ORIGINAL ARTICLE

THE EFFECTS OF WAITING TIME AND SATISFACTION AMONG PATIENTS VISITING MEDICAL OUTPATIENT DEPARTMENT OF A TERTIARY CARE HOSPITAL

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Submitted: May19, 2021
Accepted: January 04, 2022

ABSTRACT

OBJECTIVE
To assess satisfaction, factors, and effects of waiting time among patients visiting the medical outpatient department of a tertiary care hospital.

STUDY DESIGN
Cross-sectional and descriptive.

PLACE AND DURATION OF THE STUDY
Conducted in the medical outpatient department of Dr. Ruth K. M. Pfau Civil Hospital Karachi from July 2019 to December 2019.

SUBJECTS AND METHODS
Purposive and non-probability sampling technique was used which yielded a sample size of 402 patients. All patients 18 years or above visiting the medical outpatient department were included as participants. The study tool used was an interviewer-administered, semi-structured questionnaire. It consists of the Concise Outpatient Department User Satisfaction scale and questions regarding factors and effects of waiting time. Analysis was done via SPSS Version 20.

RESULTS
In the Concise Outpatient Department User Satisfaction scale, physician's professionalism scored maximum with a mean ± SD score of 8.42 ± 2.04. Waiting time attained a minimum score with a mean ± SD of 4.40 ± 2.66. Effects found were patients leaving the outpatient department without check-ups (p=0.018) and forced to seek private healthcare (p=0.031). Factors are increased patient load (91.6%) and reduced slip making counters (61.2%).

CONCLUSION
Patients are dissatisfied with the waiting time. The most common factors of delayed waiting time are increased number of patients and reduced slip-making counters. Important effects are patients leaving the outpatient department without check-ups, forced to seek private healthcare, effects on quality of care, and frustration leading to scuffles.

KEY WORDS
Waiting time, patient satisfaction, outpatient department, public, tertiary care hospital.

INTRODUCTION

OPD (Outpatient department) is considered an outpatient clinical service where patients receive consultation and treatment. Outpatient department provides the patient with the first impression of a hospital's services and this often has an impact on patient's satisfaction from the hospital.[1] If patients are effectively and appropriately managed in the OPDs this can ease inpatient load and improve utilisation of healthcare services. Patient's satisfaction from a hospital depends on a variety of factors such as affordability, convenience, fulfilment of clinical requirements, less waiting time to see the specialist and health staff care.[2]

Waiting time has been defined as "the length of time from when the patient enters the out-patient clinic to the time patient actually leaves the OPD". It is an urgent problem in hospitals worldwide and acts as a hindrance to efficient flow of patients,[3,4] A delayed waiting time is a problem that is still prevalent in public sector health care services, and may be one of the potential component of dissatisfaction. Waiting times for elective care have been considered a major problem in health care systems since it acts as a barriers to efficient patient services & it causes a significant challenge for public sector health care facilities for patients in need evaluation and intervention by specialist.[5] It has also been found out that patients satisfied with the services are more adherent to treatments and follow-ups. Thus improving the prognosis.[6]

Considering the factors affecting the waiting time, an ever-increasing population and lack of corresponding increase in healthcare services has further aggravated this problem further leading to increased waiting time in hospitals irritates the patients and provokes them to leave the outpatient department.[7] Out patients department services have logistic arrangement in the out patients department, Waiting time, logistic facilities, the performance of the staff, appointment system, facilitation by administrative staff behaviour etc.[8] A well-managed, hospital with necessary information being displayed and proper directions can facilitate the services provided to the patients.[9]

Many studies have already been carried out and it is comprehended that patient satisfaction is a critical issue both for evaluation and improvement of healthcare services.[10] Excessive

waiting time impedes the quality of health care and leads to patient dissatisfaction. It also results in poor patient compliance and follow-up.[11] There was a need to carry out a systematic study on patient waiting time in a tertiary healthcare. This research includes three interlinked parameters patient satisfaction, causes and effects of increased waiting time on patients visiting medical outpatient department of a public sector hospital in Karachi. The research aimed to study patient satisfaction, identify the factors that affect waiting time and the effects of delayed waiting time.[12] It is also important to know about the factors affecting the satisfaction of out-door patients. This can help to minimize the delay in and allow for better utilization of healthcare services. Considering the issue an improvement in services can be achieved by feedback from patients attending the OPDs of public sector hospital. As observation of beneficiaries in any healthcare setup provides impact for refining the system.

