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**Hospital services for ill patients in the middle-belt
geopolitical zone, Nigeria: Patient's waiting time and level
of satisfaction**

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Short running head: Patient's waiting time and satisfaction on hospital services in Nigeria

Abstract

An important parameter in the assessment of quality healthcare lies on patient satisfaction. Despite concerted efforts to improve health care services, patient satisfaction couple with the quality of hospital care at disposal remains a significant challenge in Nigeria. The purpose of the study was to determine the perception on factors associated with prolonged waiting time and patient satisfaction at the outpatient department of Ibrahim Badamasi Babangida Specialist Hospital in Nigeria. A mixed method research was utilised. Questionnaire was administered on 95 outpatients along with a focus group discussion (FGD) was held with 8 participants. Statistical analysis was utilized to determine the association between dependent and independent variables. Data from focus group discussion was analysed with NVivo 10. The overall hospital satisfaction was found to be 75.8% among the study population. There was a significant inverse relationship between the level of satisfaction with the doctor and (employment status, and educational level) and direct relationship with (appointment status and type of visits). In FDG, the result shows that patients were satisfied with the neatness of the hospital, doctor's professionalism and patient-doctor relationship. Dissatisfaction was with extended patient waiting time and the small size infrastructure of the hospital, inefficient handling of patient files by nurse aids and thoroughness of the physicians. The results showed that majority of the patients were dissatisfied with the waiting time for consultation in the hospital. In other words, consultation time positively correlated with the level of patient satisfaction. To improve the overall patient satisfaction the waiting time for consultation should be reduced significantly.

Introduction

Prolonged waiting time by the patient resulting to overcrowding of the hospitals and vice versa is a well-known recurring phenomenon that impedes patient satisfaction (Carrus et al., 2010; Derlet and Richards, 2000; Sinclair, 2007; Tiwari et al., 2014). This recurrence is still a huge problem in the third world nations where appointment system is not resourcefully implemented (Idowu et al., 2014). Patient's satisfaction is one indicator used to measure the quality of care and how long they have to wait for medical attention (Anderson et al., 2007; Billing et al., 2007).

According to Lambe et al. (2003) and Rauf et al. (2009) patient waiting time is the time patients spend in the hospital before receiving medical care. Whereas, patient waiting time among outpatient referred to as the length of time patient spend between entering and living outpatient department (Dinesh et al., 2013). Studies over the years had shown that prolonged patient waiting time in the outpatient department occurred from diverse scenarios. Liptak et al., (1985) found out that patient waiting time was prolonged as a result of absence of medical personnel, unavailability of examination rooms and contemporaneous registering of patients. This is in line with findings in Canada by Brian, (2003), that ailing planned

services, deficiency in healthcare workers, inability of physicians to work as a team and inadequate health facilities can significantly cause or lead to long waiting in public hospitals. Furthermore, Thatcher (2005) found out that patient waiting time was caused by shortage of staff, inappropriate filing of cards, delays arising from doctor's beginning consultation and inconsistent break in times. Likewise, Datuk et al., (2011) observed that lengthy waiting time stems from employees attitude, work processes, an excessive work load, feeble management and supervision, inadequate facilities among others. Hall (2013) in his study discovered that factors associated with prolonged waiting time are multi-factorial which ranges from inadequate bed capacity, severe nursing shortage, challenges in accessing the specialist on call, high acuity patient and patient lacking insurance cover. Likewise Ho, (2014) observed that interplay of appointment scheduling, registration processes, retrieval of medical records, patient load, overall patient and doctor's punctuality, synergy between service providers are responsible for prolonged patient waiting time.

However, Murray and Berwick (2003) disagreed with the widespread believe that delay is unavoidable and connected to limitation in resources, they suggested that prolonged waiting time is as a result of unplanned and irrational scheduling as well as poor resource apportionment. This was bolstered by Haraden and Resar (2004) who stated that prolonged waiting time cannot be resolved by adding resources but can be effectively reduced by addressing problems related to patient flow. This is because patient flows (uninterrupted movement of the patient) represent a guide in the healthcare system that monitors and evaluates the quality of services render to the patient (Conrad, 2013). Zhang et al. (2014) stated that patient flow represents both the progression of a patient's health status and the transferring of the patient through multiple hospital units within a hospital or amongst other hospitals. Additionally, Yeboah and Thomas, (2014) pointed out that prolonged consultation can also be influenced by the patient diagnosis that can have a logjam effect on patient waiting time. Furthermore, similar factors were associated with prolonged waiting time in Nigeria. For example, Oche and Adamu, (2014) observed that long waiting time is mostly caused by large turnover of the patient to be handled by insufficient health workers. As stated in O'Neill et al., (2014) studies, the main problem of prolonged waiting time among healthcare seekers in public health care facilities to include among others are poor human resources development, the absence of professional independence, poor control and support.

