

Inpatient satisfaction with physician services at King Khalid University Hospital, Riyadh, Saudi Arabia

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رضى المرضى الداخليين عن خدمات الأطباء في مستشفى جامعة الملك خالد في الرياض بالمملكة العربية السعودية
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الخلاصة: قمنا بتقييم رضى 400 من المرضى الداخليين عن خدمات الأطباء في مستشفى جامعة الملك خالد في الرياض، بالمملكة العربية السعودية، وقد تم جمع المعلومات حول خصائص المرضى والأجنحة التي قبلوا فيها في استبيان ارتكز على سلم ليكرت المعياري. وقد حازت عملية القبول في المستشفى على أعلى نقاط الأحرار، في حين كان نصيب التواصل أقل قدر من الأحرار. أما البنود المتعلقة بالخدمات فإن أعلى نقاط الأحرار قد حازتها أسئلة الطبيب عن أحوال مرضاه وعن آرائهم عندما يقدم لهم شرحاً عن الرعاية، فيما حازت أقل النقاط أسئلة الطبيب عن رأي المرضى في جودة الرعاية ومشكلاتها. وقد كان النساء والمرضى الأقل تعليماً، أكثر رضى بما يتلقون من رعاية، مقارنة بالذكور والمرضى الأكثر تعليماً. وكان أكثر المرضى تدمراً من خدمات الأطباء هم الذكور في الأجنحة الجراحية والباطنية. وهذه النتائج توفر لإدارة المستشفى المعلومات اللازمة حول مواطن القصور التي تحتاج إلى تدخل لإصلاحها.

ABSTRACT The satisfaction of 400 inpatients with physician services at King Khalid University Hospital, Riyadh was evaluated. Patient characteristics and ward of admission were collected and a questionnaire based on the standardized Likert scale was used. The highest mean satisfaction score was for admission and the lowest for communication. Among service items, the highest mean score was for physicians enquiring about patient conditions and opinions when planning care and the lowest for physicians asking for opinions about care quality and problems. Female and less educated patients were more satisfied with their care than male and educated patients. Male surgical and medical ward patients were the most dissatisfied with physicians' services. These findings offer hospital management information about shortcomings requiring remedial intervention.

Satisfaction des malades hospitalisés vis-à-vis des prestations fournies par les médecins à l'hôpital universitaire King Khalid de Riyad (Arabie saoudite)

RESUME On a évalué la satisfaction de 400 malades hospitalisés vis-à-vis des prestations fournies par les médecins à l'hôpital universitaire King Khalid de Riyad. Des données ont été recueillies en ce qui concerne les caractéristiques des malades et le service dans lequel ils ont été admis, et un questionnaire fondé sur l'échelle de Likert standardisée a été utilisé. Le score moyen de satisfaction le plus élevé concernait les admissions et le plus faible la communication. Parmi les éléments relatifs aux prestations, le score moyen le plus élevé était attribué aux médecins qui cherchaient à connaître les conditions et opinions des malades lors de la planification des soins et le plus faible aux médecins qui demandaient l'opinion des malades sur la qualité des soins prodigués et les problèmes rencontrés. Les femmes et les malades moins instruits étaient davantage satisfaits de leurs soins que ne l'étaient les hommes et les malades instruits. Les malades de sexe masculin des services de chirurgie et médecine étaient ceux qui étaient les plus mécontents des prestations des médecins. Ces résultats fournissent des informations à la direction des hôpitaux au sujet des insuffisances qui nécessitent des mesures de correction.

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Introduction

Studies of patient attitudes towards health services, health personnel and resources are important to determine whether they meet consumer expectations and needs and to judge consumer satisfaction [1,2]. In Saudi Arabia, such studies have been scarce or of a rather general nature. During the past few years, however, researchers have reported specialized studies of patient attitudes towards and satisfaction with primary health care services [3–6]. These studies have also reported how attitudes and satisfaction with providers and resources relate to various aspects of health care. Such studies are important when planning changes or improvements to health services.

A hospital as a care delivery institution is challenged to provide the quality of care that meets the needs of its clients. Hospital managers, administrators and government agencies therefore conduct surveys on quality of care to identify deficiencies within the multidimensional hospital system that require remedial intervention [7]. Hospital-based quality of care studies often focus on a range of dimensions within the hospital including reception, admission and discharge procedures, housekeeping, sanitation, nutrition services, nursing and physician-led services. Most quality of care studies of patient satisfaction with hospital services have focused on principal care providers [8–11], particularly nurses and physicians.

Physicians play a very significant role in the hospitalization process. They are responsible for the admission of the patient, diagnosis and prescription of medications, monitoring the patient's progress in relation to therapeutic procedures and treatment modalities, and instilling confidence and optimism in the patient in the hope of psy-

chologically enhancing recovery. Perceptions of satisfaction are the result of individual patient characteristics and of the medical care systems they enter and patient satisfaction is substantially correlated to the consumer's perceptions of physician conduct and interaction with patients [12]. Therefore, the extent to which physicians provide these physician-led services to the satisfaction of inpatients reflects the quality of care. Consequently this draws attention to areas that require either managerial or administrative intervention for improvement.

To the best of the author's knowledge since the establishment of King Khalid University Hospital in 1982 there has been no evaluation of the quality of care delivered by physicians to hospitalized patients. The aim of this study was to assess inpatient satisfaction with physician services at King Khalid University Hospital.

