

Patient expectation and satisfaction in different hospitals in Irbid, Jordan

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ABSTRACT

Objectives: This study attempts to identify factors contributing to patients' satisfaction and to examine the relationship between patient satisfaction and patient expectations.

Methods: The study sample consisted of 360 patients randomly drawn from the outpatients' practice of 2 health centers in Irbid, North Jordan; a university and governmental one. Patients' satisfaction was assessed using a self-administered patient satisfaction questionnaire. Patients' expectations were assessed by exposing patients to a series of video clips showing pre-tested patient provider encounters.

Results: On average, users of the Community Health Center had lower expectation levels and higher satisfaction means when compared to users of the University Health Center. The study results showed that

patient satisfaction was mainly influenced by patient expectation of received care even after adjustment for socio-demographic variables.

Conclusion: This study therefore, argues that while assessment of patient satisfaction is useful as a monitoring indicator for overall health care delivery performance, still interventions are required to improve the delivered care. There is a need to examine client expectations and tailor services accordingly since satisfaction measures can only diagnose a problem while expectation assessment can identify clients needs and thus program managers can better design health services delivery.

Keywords: Patient satisfaction, expectation, primary health care delivery.

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Patient satisfaction (PS) defined as "multiple evaluation of distinct aspects of health care which are determined in some ways by the individuals' expectations, attitudes and comparison process".¹ It represents in general, the patients overall assessment of physicians, delivered care, structure, process and outcome of their care.² While numerous factors affect patient satisfaction³ including financing and organization of care,^{4,5} waiting time,^{6,7} health status,⁸ and the patient's own expectations,⁹ the provider of care remains a key element in patient satisfaction. Physicians' gender,^{10,11} practice behavior such as providing health education, performing a physical

examination¹² and interactive skills¹³ have been shown to affect patient satisfaction. It has been shown that PS can serve as a predictor of utilization of health services, continuity of care and overall patient compliance.^{14,15} It has also been suggested that patients may be more satisfied with the provided health care services which, meet their expectations.^{15,16} If the health provider fails to perform in a way that conforms to a patient's expectations, it will be reflected negatively on PS and may increase the frequency of doctor shopping. Studies, especially those carried out in developing countries, have consistently shown a good level of

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PS in spite of poor services.¹⁷ Such an odd finding was hypothesized to be due to the low level of expectation of health care services. The literature however, provides very little information on operationalization and measurement of patient expectations. This study attempts to investigate the proposed relationship between patient expectation and satisfaction using the approach of exposing patients to video clips of selected patient provider interactions and then examining their reactions to them as compared to their satisfaction with the actual encounter with the health provider.

Methods. The study took place in 2 health care facilities providing general practice care in Irbid City, North Jordan. Both facilities are administered by the Medical School of the Jordan University of Science and Technology. The first is a government comprehensive health center (Al-Sareeh Center) that provides care to a low to middle income community. The 2nd is the University Health Center (JUST Center) which provides health services to university staff, their families, university students, and the local community. The study first assessed the level of patients expectations by exposing those coming to receive health care from the general practice clinics of the 2 centers to previously prepared and tested versions of video clips. The video clips reflected 6 dimensions of health service quality including patient-provider relationship, physician-patient contentment, access to care, technical quality, continuity of care and availability of health services presented in a positive patient-provider behavior, negative and positive behavior in sequential order and mixed positive and negative in random order. The duration of each video show ranged between 20-30 minutes. The clips measured patients' reactions to certain concepts of health services such as: 1. Privacy, confidentiality, courtesy and respect and caring and concern about feeling. 2. Physician patient contentment, referring to explanation of medical problem, and explanation of medical procedure and treatment plan. 3. Technical quality, referring to thoroughness of providers of care. Patients attending the 2 centers during the month of April, 1994 were randomly selected from the 2 centers and allocated to one of 3 groups in order to study their expectations. A total of 163 at Al-Sareeh and 147 at JUST were exposed to 3 types of video clips (A, B and C). Group A represents patients who were exposed to clips that demonstrated negative aspects of patient provider encounter. Group B refers to patients who watched the clip demonstrating negative and positive aspects alternatively arranged. While Group C represents patients who watched the clip demonstrating negative and positive aspects of care in random order. The reason for choosing 3 groups of exposure was based on an assumption that