Long waiting time is perceived by the patients in different ways, and it generates different reactions and consequences. Johnson et al., (2009) stated that reduction in patient waiting time will inadvertently reduce patient leaving hospital without medical care. And

protracted waiting time promotes decline and discontent with health care; reduce agreement with provider's recommendation (Liptak et al., 1985). Prolonged waiting by the patient does not only affect the service-satisfaction bond but also depend on the perceived waiting time, satisfaction with the waiting environment and satisfaction with the information giving for the delay to be the determinant of waiting time satisfaction (Bielen and Demoulin 2007). This was buttressed by Becker and Douglass (2008) who noted that the attractiveness of the physical environment of the health care facilities can have an impact on the patient perception of waiting time. Furthermore, the patient medical condition can deteriorate following anxiety and stress from unexplained lengthy waiting (Hall et al., 2006). According to Paul and Moser (2009), when it comes to psychosocial theory, stress is involved in its pathway to ill health. Again, in a model of stress management, waiting time is perceived to be longer than usual time as a consequence of either physical and/or emotional stress (Cox, 1993). This is closely related to findings of Naumann and Miles, (2001) who stated that patients who occupied their time while waiting enjoy a higher level of satisfaction compared to those that are idle. One of the negative consequences of prolonged waiting is the hospital losing its teeming patients. The loss relating to waiting time is tagged by Barlow, (2002) as lose – lose strategy because patients lose valuable time and hospital lose patient and reputation and staff experience tension and stress. Patient who experienced shorter waiting time are willing to recommend the hospital to others (Thompson et al., 1996) and are also willing to return to the facility themselves (Taylor et al., 2006). On numerous occasions verbal aggression by patients towards hospital staffs as rooted from prolonged waiting time (Bolton, 2002). In the extreme, O'Neill et al., (2014) stated that the system sometimes witnesses sudden collapse or death of health care seekers while waiting.

Time spent waiting by the patient is seen as resource investment for the craving objective of been seen by the physician and hence may be moderated by the outcome (Anderson et al., 2007). They further stated that in a typical setting, some degree of counter-control exists between patient waiting time and time spent with the physician. The more time an individual gets from a particular physician, the longer will other patients would have to wait to see that physician. Finally, while gearing effort towards reducing patient waiting time Ajayi, (2002) stated that for the benefit of the waiting patient the period could be sufficiently used as a medium for health information dissemination and thus improve the quality of care provided in the clinics. According to Barua et al., 2014; Meier-Kriesche et al., 2000 waiting for healthcare services result in poorer medical outcomes.

It is recommended by the Institute of Medicine (IOM) that 90% of the patient should be seen within 30 minutes of their scheduled appointment (O'Malley et al., 1983). In Nigeria and indeed most developing countries, this is far from achievable. For example, the mean patient waiting time in an outpatient department from entry to exit point in 2 teaching hospitals in north-western Nigeria are about 120 minutes in Zaria (Ameh et al., 2013), 168 minutes in a teaching hospital in Sokoto (Oche and Adamu, 2014) and 73 minutes in a university college hospital in Ibadan Southwest, Nigeria (Bamgboye et al., 1992). In a national study in Malaysia done in public hospitals by Datuk et al., (2011) patients were found to wait for an average of up to 2 hours in outpatient department from registration to getting the prescription slip and spend an average of 15 minutes with the medical personnel. However, studies in more developed countries have shown the waiting time to be shorter; for instance, the medium waiting time in California is 38 minutes (Lambe et al., 2003) and 60 minutes in Atlanta (Dos Santos et al., 1994).

Patient satisfaction over the years has been used as a tool for quality assessment and improvement in the healthcare services (Bowers et al., 1994; Cleary and McNeil, 1988; Fenton et al., 2012). Patient satisfaction is directly linked to the degree of completion of their expectation. Moreover, satisfaction consists of communally a cognitive evaluation and emotional reaction to the components of care delivery and services (Urden, 2002). Also, Shirley and Sanders (2013) pointed out that patient satisfaction arises as a result of flexible factors like setting the appropriate expectation, minimization of waiting time and provision of continuity of care and physician-patient communication. Michael et al.,(2013) stated that in an outpatient care, there is a strong and inverse relationship between patient satisfaction and waiting times. Therefore, patient waiting time is an essential component of patient satisfaction.

