Original Article

Factors affecting patient's satisfaction in outpatient clinics in Jordan: cross-sectional study

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Background: Every healthcare institution aims to reach the highest quality of care. Quality of care comprises the structure, the process, and the outcome of the care. In this study, we will assess the structure and the process of healthcare system that can affect patient's general satisfaction.

Methods: In this cross-sectional study, we surveyed patients visiting outpatient's clinics at Jordan University Hospital (JUH). We focused on aspects that are, according to previous studies, significantly affecting patient's satisfaction, these include interaction with all healthcare providing personnel, time needed to complete different services, general cleanliness, and food services.

Results: A total of 215 participants were included in this study, there were 77 (36%) men and 138 (64%) women. the mean score differences between those who rated their impression as "poor" and those who rated it as "excellent" were as following: interaction score, mean difference of 13.3 [95% confidence interval (CI): 6.4 to 20.19; P<0.001]; timing score, mean difference of 2.61 (95% CI: 0.12 to 5.35; P=0.044); cleanliness score, mean difference of 6.44 (95% CI: 3.81 to 9.08; P<0.001); and food score, mean difference of 5.07 (95% CI: 2.37 to 7.76; P<0.001).

Conclusions: Focusing on all aspects affecting patient's satisfaction can both improve the general impression about the facility and increase patient's loyalty to it.

Keywords: Patient satisfaction; quality of care; healthcare services; developing country

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Introduction

Reaching the highest quality of care possible is the aim of all healthcare institutions worldwide, though there is a wide variation in the efforts spent toward this aim. To reach the highest quality of care, attention must be drawn to all aspects of quality of care, which were summarized by Donabedian *et al.* to comprise the structure (availability of infrastructure), the process (details of care process), and the outcome of the care (mortality and morbidity) (1), and to collectively lead to patient's satisfaction. Although more attention has been paid to structure and process, most organizations that provide rankings for healthcare institutions still depend on the outcome measures (2). An example for this is Germany, where an annual survey

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to measure patient's satisfaction regarding all healthcare services provided has been already established since 2005 and it was found to have a positive impact on improving quality of management as well as patient's satisfaction (3). Patient's satisfaction is defined as a personal evaluation of health care services and providers, by capturing a personal evaluation of care that cannot be known by observing care directly (4). In the past, most patients usually lacked the professional knowledge to judge the quality of the service being provided, and to build their satisfaction based on their own experience, but currently, with the high competitiveness and advanced technologies, patients are more aware about healthcare and tend to have greater expectations (5).

The healthcare system in Jordan consists of public hospitals (funded mainly by the government), private hospitals (funded by investors), and university-based hospitals (funded mainly by universities). In Jordan, several studies have tried to find factors that affect patient's satisfaction. Most of these studies were concerned about patient's satisfaction when they interact with nursing staff (6,7). Regarding patient's satisfaction in outpatients' clinics, a previous study that aimed to measure patient's satisfaction upon visiting orthodontic clinics, found several affecting factors that were mostly related to the patient himself/herself (e.g., age, gender, disease…, etc.) rather than the facility (8). In this study, we will assess factors affecting patient's general satisfaction about a healthcare facility in the outpatient clinics in a tertiary hospital in Jordan.

Methods

This study was conducted in accordance with latest declaration of Helsinki, and was approved by institutional review board (IRB) committee of Jordan University Hospital (JUH) (Reference: 10/20/8/64), and included patients visiting outpatient clinics at JUH. All patients were consented about the use of their data for quality improvement and research purposes. All questionnaires were anonymized, so that patient's identifiers (i.e., patient's name and file number) were not included in the survey. The questionnaire used here was developed and validated into the Arabic version (the national language in Jordan) before conducting the original survey. Each survey took around 15 minutes to be completed, where the research assistant interviewed and collected the data directly from each patient.

Study design

In this cross-sectional study, we performed a brief literature review to build our Arabic-language questionnaire that can measure all aspects that may affect patient's satisfaction, other than morbidity and mortality (outcome). The following aspects were the ones that significantly affect patient's satisfaction:

- Interaction score: measuring patient's satisfaction while interacting with healthcare personnel, including doctors and nurses;
- Time needed to complete different services: which is the time from entering the clinic till completing the visit;
- General cleanliness: the cleanliness of the facility;
- Food services: satisfaction with drinking machines and the cafeteria services.

Answers are provided via Likert scale, and then we developed a scoring system for each domain as following:

- A score of 5 for strongly agree.
- A score of 1 for strongly disagree.
- A score of 3 for don't know.
- Each domain's score represents the total score for each question in that domain.