clients' responses may be modified depending on which type of video clip is shown. It was felt that portrayal of negative followed by positive aspects of care would help clients better identify with a particular aspect of care since they will have something to compare with. For the purposes of this study, group A was dropped from the analysis since the initial data analysis showed the level of expectation in group A was significantly different from Group B and C. It was concluded that in order for clients to accurately make an opinion about what they saw, it may not be sufficient to just see negative aspects of care. It was assumed that clients in group B and C were similar to each other because both groups were exposed to video clips that contrast positive and negative aspects of care. The remaining part of this paper will only focus on groups B (n=92) and C (n=102). Patients were supplied with forms on which they reported their opinions about what they watched. For each video clip, patients commented on what they saw by indicating whether they considered a certain behavior appropriate or not depending on their expectation of what that behavior should be. The responses of patients were then quantified in a way that gave a score of one for accurate identification of either satisfactory behavior or inappropriate behavior in the encounter according to the authors' definitions while, a score of zero was given for inaccurate identification. The mean expectation values were then calculated for each group. Patient Satisfaction was measured using an adapted version of the Patient Satisfaction Questionnaire (PSQ) developed by John E. Ware¹⁸ using a 5-point Likert type scale ranging from strongly disagree to strongly agree. The lowest scale was given to strongly disagree and the highest scale was given to strongly agree.

Results. As shown in Table 1, patients at the community health center were mostly adolescents (54%), being mostly female (83%) with about 10 years of education, and a family income of about JD 184 per month (\$1 = JD 0.7). About 3 quarters of clients had some form of health insurance (74%) and 12% were employed. By comparison, the university health center clients were also largely young in age (65%), female (55%), and had about 13 years of education, and a family income of about JD 287 per month. The majority had health insurance (89%), and about one fourth (23%) were employed.

Patient expectations and satisfaction. The data in Table 2 shows mean satisfaction and expectation scores by health center. On average, the community health center clients had a lower expectation level (2.19±0.41) when compared to the university health center clients (2.46±0.43), the difference was statistically significant (P <0.05). However, mean level of satisfaction in the 2 health centers was

Table 1 - Frequency distribution of selected demographic variables by health center.

Demographic variables	Health Center	
	Community n = 92	University n = 102
	n (%)	n (%)
Age (years)		
18-24	50 (54)	66 (65)
25-34	19 (21)	17 (17)
35 or older	23 (25)	19 (18)
Sex		
Male	16 (17)	46 (45)
Female	76 (83)	56 (55)
Employed		
Yes	11 (12)	23 (23)
No	81 (88)	79 (77)
Income		
Low	27 (29)	42 (41)
Middle	19 (21)	16 (16)
High	46 (50)	44 (43)
Insurance		
Present	68 (74)	91 (89)
Absent	24 (26)	11 (11)

Table 3 - Mean patient satisfaction by health center and selected demographic variables.

Demographic variables	Health Center					
	Community			University		
	n	Mean	SD	n	Mean	SD
Sex						
Male	16	3.3	0.69	46	3.1	0.71
Female	76	3.6	0.76	56	3.1	0.75
Employed						
Yes	11	3.4	0.66	23	3.1	0.71
No	81	3.6	0.76	79	3.1	0.73
Insurance						
Present	68	3.6	0.76	91	3.1	0.75
Absent	24	3.7	0.73	11	3.3	0.50
Age						
18-24	50	3.3	0.74	66	2.8	0.61
25-34	19	3.7	0.63	17	3.4	0.67
35 or older	23	4.1	0.52	19	3.7	0.76
Income						
Low	27	3.5	0.78	42	3.0	0.74
Middle	19	3.6	0.87	16	2.9	0.59
High	46	3.7	0.69	44	3.2	0.73

Table 2 - Mean satisfaction and expectation components by health center.