The patient usually visits the hospital when they have challenges or compromised health state. It is not uncommon that a patient who deserves immediate healthcare, so as to reduce the negative consequences found themselves waiting for hours before being seen by the doctor. To keep patient waiting longer than necessary is clearly undesirable based on humanitarian ground because excessive waiting means loss of working time that most country can hardly afford, as a result of shortage of manpower (Welch and Bailey, 1952; Derlet and Richards, 2000; Derlet and Richards, 2002; Lowry, 2009). Prolonged waiting time does not only lead to poor medical outcomes and patient leaving without medical care but also result in patient dissatisfaction. Also, to improve patient satisfaction, there is need to identify patient waiting time and related factors responsible for its protraction. Besides, in many settings, patient satisfaction serves as a perceptible feature of practice that patient will

use to evaluate health personnel without paying much attention to their knowledge and skills (Oche and Adamu, 2014).

The study was aimed to determine the perceptive factors associated with prolonged waiting time and patient satisfaction at the outpatient department of Ibrahim Badamasi Babangida (IBB) Specialist Hospital in Nigeria. The objectives are to I. determine the relationship between socio-demographic variables (gender, age, marital status, educational level, employment status, appointment status and type of visits) level of satisfaction in the card room, nursing unit and consultation room. II. To determine the relationship between socio-demographic variables and patient time (consultation time and patient waiting time) III. To determine the relationship between patient time (consultation time and patient waiting time) and level of patient satisfaction IV. To understand the in-depth level of satisfaction with services of the patient at the outpatient department of IBB specialist hospital.

Methods

Research design

This study is a cross-sectional descriptive study carried out at the outpatient department of IBB Specialist Hospital in Minna, capital city of Niger State in the north central geopolitical zone of Nigeria. Mixed method convergent parallel design was adopted for the study as conferred in (Creswell and Clark, 2007; Creswell et al., 2003; Johnson et al., 2007).

The quantitative approach adopted validated self-administered questionnaires in English language which was administered at exit point to collect information on socio-demography features of the patient, waiting time and questions on the general satisfaction with health care services. Satisfaction was assessed using Likert's five rating scale (Very satisfied, somewhat satisfied, undecided, somewhat dissatisfied and very dissatisfied). In this study, patient waiting time was conveyed as time spent before registration, before vital signs are taken, and before consultation. Moreover, scheduling data collection was done only on outpatient clinic days, through the month of September 2015. Two Medical Personals were trained to assist respondents who cannot read or write to complete the questionnaire. On the other hand, an open-ended questionnaire was used for the FGD to determine an in-depth knowledge of patient's perceptions on causes of prolonged waiting time and general satisfaction of the health care services at the outpatient. This part of the study is a thematic approach.

The participants included all the patients seeking medical attention at the general outpatient Department of the hospital. Only 15 year old patients and above that consented to

participate in the study were recruited for the studies (inclusion criteria), political patient that often bypass the hospital protocol, and the critically ill patients are excluded from the survey. The required sample size of 96 was calculated using Gregg (2008) formula for calculating sample size in a population less than 10,000. Value of n was calculated using the formula $n = Z^2pq/d^2$. Snowball sampling technique was used for the qualitative study. The quantitative aspect of the study was analyzed with Statistical Package for Social Science (SPSS). This includes descriptive analysis, bivariate and multivariate logistic regression to determine the association between the covariate and dependent variables. Association between variables was based on Spearman Rho correlation. Multiple regressions were used to test the strength of prediction of independent variables on outcome variables. Similarly, the open-ended questions used in the focus group discussion were analyzed with NVivo.

The scales used in this study have been used in other studies and pre-tests of the contextually adopted tools were carried out before the actual data collection. Multiple items were used to establish appropriate measurement properties of the selected constructs. Trustworthiness of a research is significant in evaluating its worth, and it was used to determine quality assurance for the qualitative strand.

Institutional approval: Accurate information regarding the research was made available to the institution. A written research proposal along with completed ethical form was submitted to the institution. The dissertation was approved by the Natural Science Ethics Subcommittee NSESC of the Middlesex University.

Hospital approval: The researcher obtained approval from the hospital research, ethics and publication committee before commencement of the study.

Confidentiality: Assurance was given to the respondents that all their responses will be kept confidential.

Results

The socio-demographic characteristics of the respondent for this study include age, sex, educational level, employment, marital status, appointment status and types of visit. Table 1 shows that more than half (53.7%) of the respondents are female. The age range of the respondents was between 15 and 85 years, of which about 70% of them are young adults between the age of 15 and 45, and the remaining 30% were 45 years and older. The mean age and standard deviation were 38.98 and 15.65 years respectively. A higher percentage of those that responded are educated, 56.8% were educated to tertiary level, and 31.6% were educated below tertiary level while 11.6% did not have any form of education. More than half (61%)

of the respondents were either formally or informally employed; this was followed by 22.1% students and 16.8% that are not gainfully employed. About 80% are married and made up the majority of the respondents, 19% are not married, and only 1% of the respondent was found to be divorced.