We also added questions to measure the effect of other factors including availability of medications, availability of directions, and patient's general demographics.

Participants

We collected questionnaires using stratified sampling technique from all outpatient clinics at JUH in the period from 1st of January to 30th of June 2017. We included adult patients, or parents of children in pediatric clinics, we surveyed patients who completed their visit and took their medications from hospital's pharmacy; the final step in the routine healthcare process at JUH. We excluded patients who were visiting the hospital for medication refill only (didn't see doctors).

Statistical analysis

We generated descriptive statistics for the included sample population using counts and proportions.

We used independent sample *t*-test and one-way ANOVA to study mean difference between generated scores for interaction, timing, cleanliness, and food services, and both; if patients would advise their peers to visit our

hospital and their general impression, respectively. We used Kruskal-Wallis and Chi-square tests to study the differences in gender, type of clinic, place of living, insurance, availability of directions, and availability of drugs for both general impression and if patients would advise their peers to visit our hospital. P value threshold of 0.05 was deemed as significant.

Results

A total of 215 participants were included in this study, there were 77 (36%) men and 138 (64%) women. Most of this study's participants [i.e., 202 (94%)] were insured. 123 patients (57%) were from the capital city of Amman (same hospital's city), and 92 patients (43%) were from outside Amman. Details regarding visiting clinics are provided in (*Table 1*).

Forty-four patients (20.5%) rated their general impression as excellent, 56 (26.0%) rated it as very good, 100 (46.5%) as good, 7 (3.3%) rated it as accepted, and only 8 patients (3.7%) rated it as poor. Although not statistically significant, females generally rate their general impression better, as 3.8% of females rated it as poor compared to 4.1% for males, and 22.9% rated it as excellent compared to only 17.8% for males. No significant difference in regard to clinics and general impression. Upon analyzing the mean interaction, timing, cleanliness, and food services scores with general impression, we found that the mean score for the four domains were significantly different between each of the impression choices (P values were <0.001, =0.006, <0.001 and <0.001, respectively). Median and 25% to 75% quartiles for each domain for each general impression choice are shown in (*Table 2*). The mean score differences between those who rated their impression as "poor" and those who rated it as "excellent" were as following:

- Interaction score, mean difference of 13.3 [95% confidence interval (CI): 6.4 to 20.19; P<0.001].
- Timing score, mean difference of 2.61 (95% CI: 0.12 to 5.35; P=0.044).
- Cleanliness score, mean difference of 6.44 (95% CI: 3.81 to 9.08; P<0.001).
- Food services score, mean difference of 5.07 (95% CI: 2.37 to 7.76; P<0.001).

One hundred and seventy-six patients (91.2%) admitted that they would advise their peers to visit our hospital, compared to only 17 patients (8.8%) who would not. No gender difference or a clinic-based difference regarding advising the peers to visit the clinic were found. Upon analyzing mean score difference for those who would advise their peers to visit our hospital and those who would not, only timing score was significant (P=0.028). Mean score for those who would advise was 8.44 (SD 2.51) compared to 9.88 (SD 3.46) for those who would not, taking into account that higher timing scores represent more time needed for the service. *Table 3* details the general impression of patients who would or would not advice their friends or relatives to

Table 1 Outpatient clinics covered by the survey

Valid	Frequency	Percent (%)
Medicine	76	35.3
General surgery	21	9.8
Pediatric	11	5.1
Gynecology	23	10.7
Sub-surgery	44	20.5
Orthopedic	14	6.5
Family medicine	13	6.0
Dentistry	13	6.0
Total	215	100.0

Table 2 Median and 25% to 75% quartiles for each domain for each general impression choice, where 1 represent "poor" and 5 represent "excellent"

General impression toward hospital	Interaction	Timing	Cleanliness	Food score
Poor	4 [3.5–4]	3 [3–3.5]	3 [2–3.5]	2.5 [2–3]
Accepted	4 [3–4]	3 [3–4]	3 [3–3]	4 [3–4]
Good	4 [4–5]	3 [2–3]	4 [3.5–5]	4 [4–4]
Very good	5 [4–5]	3 [2–3]	4 [4–5]	4 [4–5]
Excellent	5 [5–5]	2 [2–3]	5 [4–5]	5 [4–5]

Table 3 Each domain and the general impression of patients who would and those would not advice their friends or relatives to come to the hospital for treatment

