

---

## Literature Review: Waiting Time and Patient Satisfaction Relationship

Hamad Abdulaziz AlSubaie<sup>a\*</sup>, Mansour AlNaim<sup>b</sup>, Sara AlSubaie<sup>c</sup>

<sup>a</sup>Family Medicine Department, King Abdulaziz Hospital, Kingdom of Saudi Arabia, Eastern Region, AlHassa

<sup>b</sup>Family Medicine at King Abdulaziz Hospital at AlHassa

<sup>c</sup>Family Medicine at Primary Health Center of National Guard Health Affair at AlHassa

<sup>a</sup>Email: [Hamad.alsubaie@hotmail.com](mailto:Hamad.alsubaie@hotmail.com)

### Abstract

The patient waiting period in an outpatient facility may affect the satisfaction of patients and relies on other characteristics of the visit. This study examines how patient satisfaction is related to the period of waiting for medical attention in a healthcare facility. The study was undertaken in specialized clinics including family medicine. Data was collected by distributing structured questionnaires to patients in the outpatient clinics which included social demographics and patient satisfaction scores. Half of the total patients that participated in the study confirmed their satisfaction with waiting time. Comparably, the clinic of family medicine recorded better scores in waiting periods than other clinics. Besides, it was confirmed that patients treated in family medicine clinics recorded the highest scores in patient satisfaction. Although overall patient satisfaction was lower compared to previous pieces of literature, the study confirms that a reduced waiting period results in increased patient satisfaction and a greater likelihood of patients returning to the health facility.

**Keywords:** Family; Medicine; patient; satisfaction; waiting; relationship.

---

\* Corresponding author.

## **1. Introduction**

The level of contentment of a patient with the services received in a healthcare facility is referred to as patient satisfaction, which may determine retention of patients and clinical outcomes as well as influence medical malpractice cases [1,2]. The fundamental healthcare goals according to the IOM report include patient safety, efficiency, equity, timeliness, effectiveness, and patient-centered care [3]. However, timeliness is the only healthcare aim that is least studied and understood which justifies the purpose of this study. There exists a negative correlation between the time that patients spend in a clinic and their satisfaction. The IOM report recommends an average of 30 minutes of patients' waiting time before receiving the desired medical care [4]. Besides, patient waiting time negatively affects the utilization of healthcare facilities as it discourages patients from returning to the facility bearing an ultimate impact on care continuity. Therefore, patient waiting time reduction might lead to increased patient satisfaction and retention of patients [5]. Many studies have showed that longer periods of waiting are associated with decreased patient satisfaction [6]. Furthermore, a 2015 study conducted in Saudi Arabia showed that the waiting period was the only factor that significantly influenced the overall patient satisfaction whereby those who waited for more than 30 minutes reported dissatisfaction with the services received [7]. In addition, a King Abdulaziz University study demonstrates that a majority of patients confirmed longer waiting times to be influencing their satisfaction [8]. However, these studies had methodology limitations regarding the selection of patient populations. In specific, this study assesses factors influencing waiting period and patient satisfaction in Al-Ahsa's King Abdulaziz hospital as well as investigates the relationship between them.

## **2. Materials and Methods**

The research applied a cross-sectional approach and it was undertaken at specialized clinics in the outpatient department including family medicine, orthopedics, neurology, cardiology, rheumatology, and pulmonology. The Epi software program was used to estimate the sample size whereby the established final sample was 406 adult patients. Besides, in the selection of patients, a multi-stage systematic random technique was used. Clinic selection was the first stage whereby the respective registration offices and the number of doctors and nurses working in those clinics were identified. The second stage entailed the selection of patients who were served in the targeted outpatient clinics until the sample size that was targeted was reached. Besides, a pilot study comprising 15 patients was performed to test the logistics of the research. Structured and self-administered questionnaires were distributed to all the respondents. In the questionnaires, the respondents were required to enter data related to their demographics and social identification, which include age, sex, marital status, levels of education and occupational status, place of residence as well as the respective outpatient clinic where each respondent was served. Medical interns recorded the overall waiting time for every patient in the respective outpatient clinics. The patients' satisfaction score was determined by 9 questions whereby patients responded by either strongly disagreeing, disagreeing, neutral, agreeing, and strongly agreeing. The strongly disagreeing and disagreeing lot was deemed as dissatisfied while neutral, agreeing, and strongly agreeing were considered satisfied with the offered services. The obtained data were recorded into a Microsoft Excel application whereas the SPSS application analyzed the data collected. Besides, all the data variables were first coded before being recorded and checked before being analyzed. Calculation of descriptive statistics was also performed on the data

including mean and standard deviation whereas a non-parametric chi-square test was applied in determining the difference in satisfaction and dissatisfaction of patients. Furthermore, the relationship between waiting period and satisfaction of patients was tested through a multiple univariate logistic regression model.

### **3. Results**

Females were the majority representing 70% of the tested sample whereas 79% of the patients were married, with 37% recording to have a good education, 35% averagely educated and 28% poorly educated. The majority of the patients were unemployed, 70%, with 12% of the employed being military personnel. The family medicine clinic contributed to more than 49% of the total sample while the remaining clinics sharing the remaining proportion with the majority of the patients being local Al-Ahsa city residents. Overall, half of the patients were determined as being satisfied with a mean satisfaction score of 38.6 with a 6.6% standard deviation. It was also established that the satisfaction score significantly varied with the waiting time whereby the patients who attended family medicine clinics recorded high levels of satisfaction. Moreover, according to the multiple univariate logistic regression analysis, patients' age and sex, level of education as well as the respective outpatient clinic are the significant patient satisfaction predictors.