Insert Table 1 about here

Whereas in the qualitative phase the lowest age of the participants is 36 years, and the highest is 65 years. Half of the participants were between 36 – 45 years. The remaining 37.5% and 12.5% of the participants were between the ages of 49-55 and 56-65 years respectively. More than half of the participants (62.5%) were females and majority of the participants (75%) are both educated up to tertiary education level and are in formal employment. All the participants were married.

Table 2 shows that about two-third of the respondents (75.8%) are follow-up patients, out of which overwhelming majority came to the facility on appointment while the remaining one-third (24.2%) are using the facility for the first time only and 12.6% of the total respondents were there on appointment.

Table 2 about here

In the qualitative phase, the thematic analysis was used to code the transcript into broad themes based on the research objectives and the interview questions. The themes were further reviewed and modified. Each broad theme was then analyzed, and some child nodes were identified.

Majority of the patients perceived prolonged waiting in the outpatient department most especially while waiting for consultation. And the perceived cause of the prolonged waiting was long queue, shortage of manpower; this is consistent with the findings of the quantitative survey. However, undue interference of the clinics, thoroughness of the doctors, misplacements of cards at the card room and preferential treatment given to some patients (whereby the cards of those who came late are swapped to top those who were early) by the nurses were also highlighted in the FGD as reasons for prolonged patient waiting time. This was similar to the findings in quantitative phase, where about 38% respondent waited greater than 2 hours before consultation (figure 1), and the average individual waiting increases when you add this to the time spent waiting in the card room and nursing station. Although the

mean waiting time was not calculated for this study, but quantitatively more than half of them believed they experienced often delays while waiting for consultation, reasons not farfetched from long queues (46%), late commencement of clinics (10.6%), poor communication (7.5%) and shortage of manpower (7.5%) see figure 2.

Insert Figure 1 and 2 about here

High satisfaction level was observed quantitatively ($> 90\%$) in all the sections of the outpatient department under study (card room, nursing station and consultation room) see table 3. Majority of the participants in the focus group discussion were satisfied with neatness of the hospital, exceptional professionalism by the doctor, good patient-providers interaction, hierarchy system of operation. For example, a comment made by a 36-year-old patient of the hospital ... *“And then what I like about the hospital is the neatness, no oozing, there is cleanliness, very okay. The expertise the way I looked at it, I am not a doctor, the professional aspect, the doctor always listen carefully, advice well and I think administers well too”*..... Perhaps above mentioned factors could be responsible for the high level of overall satisfaction of 75.8% obtained from the quantitative phase (see table 3). However, quantitatively 23.2% of the respondents were dissatisfied with the hospital (table 3). Factors such as prolonged patient waiting time, the small size of the hospital, poor attention to National Health Insurance Scheme (NHIS) patients, poor schedules of clinic days and the high cost of medical bills for NHIS patients, lack of adequate education of patient medical condition by the providers were identified in the qualitative phase to be responsible for dissatisfaction.

From the quantitative phase (table 4) no significant correlation was observed between age, gender, marital status and level of satisfaction with service delivery at the outpatient department units. This was consistent with findings in the qualitative phase where mixed feelings towards satisfaction level were displayed without clear dichotomy preference for any age and gender. However, the result shows a presence of significant weak negative correlation between the level of satisfaction with the doctor and employment status ($r = -0.204$, $p = 0.047$) and educational level ($r = -0.259$, $p = 0.011$) (see table 4). The unemployed and the least educated were more satisfied with the services they received from the doctors. Although this was an interesting finding from the survey, comments from the focus group participants on satisfaction with the doctor were homogenous across the educational level and

employment status. Similarly, there was a significant weak positive correlation between appointment status and level of satisfaction with the doctor ($r= 0.218$, $p= 0.034$) (table 4). This denotes that patients on appointment are more satisfied with the doctor than those that came without an appointment.

Table 3 about here

A significant positive weak correlation was also observed between type of visits and level of satisfaction with the doctor ($r=0.326$, $p = 0.001$) table 4. Follow up patients are more satisfied with the services they get from the doctor than those using the facility for the first time. This observation was not completely in line with the findings from the qualitative phase. For example comments from two participants. A male participant who had been using the facility for about ten years *“Since I started coming to this hospital I have not seen changes in the outpatient rather the hospital is living on past glory.”* Another comment coming from a female respondent using the facility for the first time ...*“They are trying, this is not my first hospital, and they are trying compare to other hospital”* ...