Domain	Do you advise your friends or relatives to come to the hospital for treatment?			
	Yes		No	
	Count	%	Count	%
Interaction				
Poor	0	0.0	0	0.0
Accepted	1	50.0	1	50.0
Good	7	63.6	4	36.4
Very good	58	86.6	9	13.4
Excellent	110	97.3	3	2.7
Timing				
Excellent	0	0.0	0	0.0
Very good	64	92.8	5	7.2
Good	98	93.3	7	6.7
Accepted	11	73.3	4	26.7
Poor	3	75.0	1	25.0
Cleanliness				
Poor	0	0.0	0	0.0
Accepted	3	50.0	3	50.0
Good	25	75.8	8	24.2
Very good	70	94.6	4	5.4
Excellent	78	97.5	2	2.5
Food score				
Poor	0	0.0	0	0.0
Accepted	7	70.0	3	30.0
Good	20	83.3	4	16.7
Very good	87	92.6	7	7.4
Excellent	62	95.4	3	4.6
General impression toward hospital				
Poor	2	28.6	5	71.4
Accepted	4	57.1	3	42.9
Good	77	95.1	4	4.9
Very good	49	90.7	5	9.3
Excellent	44	100.0	0	0.0

come to the hospital for treatment.

Moreover, we studied the effect of other factors on both general impression and future peer advice including: gender, type of clinic, being in the same hospital's city, availability of directions, and availability of medications. For general impression, we only found significant difference for availability of medications (P=0.029), as the median rate for available medication on Likert scale was 3 (25^{th} to 75^{th} percentiles of 3 to 4), compared to a median rate of 1 (25^{th} to 75^{th} percentiles of 1 to 2). For advising peers, only availability of medications significantly affected visitors' decision to advise (P=0.037), as only 4% would advise peers to visit when medications aren't available compared to 13.5% when medications are available.

Discussion

In this study, we demonstrated the importance of five main factors on the general impression of patients visiting outpatient clinics and their intention to advice their peers to visit, these factors are: interaction with service providers, time needed for services, the cleanliness of the healthcare facility, food services, and availability of medications.

Improving healthcare interaction quality with patients will attract more customers and increase loyalty to the healthcare institution, a goal not easily maintained (9). It is well known that the good communication between patients and healthcare providers is very important as it might affect the outcome, which is why patients are usually keen to build a good relationship with their healthcare providers (10). We found that interaction with healthcare providers has the biggest effect on patient's general impression about the healthcare facility and its services. Our study goes hand in hand with previous studies that emphasize on considering a possible shift from mere treatment orientation to more behavioral orientation (5). In a previous study done in Jordan that investigated patient's satisfaction regarding nursing care and communication, it found that patient's gender and educational levels affect satisfaction about interaction (6,7). Moreover, Patient's personality trait was found to be an important factor to determine the overall satisfaction (8).

Lengthy outpatient waiting times carry a considerable challenge to those aiming to improve the quality of healthcare services (11). The negative impact of waiting time and its effect on the overall satisfaction is related to patient's expectations, so it is a problem in both developed (12) and developing countries as well (13), regardless of

the duration. In a study done on both Jordanian and Egyptian hospitals, lengthy waiting time was found to be one of the biggest problems behind low patient's satisfaction (14). Although the impact of waiting time in our sample population has significantly affected the general impression, as also found in other studies (15), its effect was the least among other considered factor, partly due to our patients' expectations.

General facility cleanliness is one of the important determinants of patient's satisfaction as shown by our study and a previous study that also found cleanliness to affect satisfaction of patients with higher educational levels (16). On the other hand, increasing the supplementary services (i.e., food services in our study) has improved both general impression and advising peers. A related finding in a previous report has showed increased frequency of visits in association with improvement in these services (17). The effect of these supplementary services was shown to be affected by patients' demographics, mostly age (18). Moreover, supplementary services usually reflect the overall quality of the facility itself, in which satisfaction of patients might be reflected by their availability, especially in outpatient settings (14). Finally, availability of medications is also an important determinant of patient's general impression and future peer advice, although previous reports studied this subject in details by measuring satisfaction of availability of assessing personnel with the medications and the accessibility of pharmacies (19), we only measured drug availability in its general term.

Although we tried to include all types of outpatient clinics for different specialties, this study has some limitations. Selection bias might be an issue. As the research assistant from the hospital staff is doing the survey, patients might be biased toward answering better responses, despite reassurance about the blinding of their responses. Future studies with larger sample size should be considered to validate our results. We believe future studies should consider asking about the specific groups of medications that mostly affect their satisfaction (e.g., essential disease treatment *vs.* supplements) in the medication's domain.