SUBJECTS AND METHODS

This was a cross-sectional observational survey. The study was conducted at medical Outpatient department of Dr Ruth K. M. Pfau Civil hospital Karachi from July 2019 to December 2019. Sample size: 395. The software used to calculate the sample size was NCSS PASS. The formula for sample size X = Zα/22 *p*(1-p) / MOE2, and Zα/2 is the critical value of the Normal distribution at α/2 (e.g. for a confidence level of 95%, α is 0.05 and the critical value is 1.96), MOE is the margin of error, p is the sample proportion, and N is the population size. A sample size of 395 achieves 90% power to detect a difference of 6.3 between the null hypothesis mean of 83.7 and the alternative hypothesis mean of 90.0 with an estimated standard deviation of 38.5 and with a significance level (alpha) of 0.05000 using a two-sided one-sample t-test.

Inclusion criteria: All patients.

All patients aged above 18 years of both sex, mentally fit to comprehend the study survey tool and respond as assessed by psychiatrist.

Exclusion criteria: Those patients seeking emergency medical services, those who refuse to participate, medical Students and hospital staff.

Tools

A semi structured questionnaire including bio data, concise outpatient department user satisfaction scale, factors affecting for a delay in waiting time and effects of delayed waiting time were taken.[9,11] Concise outpatient department user satisfaction scale: a three-domain, 10-item scale. The items are (i) physical environment, (ii) equipment and facilities, (iii) appointment arrangement, (iv) waiting time, (v) service of the dispensary, (vi) support staff, (vii) case physician's professionalism, (viii) explanation given by the case physician, (ix) case physician's attitude and manner, and (x) consultation time. Respondents need to answer each item in a response format of a 10-point anchored numerical scale, where '1' indicates not satisfied at all and '10' extremely satisfied.[12]

Data collection

All patients aged 18 or above were approached at , visiting the medical outpatient department of Civil Hospital Karachi on any number of visit were interviewed by the researchers after taking informed consent randomly been selected considering the inclusion criteria were interviewed after being explained about the purpose of study, an informed consent was taken. Semi-structured, interviewer administered questionnaire was used.

Completed forms were analysed with SPSS Version 20. Means, frequency, standard deviations were calculated, and t-test and Chi-square tests were applied to find associations.

Ethical consideration

An Institutional Review Board approval was obtained from the Department of Research of Dow University of Health Sciences before commencing data collection. Consent was taken from the samples. Anonymity was considered.

RESULTS

The study included a total of n=430 patients, patients responded were n=402 (93%). Reason for exclusion were incomplete forms. Males n=188 (46.8%) and females n=214 (53.2%). For age distribution, n=148 (36.8%) of between 30-40 years of age followed by 116(28.9%) between 18-29 years of age and 138 (34.3%) from 41 to 95 years of age. Only 84(20.9%) patients were uneducated while rest had primary, secondary, tertiary, religious or apprenticeship education. Among them 339(84.3%) patients were from urban areas and 63(15.7%) were from rural areas. The mean waiting time of our study was 164 minutes. Patients' satisfaction with different components is shown in Table 1. Physician's professionalism scored maximum and waiting time attained a minimum score. The mean and standard deviation was calculated for each component.

Table 1
Results of the Concise Outpatient Department User Satisfaction Scale.

Components	Mean	SD
Physical environment	6.33	2.648
Facilities	6.44	2.685
Appointment arrangement	6.00	2.747
Waiting time	4.40	2.662
Service of the dispensary	5.23	2.797
Support staff	6.43	2.802
Physician's professionalism	8.42	2.043
Explanation by physician	8.20	2.317
Consultation time given	7.50	2.512

Table 2
Factors of delayed waiting time.

Factors	Total (402)			
	Yes		No	
	Frequency	%	Frequency	%
1. Increased patient load	367	91.3	35	8.7
2. Few doctors	167	41.5	235	58.5
3. Not maintaining decorum in slip making queue	156	38.8	246	61.2
4. Doctor teaching students simultaneously	43	10.7	359	89.3
5. Junior doctor takes more time	44	10.9	358	88.1
6. Reduced slip making counters	246	61.2	156	38.8
7. Lack of examination equipment/space/rooms	105	26.1	297	73.9
8. Physical design of the OPD	92	22.9	310	77.1
9. Late arrival of doctors	107	26.6	295	73.4
10. Preferential treatment by doctors	96	23.9	306	76.1
11. Lack of guidance	177	44.0	225	56.0
12. Patient unable to select the correct OPD for his ailment	73	18.2	329	81.8
13. Not advised properly when to return for follow-up	37	9.2	365	90.8

Table 3
Association between effects and waiting time an issue.