Table 4 about here

There was a significant negative moderate correlation between the type of visit and satisfaction with time spent in the examination room (consultation time) ($r = -0.437$, $P = < 0.001$) see table 5. Those using the facility for the first time are more satisfied with the consultation time than the follow-up cases. Although in the qualitative phase satisfaction with the consultation was homogenous. Also from quantitative phase, findings from Table 6 shows a significant positive moderate correlation between satisfaction with the time spent with the doctor and the level of satisfaction with the doctor ($r = 0.651$, $p = 0.00$). Those that spent more time with the doctor are more generally satisfied with the doctor. A significant positive but weak correlation was observed between satisfaction with the services of the doctor and the overall hospital satisfaction (pleasant experienced) ($r = 0.243$, $p = 0.018$) see table 6. Those that are more satisfied with the physician tend to have more overall hospital satisfaction. This can casually be related to the findings from qualitative phase, which revealed that despite dissatisfaction with the long waiting time, high cost of NHIS drugs, poor

handling of NHIS patients, unpleasant schedules of clinic days, overall clinic experience was pleasant by most participants, perhaps this could be as a result of high satisfaction with the doctor. A counter-measure was observed in both quantitative and qualitative phase. For example, despite most of the patients waited longest before the consultation, they were still satisfied with the services at the examination room mainly because of satisfaction with the consultation time. It was revealed in the quantitative phase (see table 3) where 95.7% of the respondents were satisfied with the consultation time, and nearly all the participants in the focus group were also satisfied with the time they get during the consultation. For example, here is one of the comments in focus group discussion:

“yesterday I had problem and coming to see doctor I was delayed, and I was not satisfied at that point but when I was able to see a doctor, and I think the doctor was able to attend to me thoroughly unlike other places when you visit a doctor, and the doctor will be in haste or some of them don't have manners to accommodate patients. That doctor-patient relationship yesterday I think I was satisfied a bit because the man was able to attend to me, despite the fact that I delay a bit, and that was based on the fact that there were people there before me. So they have to attend to people before me and I consider it a normal thing.”

Lastly, in the quantitative phase, consultation time was found to be a strong predictor of the level of satisfaction with the physician. Moreover, the level of satisfaction with the doctor was also found to be a predictor of overall clinic satisfaction (table 7). This could also be a reflection of the findings from the qualitative phase where emphasis was continuously made at different stage of the discussion by the participants on the high level of satisfaction with the doctors.

Insert Table 5 – 7 about here

Discussion

Prolonged waiting time was perceived as a source of dissatisfaction in most public health facilities. This was not an exception in this study and the overall causes of prolonged waiting time are long queues, late commencement of clinics, poor communication, shortage of manpower, undue interference of the clinics, thoroughness of the doctors, misplacements of cards at the card room and not handling cards on a first-come-first-served basis. Similar reasons were also observed to be the cause of prolonged waiting when you combine the

findings of studies of Thatcher (2005) in Jos University Teaching Hospital (JUTH) and Megbelayin et al., (2013) in Uyo all in Nigeria. Findings from this study were in line with this assertion where 63.8% of the patients were dissatisfied with the time they waited for consultation. This finding was much higher than the value obtained in a study in Aminu Kano Teaching Hospital by Iliyasu et al., (2010) where only 30% of the patients were dissatisfied with the waiting time. The low level of satisfaction with the waiting time may be attributed to the fact that, as the hospital transform from specialized hospital to specialist hospital and still evolving, there was significant increase in the influx of patients seeking for various specialist care without corresponding increase in manpower or improvement in appointment system to match the new status of the hospital. This mismatch in doctor-patient ratio will continue to contribute to prolonged patient waiting time.

The overall level of satisfaction with the services at the outpatient department was 75.8%. This level of satisfaction is similar to that obtained in Ibadan, Nigeria (75%) by Olusina et al., (2002), in Bida, Nigeria (78.5%) by Adekanye et al., (2013) but lower than the values obtained in Kano, Nigeria (83%) by Iliyasu et al., (2010) and Ethiopia (80.1) by Asefa et al., (2014). The dissimilarities in the study population and perhaps patient expectation and the difference in the way services are delivered could affect the satisfaction level. Neatness of the hospital, exceptional professionalism of the doctors, good patients-providers interaction, was some of the factors responsible for the satisfaction. Similar reasons were also found to be determinants of patient satisfaction in a study by Net et al., (2007) in Thailand.

In this study, no significant correlation was observed between age, gender, marital status and level of satisfaction with service delivery at the outpatient department units. These outcomes are in agreement with the findings of a study in Ethiopia by Asefa et al., (2014). However, significant negative correlation was observed between educational level, employment status and level of satisfaction with the doctor. The findings of the association between socio-demographic characteristics of patient and level of satisfaction in this study were similar with that obtained in Iran by Kelarijani et al., (2014). In their study, no association was found between age, gender and patient satisfaction but significant negative correlation was found between educational level, employment status and patients satisfaction. They further reiterated that less satisfaction is observed with patients with higher level of education, mainly because they have higher education, higher income and social status and perhaps their expectation are higher. Moreover, this is a reflection of the meaning of quality health services which is based on the growing public awareness.