Conclusions

This paper discusses the most important determinants of overall impression about outpatient clinics in Jordan. We demonstrated the main factors affecting patient's satisfaction when they are visiting outpatient clinics and their effect on patient's general impression and loyalty to the institution. We believe that improving communication between patients and healthcare providers is the main factor affecting overall patients' satisfaction. Reducing time needed to complete services, improving general cleanliness of the facilities, improving food services, and improving medications availability are important factors to be considered. Collectively, these can significantly increase patients' loyalty to the institution.

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Footnote

Conflicts of Interest: All authors have completed the ICMJE uniform disclosure form (available at http://dx.doi.org/10.21037/jhmhp.2019.01.01). The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. This study was conducted in accordance with latest declaration of Helsinki (as revised in 2013), and was approved by institutional review board (IRB) committee of Jordan University Hospital (JUH) (Reference: 10/20/8/64), and written informed consent was obtained from the patient for publication of this manuscript and any accompanying images.

References

1. Donabedian A. Evaluating the quality of medical care. Milbank Mem Fund Q 1966;44:Suppl:166-206.
2. Chow A, Mayer EK, Darzi AW, et al. Patient-reported outcome measures: the importance of patient satisfaction

in surgery. Surgery 2009;146:435-43.
3. Jenkinson C, Coulter A, Bruster S. The Picker Patient Experience Questionnaire: development and validation using data from in-patient surveys in five countries. Int J Qual Health Care 2002;14:353-8.
4. Ware JE Jr, Snyder MK, Wright WR, et al. Defining and measuring patient satisfaction with medical care. Eval Program Plann 1983;6:247-63.
5. Singh Gaur S, Xu Y, Quazi A, Nandi. Relational impact of service providers' interaction behavior in health care. Managing Service Quality 2011;21:67-87.
6. Alasad JA, Ahmad MM. Patients' satisfaction with nursing care in Jordan. Int J Health Care Qual Assur 2003;16:279-85.
7. Alhusban MA, Abualrub RF. Patient satisfaction with nursing care in Jordan. J Nurs Manag 2009;17:749-58.
8. Al-Omiri MK, Abu Alhaija ES. Factors affecting patient satisfaction after orthodontic treatment. Angle Orthod 2006;76:422-31.
9. Roberts BW, Wood D. Personality development in the context of the Neo-Socioanalytic Model of personality. In: Mroczek D, Little T. editors. Handbook of Personality Development. Mahwah, NJ: Lawrance Erlbaum Associates, 2006;Chapter 2:11-39.
10. Sweeney JC, Danaher TS, McColl-Kennedy JR. Customer effort in value cocreation activities: Improving quality of life and behavioral intentions of health care customers. J Serv Res 2015;18:318-35.
11. McCarthy RE 3rd, Boehmer JP, Hruban RH, et al. Long-term outcome of fulminant myocarditis as compared with acute (nonfulminant) myocarditis. N Engl J Med 2000;342:690-5.
12. Maitra A, Chikhani C. Patient satisfaction in an urban accident and emergency department. Br J Clin Pract 1992;46:182-4.
13. Umar I, Oche MO, Umar AS. Patient waiting time in a tertiary health institution in Northern Nigeria. J Public Health Epidemiol 2011;3:78-82.
14. Zineldin M. The quality of health care and patient satisfaction: an exploratory investigation of the 5Qs model at some Egyptian and Jordanian medical clinics. Int J Health Care Qual Assur Inc Leadersh Health Serv 2006;19:60-92.
15. Aswar Nandkeshav R, Kale Kalpana M, Rewatkar Mangesh P, et al. Patients' Waiting Time and Their Satisfaction of Health Care Services Provided at Outpatient Department of Government Medical College, Nanded (Maharashtra, India). Int J Health Sci Res 2014;4:21-7.
16. Quintana JM, González N, Bilbao A, et al. Predictors of patient satisfaction with hospital health care. BMC Health Serv Res 2006;6:102.
17. Cho WH, Lee H, Kim C, et al. The impact of visit frequency on the relationship between service quality and outpatient satisfaction: a South Korean study. Health Serv Res 2004;39:13-33.
18. Fletcher RH, O'Malley MS, Earp JA, et al. Patients' priorities for medical care. Med Care 1983;21:234-42.
19. MacKeigan LD, Larson LN. Development and validation of an instrument to measure patient satisfaction with pharmacy services. Med Care 1989;27:522-36.

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