Effect		Waiting time an issue		Total	p-value
		Yes	No		
Leaving the hospital without check-up	Yes	149	12	161	0.018
	No	204	49	241	
Leads to brawls	Yes	99	5	104	0.008
	No	254	44	298	
Forced to seek private healthcare	Yes	135	11	146	0.031
	No	218	38	256	
Affects the quality of care	Yes	97	7	7	0.048
	No	256	42	42	
Patient disappointment	Yes	274	32	32	0.058
	No	79	17	17	

The means of satisfaction scale were compared on basis of gender. Un-paired T-test was used for analysis. Females were found to be more satisfied with the arrangements than males. Significance ($p<0.05$) was found in physical environment ($p=0.001$) and physician's professionalism ($p=0.005$).

Out of 402 patients 353 (87.8%) considered medical outpatient waiting time an issue. Chi-square test was run to find an association between waiting time an issue and effects of increased waiting time. Table 2 shows that of all factors only two factors, i.e. increased patient load n= 367 (91.3%) and reduced slip making counters n=246 (61.2%). are factors related to increased waiting time. Respondents did not consider other factors significant for delayed waiting time.

Table 3 shows effects of increased waiting time was indicated by $p<0.05$. Significant effects found were patients leaving the outpatient department without check-up ($p=0.018$), forced to seek private healthcare ($p=0.031$), effects on quality of care ($p=0.048$) and frustration leading to scuffles ($p=0.008$).

DISCUSSION

According to the World Health Organisation the measure of a responsive health system depends on patient's waiting time. Waiting time in this study is comparable to an Iranian study's average waiting time of 161 minutes for each patient in the educational institution, albeit they have studied surgical and ophthalmological outpatient departments.[13] A Nigerian study puts its mean waiting time at 168 minutes[9] and another Nigerian study puts its mean waiting time at 173 minutes.[14] While these waiting times are similar, but a study carried in a surgical outpatient department in Pakistan puts it's waiting time at only 47.47 minutes.[15] While another India mentions the average waiting time in government hospitals as 20.3 minutes.[16] Reason may be that they were carried out in private hospital with less number of patients.

This study has indicated that patients have shown satisfaction with doctors' professionalism and the time they give during their check-up. However, all things that happen apart from it that is waiting time, dispensary services etc. leave the patient dissatisfied. A study carried out at a private hospital in Pakistan[8] finds that patients are generally satisfied in nearly all aspects of the scale. An Iranian study

uses a similar scale to evaluate patient satisfaction; while they have moderate to good responses amongst all their components the dimension of physician consultation scored the highest whereas perceived waiting time the lowest.[17] An Ethiopian research puts its determinants of patient satisfaction as age, educational status, payment status, waiting time, availability of drug and supply.[18]

When a comparison was drawn between males and females, physical environment of the outpatient department and physician's professionalism show a statistically significant association where females seem to be more satisfied than males. Another research found differences in explanation given by the physicians and appointment arrangement.[8]

There are many factors associated with delayed waiting time. In our study, the two most common factors were high patient load and reduced slip making counters. In a Nigerian study, the waiting time of which has already been quoted above, the commonest reasons found were substantial number of patients and few healthcare workers.[9] Another Nigerian study carried by the same university comes to a similar result.[19] A Ugandan dissertation cites increased number of patients, lack of coordination between different services and queue making inappropriateness as main reasons for delayed waiting time.[10] While in an Iranian study the factors found were lack of human resources, lack of equipment, patient attitudes and registration process.[13] A study in Pakistan indicated unavailability of doctors at the station to be a major reason.[20] Studies conducted in countries with lower Human development index showed same indices as found in our study. If these are identified and quantified efforts can be made to solve them.

At present, according to the best of our knowledge after literature research, we could not find any study on effects of delayed waiting time. This study documented the effects due to delayed waiting time that come out statistically significant included leaving without check-up, forced to seek private healthcare, adverse effects on quality of care, frustration leading to scuffles and patients getting disappointed

The study has outlined the different dimensions that affect patient satisfaction and causes and effects of delayed waiting time. This can help set new policies, revaluate old ones and monitor performance. With a few relatively well equipped public hospitals available high patient density is an inevitable factor. This has been proven by our research. Although slip making counters are not less in number they do seem paltry when put parallel to the number of patients attending Civil Hospital Karachi.

It is however felt that this research may be helpful to highlight the issue and bring about changes to this long-awaited improvement. The government does make commendable efforts and appreciable changes cannot be made in a day, there is still a long way to go before public healthcare and the waiting times be made better to better serve the masses.

CONCLUSION

Patients are heavily dissatisfied regarding waiting time but seem satisfied regarding physician's professionalism, consultation time given and explanation by the physician. Statistically significant difference between males and females in the Concise Outpatient department user satisfaction scale was found in elements of appointment arrangement and physician's professionalism, where females are more satisfied than males. Most common factors contributing to delayed waiting time are increased number of patients and reduced slip making counters. Important effects surmised are patients leaving outpatient department without check-up, forced to seek private healthcare, effects on quality of care and frustration leading to scuffles.