Client satisfaction and expectation components	Health Center				t-value
	Community		University		
	Mean	SD	Mean	SD	
Client provider relationship	3.95	0.68	3.61	0.71	3.34*
Information exchange	3.80	0.82	3.40	0.90	3.26*
Technical competence	3.53	1.12	2.88	1.02	4.21*
Continuity of care	3.65	1.02	2.91	0.99	5.07*
Availability of services	3.85	1.19	3.10	1.02	4.70*
Mean satisfaction	3.59	0.75	3.08	0.72	4.80*
Mean expectation	2.19	0.41	2.46	0.43	-4.46*

* Significant beyond the 0.05 level; SD - standard deviation

Table 4 - Mean patient expectation by health center and selected demographic variables.

Demographic variables	Health Center					
	Community			University		
	n	Mean	SD	n	Mean	SD
Sex						
Male	16	2.1	0.46	46	2.3	0.48
Female	76	2.2	0.40	56	2.5	0.36
Employed						
Yes	11	2.1	0.51	23	2.4	0.51
No	81	2.2	0.40	79	2.5	0.41
Insurance						
Present	68	2.2	0.42	91	2.5	0.42
Absent	24	2.1	0.37	11	2.3	0.51
Age						
18-24	50	2.3	0.37	66	2.5	0.34
25-34	19	2.2	0.41	17	2.4	0.51
35 or older	23	1.9	0.38	19	2.2	0.52
Income						
Low	27	2.3	0.40	42	2.4	0.38
Middle	19	2.2	0.45	16	2.4	0.47
High	46	2.1	0.39	44	2.5	0.47

Table 5 - Correlation matrix of client mean expectation and components of client satisfaction.

Variable	Mean expectation	Client provider relationship	Information exchange	Technical competence	Continuity of care	Availability of services	Overall satisfaction
Mean expectation	1						
Client provider relationship	-0.35	1					
Information exchange	-0.34	0.69	1				
Technical competence	-0.38	0.72	0.70	1			
Continuity of care	-0.35	0.42	0.33	0.37	1		
Availability of services	-0.37	0.47	0.40	0.54	0.47	1	
Overall satisfaction	-0.33	0.59	0.51	0.53	0.41	0.57	1

*Statistically significant beyond the 0.05 level

Table 6 - Multiple linear standardized regression β -coefficients and t-values for selected independent variables on client's satisfaction components.

Independent variables	Dependent variables (client satisfaction components)						
	Client provider relationship	Information exchange	Technical competence	Continuity of care	Availability of services	Overall satisfaction	Mean satisfaction
Mean client expectation							
Standardized β	-0.34*	-0.34*	-0.34*	-0.32*	-0.31*	-0.26*	-0.43*
t-value	-4.60	-0.49	-4.65	-4.32	-4.46	-3.60	-6.27
Health Center ⁺							
Standardized β	-0.14	-0.05	-0.17*	-0.05	-0.18*	-0.24*	-0.15*
t-value	-1.75	-0.59	-2.23	-0.61	-2.36	-3.03	-2.05
Gender ⁺⁺							
Standardized β	0.08	0.24*	0.07	0.04	0.17*	0.05	0.15*
t-value	1.05	3.33	0.93	0.48	2.46	0.67	2.15
Income							
Standardized β	0.05	-0.05	0.01	-0.001	-0.04	0.05	-0.01
t-value	0.62	-0.66	0.13	-0.01	-0.52	0.75	-0.15
Insurance ⁺⁺⁺							
Standardized β	-0.07	-0.05	0.01	0.07	0.05	0.07	0.01
t-value	-0.96	-0.77	0.18	0.95	0.69	0.99	0.21