High satisfaction level was recorded in this study (> 90%) in all the sections of the outpatient department under study (card room, nursing station and consultation room). These findings are similar to that obtained in a study in Cambodia by Vadhana, (2012) where 81.5 to 96% of the respondents were satisfied with the services at the nursing units and consultation room. Although unlike the finding in the present study, the satisfaction level at card room in the study at Cambodia is low. This higher level of satisfaction in the card room in this study could be as a result of the differences in the operation settings in the centers and also because the card room recently benefitted from additional manpower as the hospital transformed from a specialized to a specialist hospital and also because the section periodically has students on posting that usually contribute to their workforce.

Findings from this study show a significant positive moderate correlation between satisfaction with the consultation time and the general satisfaction with the doctor. This was similar to findings of Anderson et al., (2007) in their study which found out that time spent with the physician was a stronger predictor of patient satisfaction than with the time spent in the waiting room. This could also be explained by findings in a study in London, the United Kingdom by Ogden et al., (2004). Results from their study show that irrespective of the real or perceived consultation span, greater desire for more time was associated with a lower satisfaction with the emotional content of the consultation and a lower intention to comply with the doctor's recommendations. Similarly, a significant positive but weak correlation was observed between satisfaction with the services of the doctor and the overall hospital satisfaction. Moreover, consultation time was found to be a strong predictor of the level of satisfaction with the doctor while the level of satisfaction with the doctor was also found to be a predictor of overall clinic satisfaction. This is in line with findings from a study in Makurdi, Nigeria by Onwujekwe et al., (2015). The study identified consultation time as an influencing factor on the level of patient satisfaction with healthcare services. Moreover, time spent with the doctors during consultation was the most powerful determinant of the overall patient satisfaction.

Conclusion

The study demonstrated that patients are dissatisfied with prolonged waiting in the outpatient departments, especially when waiting for consultation. However, high satisfaction of more 90% was recorded with services in all the units under study, and this contributed to the

overall level of satisfaction (75.8%). Also, overall clinic satisfaction was strongly predicted by level of satisfaction with the doctor which in turn depends on the consultation time. What this means for the hospital administrators is that, since level of satisfaction appears to increase with the time spent with a doctor, they may want to design appropriate strategies that will reduce waiting time significantly thereby maintaining or even increasing the consultation time.

The government and policy makers could also benefit from the study by hiring more hands so that patients could take more benefits from the healthcare centers.

Limitation

1. The average mean waiting time was not calculated in this study because the individual average waiting time was not entered as a continuous variable.
2. Some level of bias may exist because the questionnaires were self-reported by the patient and this depend on their character, receptivity and overall frame of mind.

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Figure 1: Number of persons waiting at outpatient department by duration of waiting time (N = 95)