LIMITATIONS

The study is a single centre study conducted at a single department of the hospital. While a standardised Urdu version of the questionnaire was utilised and although nearly all participants were able to understand Urdu a few did not have command over Urdu which can be a possible bias of the study.

CONFLICT OF INTEREST: None.

REFERENCES

1. Patel R, Patel HR. A study on waiting time and out-patient satisfaction at Gujarat medical education research society hospital, Valsad, Gujarat, India. International Journal of Community Medicine and Public Health. 2017; 4(3):857-63.
2. Kamra V, Singh H, Kumar De K. Factors affecting patient satisfaction: an exploratory study for quality management in the health-care sector. Total Quality Management & Business Excellence. 2016; 27(9-10):1013-27.
3. Nakhwa P, Kadam S. The Study of Waiting Time for Patients in Healthcare System and Ways to Reduce Wait Time by Implementing Time Management Methods. AADYA-National Journal of Management and Technology (NJMT). 2016; 6:64-8.
4. Dinesh TA, Singh S, Nair P, Remya TR. Reducing waiting time in outpatient services of large university teaching hospital-A six sigma approach. Management in health. 2013 Oct 4;17(1).
5. Naiker U, FitzGerald G, Dulhunty JM, Rosemann M. Time to wait: a systematic review of strategies that affect out-patient waiting times. Australian Health Review. 2018 Jun 26;42(3):286-93.
6. Pascoe GC. Patient satisfaction in primary health care: a literature review and analysis. Evaluation and program planning. 1983;6(3-4):185-210.
7. Umar I. OMOaUAS. Patient waiting time in a tertiary health institution in Northern Nigeria. Journal of Public Health and

Epidemiology 2011;3(2):5.
8. Aijaz, Hiba &Jawaid, Masood &Shafi, Rameez & Hafeez, Kamran. Satisfaction of patients with Surgical and Orthopedic Out-patient Department of Dow University Hospital. Rawal Medical Journal. 2013;38:294-297.
9. MO Oche HA. Determinants of Patient Waiting Time in the General Outpatient Department of a Tertiary Health Institution in North Western Nigeria. Ann Med Health Sci Res. 2013;3(4):5.
10. Musinguzi C. Patient waiting time and associated factors at the Assessment Center, General out-patient Department Mulago Hospital Uganda. 2013.
11. Obamiro JK. Effects of waiting time on patient satisfaction: Nigerian hospitals. International Journal of economic behavior. 2013;3:9.
12. Ivy F. Tso, S. M. Ng, Cecilia L. W. Chan, The development and validation of the Concise Outpatient Department User Satisfaction Scale, International Journal for Quality in Health Care, Volume 18, Issue 4, August 2006, Pages 275–280.
13. Rafat Mohebbifar EH, Mohammad Mohseni, Mobin Sokhanvar, Omid Khosravizadeh,and Haleh Mousavi Isfahani. Outpatient Waiting Time in Health Services and Teaching Hospitals: A Case Study in Iran. Glob J Health Sci. 2014;6(1):9.
14. Ofovwe CE OA. Indices of patient satisfaction in an African population. Public Health. 2005;119(7):5.
15. Masood Jawaid NA, Shams Nadeem Alam, , Bilal Hasan Rizvi HAR. Patients Experiences and Satisfaction from Surgical Out Patient Department of a Tertiary care teaching hospital. Pakistan Journal of Medical Sciences. 2009;25(3):4
16. Kumar P, Adhikari A, Ray M, Indu R, Bhattacharya S, Das AK. Assessment of patient satisfaction in outpatient department of a tertiary care hospital in West Bengal, India: a questionnaire based study. International Journal of Community Medicine And Public Health. 2018 Aug 24;5(9):3919-23.
17. Pouragha B, Zarei E. The effect of outpatient service quality on patient satisfaction in teaching hospitals in Iran. Materia socio-medica. 2016 Feb;28(1):21.
18. Mezemir R, Getachew D, Gebreslassie M. Patients Satisfaction and its determinants in Outpatient Department of Deberebirhan Referral Hospital, North Shoa, Ethiopia. Int. J. Econ. Manage. Sci. 2014;3:191.
19. Umar I, Oche MO, Umar AS. Patient waiting time in a tertiary health institution in Northern Nigeria. Journal of Public Health and Epidemiology. 2011 Feb 28;3(2):78-82.
20. Sumaira Shahzadi SA. Factors Associated Patient Waiting Time at Outpatient Department in Allied Hospital Faisalabad. Journal of biology, agriculture and healthcare. 2017;7(17):7.

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