in the staff-patient ratio; thus, health facilities are unable to meet the recommendations of the IOM that at least 90% of patients should be seen within 30 min of their scheduled appointment time (Valentine *et al.,* 2003).

4.3 Health Care Provider Factors Affecting Overall Computed Waiting Time at Emergency Departments

According to this study, computed patient wait times were influenced by the accessibility of health professionals, their areas of expertise, and their communication skills. The findings of Nasiri *et al*. (2012) revealed that from the viewpoints of patients and their caregivers, the high patient volume, lack of timely physician presence, poor communication, and inadequate manpower are the key causes of delaying and lengthening the waiting time of patients. According to MaddiNeshat *et al*. (2015), patient restlessness, a lack of guiding signs, poor communication, and a lack of staff are the main causes of delays in getting medical treatments. Other studies have identified the primary variables influencing patient wait times as being a shortage of staff and equipment, an increase in the number of patients attending emergency rooms, patient financial difficulties, and a distance between hospital wards.

The lengthy wait times found in this study could not be unconnected to the conditions in poor nations, where medical staff are frequently overburdened with patients. As long as the imbalance in the doctor-patient ratio is not rectified, patients in Nigeria will have to wait longer in line before seeing their physicians. Few number healthcare staff to care for the huge number of people in line was cited by our respondents as the main cause of the lengthy wait time. Due to the lack of doctors and other healthcare professionals, this is a typical finding at the majority of hospitals in Kenya. In the research from Jos University Teaching Hospital (JUTH), Nigeria, comparable causes were noted (Galluch, 2015). Patient wait times would rise if patients and healthcare staff were overrepresented. The population has grown significantly over time, but there hasn't been a corresponding rise in the number of healthcare professionals. One doctor for every 1000 people is the World Health Organization's (WHO) aim. The 25 poorest nations in the world, including Nigeria, only have one doctor for every 25,000 people. According to this pattern, the average number of patients waiting in our GOPDs will be a decimal.

4.4 Health Facility Factors Affecting Overall Computed Waiting Time at Emergency Departments

There is evidence that many of the respondents strongly disagreed and disagreed that the current healthcare facility's physical factors enhanced good patient flow. For instance, 27.7% of the respondents strongly disagreed and 30.4% of the respondents disagreed that signage was well done. In studies conducted in other areas of the world, it has been shown that the long waiting time and stay of patients in emergency units is the result of inefficiency of the workflow process in three steps of patient's arrival at the emergency unit, provision of services, and patient's discharge, Horwitz *et al.* (2010b).

Dalili *et al*. (2020) reported that the most important factors for delay in receiving hospital services are shortage of guidance signs, poor communication, low number of manpower, and restlessness of patients. In addition, lack of human resources and equipment (provided by the health facilities) to serve patients, increased number of patients visiting the emergency units, financial problems of patients, and long distance between different departments of hospitals have been mentioned as the main factors

affecting the waiting time of patients in other studies. The findings of a study conducted by Benning *et al*. (2017) on reduced waiting times of patients in the emergency unit of Al-Nour Specialized Hospital of Mecca in 2015 corroborated the results of the present study. The results of a study conducted by Cassarino *et al*. (2019) about the reduced waiting time in the emergency unit of Saskatchewan in Canada are also consistent with the findings of the present study.

5.0 Conclusion

The study's aim was to identify factors associated with waiting time at Emergency Departments. According to this study, the overall conclusion from this study is that patients wait longer to receive services in different departments in this facility.

The availability of healthcare workers in different service stations contributed to patient waiting time. In addition, communication on waiting time was not well done as there was a disagreement that nurses showed good communication skills, while the other healthcare provider factors did not influence the patient waiting time.

All the healthcare facility factors including signage, physical design and Emergency Department registration process did not influence the patient waiting time.

6.0 Recommendation

Patient waiting time can greatly be improved if the health facility management adopts the following recommendations; increase the number of healthcare workers and ensure that the healthcare workers are available all around the clock to offer services to patients as this will help reduce the long waiting time and work on putting signage within the hospital to help show direction and reduce delays in patient seeking services. The hospital management should equally work on restructuring the physical design of the patient in order to improve patient flow.

7.0 Limitation

A descriptive cross-sectional research design was used in this study where data was collected at one point in time. Therefore, the study findings may not be generalized. The researcher addressed this limitation by using a representative sample from the target population. Secondly, the sample size was small comprising 191 patients. The researcher addressed this by using a systematic sampling method for the selection of study participants thus providing all study participants with an equal opportunity to be included in the study. Lastly, the single site may produce context-specific findings.

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