*Statistically significant beyond the 0.05 level
+ Comparison group: community health center
++ Comparison group: male
+++ Comparison group: insured

reversed. The community health center clients were more satisfied (3.59 ± 0.75) than the university center clients (3.08 ± 0.72). The difference in levels of satisfaction was statistically significant. The difference in the levels of satisfaction between the 2 centers continued to exist when other components of client satisfaction were examined, Table 2. In the community health center, satisfaction levels were not significantly different when sociodemographic variables were examined although females, and unemployed older patients and high-income categories had higher mean satisfaction levels, Table 3. In the university health center setting, the more satisfied clients were the uninsured, older patients and those in the middle income category, Table 3. Analysis of patient expectation by sociodemographic variables in the community health center showed that sex, employment status and the presence of insurance did not make a difference, Table 4. Moreover, there was a downward trend in patient expectation with increasing age and income. A similar picture is seen in the university health center. The relationship between client levels of satisfaction and their expectations were further investigated by examining the correlation between mean expectation levels and mean levels of client overall satisfaction components and individual components. The data in Table 5 shows that the higher the level of expectations, the lower the level of client's satisfaction, with the relationship being statistically significant.

Since clients' expectations and satisfaction are expected to be affected by certain background variables, a multiple regression analysis was performed. Components of client satisfaction and

overall satisfaction measures were used as dependent variables. Each was entered into a separate multiple regression equation. In each equation, mean client expectation, type of health center, presence of health insurance, sex, and income were entered as independent variables. The data in Table 6 shows that mean client expectation was significantly related to mean satisfaction for all components. Client provider relationship was found to be affected negatively by expectation levels. Type of health center was also found to significantly affect client provider relationship. Clients visiting the community health center were more satisfied with their relationship with the provider of care. Satisfaction with information exchange was related to client expectation and also to client gender. Females were found to be more satisfied with information given in comparison to males. Technical competence of providers was related to client expectation levels and type of health center, while continuity of care was only significantly related to mean expectation levels. Moreover, client satisfaction with the availability of services was related to expectation, type of health center and gender.

Discussion. In this study it was found that patients at the university health center had a higher overall expectation level than patients at the community health center. This may be due to the higher proportion of young adult patients and patients with 10 years or more of education. Young patients had higher levels of expectations than others did, because they were mainly university educated. The high levels of expectations in the educated patients

group may be due to the level of critical thinking. Educated clients may form their own views of what an ideal relationship between patients and health providers should look like. University staff and students are expected to be more critical than the general public. This finding corresponds with previous studies that also found an inverse relationship between patient expectations and age, and a direct relationship between patient expectations and education.¹⁹ The study also showed that young adult patients and those with 10 years or more of education had lower levels of satisfaction than other patients. We argue that the low level of satisfaction was related to the level of expectation that these groups had. This finding corresponds with a survey carried out in South Auckland, New Zealand that described PS with access to general practitioner services and found that patients' overall satisfaction was lowest among the 18-28 year old category.²⁰ The above finding also corresponds with previous studies that found an inverse relationship between PS and age.^{21,22} This study has demonstrated that patients with higher levels of expectation were less satisfied than patients with lower levels of expectation. This means that patients with higher expectation levels wanted to receive a higher quality of health services, but they failed to get it. This finding corresponds with a study of 396 patients aged 18-65 years which found that patients who expected to receive certain necessary elements of care, such as examination of eyes and failed to receive it, left the academic center with a lower satisfaction level.²³ Moreover, a study of 237 patients with upper respiratory infection conducted in Switzerland showed that when patients received more services in the form of better medication and personal interest they tended to be more satisfied than others.²⁴

In conclusion, the validity of our findings are further supported by the fact that when expectations were regressed on satisfaction and controlling for other sociodemographic variables, the relationship between expectation and satisfaction remained significant. This finding documents an intuitive hypothesis and also proposes that program managers and educators ought to focus on expectation rather than satisfaction. Assessment of patient satisfaction is a relatively easy way of monitoring performance of health care facilities and providers of care but as an evaluation tool fails to pinpoint the needed intervention. We argue that provision of health services needs to be tailored to patients' needs. Assessment of patient's expectation is one way of learning about patients' needs and as this study has shown it also correlates with satisfaction.

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