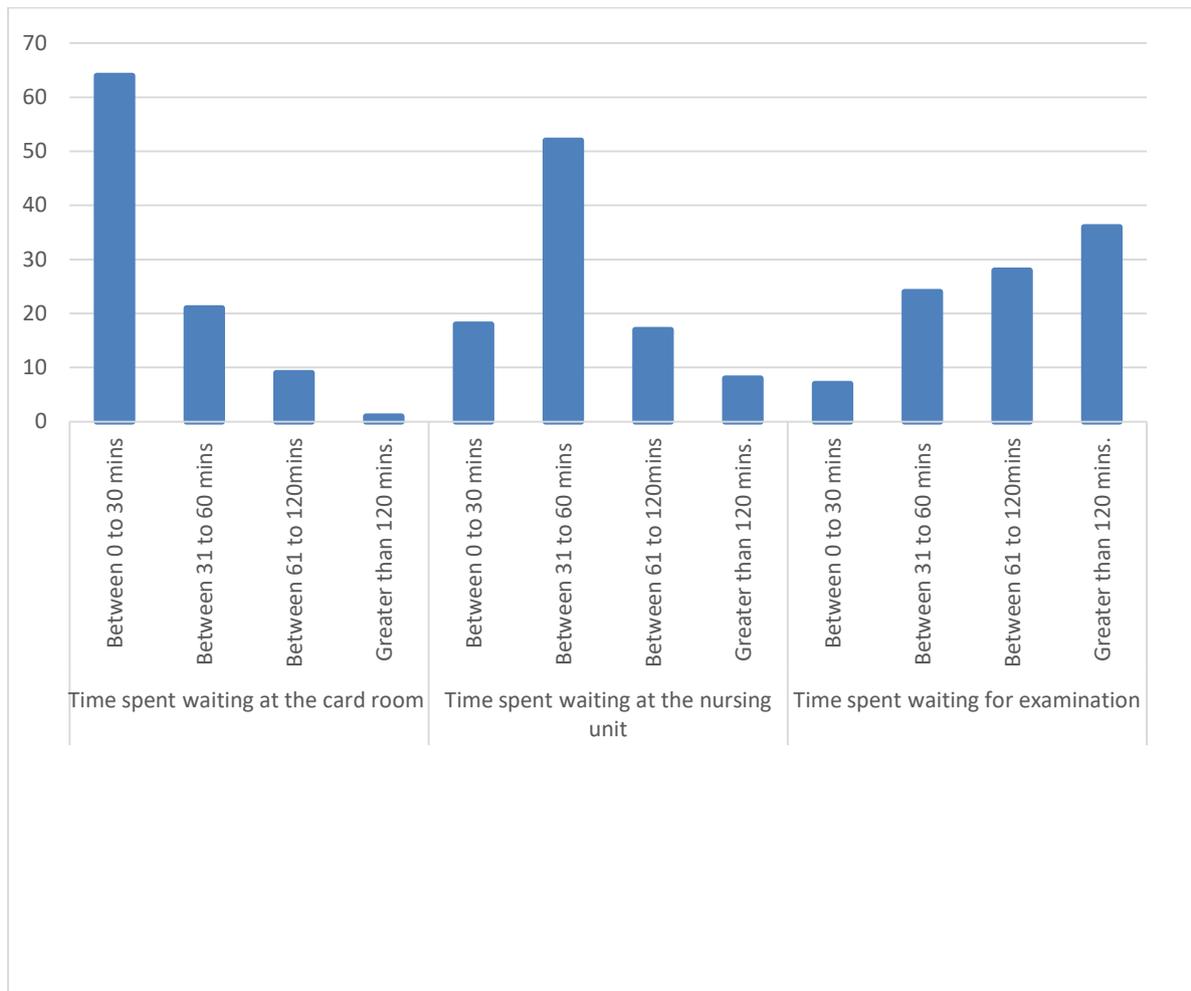


Figure 2 causes of prolonged waiting time at the outpatient department

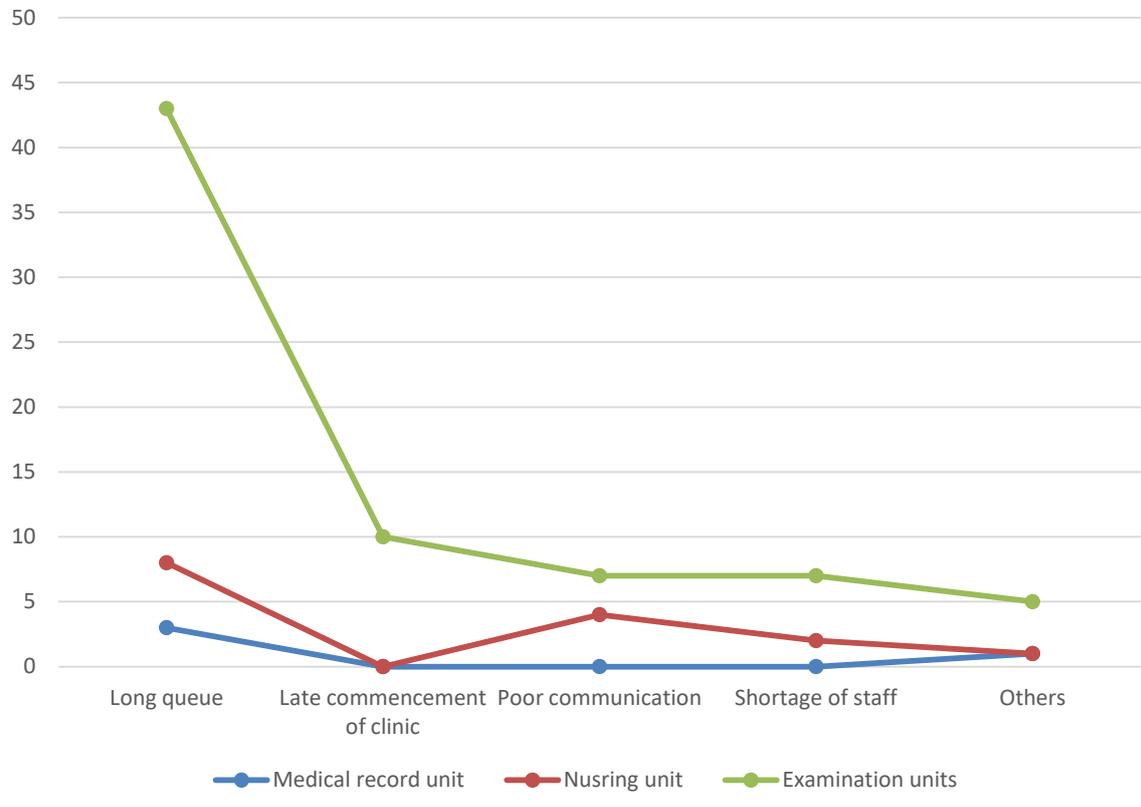


Table 1: Sociodemographic characteristics of the respondents (N = 95).