### **4. Discussion**

Considering the sample size, patients' satisfaction level is considered relatively low with approximately 50% of the patients reporting dissatisfaction with the period of waiting. The study also established that patients' waiting period was significantly correlated with satisfaction scores. There is consistency in these findings with other previous study that was undertaken in Saudi's Jeddah University hospital by Aldaqal and his colleagues which established that waiting period impacted patients' perceptions on satisfaction and quality of care [9]. Regarding satisfaction scores, the results are also in line with another Saudi study that showed satisfaction of patients with a waiting period to be low at 62%. Besides, another study by Al –Moajel and his colleagues conducted in Jubail city's primary healthcare clinics demonstrates that longer waiting period more so the period between registration and consultation leads to higher dissatisfaction rates [10]. Several other pieces of research have explored how the period of waiting and patient satisfaction are related, therefore asserting that waiting periods exceeding 30 minutes are not uncommon. However, the varying consultation periods in different countries affect the comparability of these findings to other related studies. The standard operating procedures require average waiting time in district level hospitals to be 1 minute, medicine dispensation 2-3 minutes, and laboratory investigation 10 minutes. However, the study's findings show slightly longer periods compared to the provided benchmarks. This may have been largely influenced by the registration period, which is affected by various factors including gender, place of residence, and the type of clinic. The higher patient satisfaction in the family medicine clinic may have been contributed by the type of hospital, social-cultural settings as well as the accessibility and availability of medical resources. The study's implication in the current practice is that longer waiting periods lead to high levels of patient dissatisfaction. The study's limitations include the probable bias in the selection of samples and the unreliability of the measures used in the research. Besides, the responses from the patients may have been biased as they were interviewed while seeking medical attention hence fearing putting their medical care in jeopardy.

## **5. Conclusion**

Overall, waiting time differed with the type of clinic attended by the patients whereby there was experienced fewer waiting periods in the clinic of family medicine compared to other clinics hence higher satisfaction levels. From the research, a half of the patients confirmed dissatisfaction with the period of waiting. Therefore, there is stillroom for improving healthcare quality. In that regard, it is recommendable for various hospital managements to deal with waiting period issues to improve patient satisfaction. Besides, programs of quality improvement may consider using these results as a basis for implementing interventions to improve patient satisfaction.

## **Acknowledgements**

I'm thankful to all the support I received from my colleagues and my family. Dr. Hamad AlSubaie.

## **References**

- [1]. H. Farley, E.R. Enguidanos, C.M. Coletti, L. Honigman, A. Mazzeo, T.B. Pinson, et al. "Patient satisfaction surveys and quality of care: an information paper". *Annals of Emergency Medicine*, vol. 64, pp. 351-7, Oct. 2014.
- [2]. B. Prakash. "Patient satisfaction". *Journal of Cutaneous and Aesthetic Surgery*, vol. 3, pp. 151, Sep. 2010.
- [3]. P.P. Groenewegen and J.B. Hutten. "Workload and job satisfaction among general practitioners: a review of the literature". *Social Science & Medicine*, vol. 32, pp. 1111-9, Jan. 1991.
- [4]. M.S. O'Malley, S.W. Fletcher, R.H. Fletcher and J.A. Earp. "Measuring patient waiting time in a practice setting: A comparison of methods". *The Journal of Ambulatory Care Management*, vol. 6, pp. 20-7, Aug. 1983.
- [5]. F. Camacho, R. Anderson, A. Safrit, A.S. Jones and P. Hoffmann. "The relationship between patient's perceived waiting time and office-based practice satisfaction". *North Carolina Medical Journal*, vol. 67, pp. 409-13, Nov. 2006.
- [6]. R.T. Anderson, F.T. Camacho, R. Balkrishnan. "Willing to wait?: the influence of patient wait time on satisfaction with primary care". *BMC Health Services Research*, vol. 7, pp. 1-5, Dec. 2007.
- [7]. K.A. Alnemer, I.A. Al-Homood, A.A. AlNemer, O.M. Alshaikh, M.A. Alsaidan and A.T. Alzahrani. "A multicenter study of factors affecting patient's satisfaction visiting primary health care clinics in Riyadh, Saudi Arabia". *Family Medicine & Medical Science Research*, vol. 4, pp. 1-4, 2015.
- [8]. M. Alahmari, I.A. Aljasser and B. Sasidhar. "Patient satisfaction and perception of quality of care in outpatient clinic in an eye specialist hospital in Saudi Arabia". *Journal of Economics, Management and Trade*, vol. 9, pp. 1-8, Oct. 2015.
- [9]. S.M. Aldaqal, H. Alghamdi, H. AlTurki, B.S. El-deek and A. Kensarah. "Determinants of patient satisfaction in the surgical ward at a University Hospital in Saudi Arabia". *Life Science Journal*, vol. 9, pp. 277-80, 2012.
- [10]. A. Almoajel, E. Fetohi and A. Alshamrani. "Patient satisfaction with primary health care in Jubail City, Saudi Arabia". *World Journal of Medical Sciences*, vol. 11, pp. 255-64, 2014.