<i>Characteristics of respondents</i>	<i>N</i>	<i>Percent</i>
Gender		
Male	44	46.3
Female	51	53.7
Age (years) *38.98 (15.65)		
15- 30	33	34.7
31-45	33	34.7
46- 60	22	23.2
61- 85	7	7.4
Educational level		
None	11	11.6
Primary	7	7.4
Secondary	23	24.2
Tertiary	54	56.8
Employment status		
No gainful employed	16	16.8
Student	21	22.1
Informal employment	17	17.9
Formal part time	4	4.2
Formal full time	37	38.9
Marital status		
Single	18	19.4
Married	74	79.4
Divorce	1	1.2

Table 2: Facility related characteristics of the patient (N = 95)

Appointment status	Type of visit		Total
	New n (%)	Follow-up n (%)	
On appointment	12 (12.6)	62 (65.2)	74 (77.8)
Not on appointment	11(11.6)	10 (10.5)	21(22.1)
Total	23 (24.2)	72(75.8)	95(100)

Table 3 Percentage of the level of satisfaction at the outpatient department

	Strongly satisfied	Satisfied	Undecided	Dissatisfied	Strongly Dissatisfied
At the card room	62.8	33.0	0	2.1	2.1
At the nursing unit	46.8	47.9	0	3.2	2.1
At the examination room	59.6	33.0	3.2	2.1	2.1
Time spent with the doctor	61.7	34.0	1.1	1.1	2.1
Time spent waiting for doctor	16.0	20.2	3.2	22.3	38.3
Overall satisfaction	20	55.8	3.2	14.7	6.3

Table 4 Association between socio-demographic characteristics and satisfaction level

Variables	Card room (p-value)	Nursing unit (p-value)	Consultation room (p-value)	Overall clinic satisfaction (p- value)
Age	-0.064 (0.543)	-0.079 (0.448)	-0.184 (0.075)	0.029 (0.779)
Gender	0.138 (0.183)	-0.047 (0.649)	-0.049 (0.638)	-0.061 (0.554)
Employment status	-0.98 (0.346)	-0.082 (0.427)	-0.204 (0.047*)	0.128 (0.216)
Educational level	-0.122 (0.242)	0.028 (0.786)	-0.259 (0.011*)	0.123 (0.235)
Marital status	-0.195 (0.600)	0.114 (0.270)	-0.141 (0.174)	0.083 (0.423)
Type of visit	0.094 (0.366)	0.113 (0.275)	0.326 (0.001**)	0.175 (0.095)
Appointment status	0.132 (0.205)	-0.183 (0.076)	0.218 (0.034*)	-0.156 (0.132)

Note: * Significant at $P < 0.05$, ** Significant at $P < 0.01$

Table 5 Association between socio-demographic variables and satisfaction with patient waiting time

Variables	Satisfaction level with	
	Consultation time	Time waiting for consultation
	rho (p- value)	rho (p- value)
Age	-0.098 (0.343)	-0.014(0.894)
Gender	-0.075 (0.472)	-0.010 (0.023)
Employment status	-0.111 (0.282)	-0.144 (0.163)
Education level	0.155 (0.133)	-0.137 (0.185)
Marital status	-0.185 (0.072)	0.015 (0.887)
Type of visit	-0.437 (0.000**)	0.106 (0.307)
Appointment status	0.193 (0.061)	0.086 (0.409)

Note: ** Significant at P< 0.01

Table 6 Association between patient satisfaction and patient waiting time

Variable	Level of satisfaction with		
	Consultation time	Time spent waiting to see doctor	Overall hospital satisfaction
	rho (p-value)	rho (p- value)	rho (p- value)
Level of Satisfaction with the doctor	0.651 (0.000**)	0.048 (0.643)	0.243 (0.018*)

Note: * Significant at $P < 0.05$, ** Significant at $P < 0.01$

Table 7: Multiple regression analysis for patient satisfaction with doctor

Selected variable	Unadjusted Coefficient (b)	p-value	Adjusted Coefficient (b)	p-value
Consultation time	0.859	0.001**	0.846	0.001**
Doctor's waiting time	0.084	0.132	-0.03	0.928
Overall Clinic satisfaction	0.154	0.040*	0.60	0.212

Note: * Significant at $P < 0.05$, ** Significant at $P < 0.01$