Methods

From January 2000 to April 2000, various aspects of inpatient services were evaluated at King Khalid University Hospital, Riyadh, which provides free medical services to eligible patients. The average daily census at the hospital is 547, average occupancy rate is 81%, average turnover interval is 2, average length of stay is 5 days and 701 beds are available. There are 7 wards in the hospital, i.e. medical male, medical female, surgical male, surgical female, obstetric, gynaecologic and paediatric.

A questionnaire that included 83 questions about the hospital, of which 15 pertained to physician-led services, was used to collect information from inpatients. The questionnaire was based on the standardized Likert scale of patient satisfaction. For each question the minimum score was '1'

(dissatisfaction) and the maximum was '5' (satisfaction). The questions addressed three main components: admission and diagnosis; communication; and care of the patient. These questions were compiled from several studies of patient perceptions of quality of care [7–12]. The study population consisted of all patients admitted as inpatients. Criteria for inclusion were that the patient was admitted for at least 3 days and consented to the interview. For paediatric patients unable to answer the questions, a family member attending to the patient was interviewed. Informed consent was obtained from each respondent before the interview and confidentiality of responses was assured. The sample consisted of 400 patients selected at random from the different wards with probability proportional to the number of patients in the ward. The department of patient affairs collected the data.

Student *t*-test and analysis of variance were used for comparisons of mean score of satisfaction within sociodemographic variables. Multiple regression analysis identified sociodemographic factors that influenced patient satisfaction with physician-led service. The cut-off values for significance were $P < 0.05$ or $P < 0.01$.

Results

Data were obtained for 350 patients, i.e. a response rate of 88%. Lack of response was due to poor interviewer technique. Table 1 shows patient satisfaction with various physician-led services. The highest mean satisfaction score was for admission and diagnosis (3.72) and the lowest for communication (3.10). For communication, the highest mean score was for patient conditions, opinions and preferences (4.78) and the lowest for physicians inquir-

ing about patient opinions of the provided quality of care (1.45). For admission and diagnosis, the highest mean score was for necessary precautions for maintaining patient's privacy during physical examination (4.70) and the lowest was for complexity of the admission procedure (2.30). For care to the patient, the highest mean satisfaction score was for periodic checks on patient progress (4.20) and the lowest was for physicians being unable to know the individual condition of each patient with so many patients to see (2.10).

Table 2 shows mean level of satisfaction by sociodemographic variable. Females were more satisfied (3.82) than males (3.46). Education, marital status and age were significantly related to satisfaction with physician-led services. Those with more education (3.48) were less satisfied than those with less education (3.69–3.74). Patients ≥ 50 years (3.48) were more satisfied than younger patients (3.18 and 3.42). Married patients (3.73) were more satisfied than single patients (3.11). The high-income group (> 9000 Saudi riyals per month) was less satisfied (2.85) than other income groups (3.12–3.17).

Table 3 shows mean satisfaction score for physician services by ward. The highest mean satisfaction score was for obstetrics (4.10) and the lowest was for male surgical (3.10). The mean satisfaction scores for female medical, male medical wards, female surgical and paediatric were 3.75, 3.42, 3.81 and 3.72 respectively.

The association between sociodemographic factors and satisfaction with physician-led services was also investigated by regression analysis (Table 4). The strongest variable to influence mean satisfaction was sex, females having a mean satisfaction score of 0.238 more than males. The second strongest influence on mean satis-

Table 1 Mean satisfaction score of inpatients with physician services

Physician-led service	Mean satisfaction
<i>Admission and diagnosis</i>	
The admission procedure is complex and takes time	2.30
Necessary precautions for maintaining patient's privacy during physical examination	4.70
Nurses and physicians interact effectively while examining patient	4.36
Time spent by physician in examining patient and taking history is adequate	4.42
Time spent waiting for treatment for diagnostic work-up is unduly long	2.83
<i>Communication</i>	
Reasons for admission are clearly explained by physician to patient and family	3.60
Most physicians ensure that the purposes for diagnostic and therapeutic procedures are adequately explained to each patient	2.70
Patient's condition, opinion and preference are considered in planning his/her care activities	4.78
Physician provides patient/family with adequate information regarding patient's condition and treatment plan to be followed	2.97
Physicians ask patient about his/her opinion of the quality of care provided and the problems encountered	1.45
<i>Care of the patient</i>	
Physician checks periodically on progress in patient's condition and follows up during daily rounds	4.20
Patient's requests are promptly attended to by treating physician at any hour of the day	3.82
Physicians are unable to know the individual condition of each patient with so many patients to see	2.10
Conflict in opinions regarding patient condition and therapy plan arises with so many physicians in charge of care	2.30
Most physicians focus on treating illness rather than taking a real interest in the patients and their complaints	3.20

1 = 'dissatisfaction'; 5 = 'satisfaction'.

faction was age as patients ≥ 50 years rated their satisfaction higher than younger ones. The third strongest variable was marital status. Married people had significantly higher satisfaction scores than single people. None of the other independent variables was significantly associated with physician-led services. The tested independent variables accounted for 54% of the variation in mean satisfaction with physician-led services.

Discussion

Because physicians are the leaders of health services and the decision-makers for inpatient care, patient desires and expectations for physician care warrant scrutiny. The overall mean satisfaction score of our patients with physician-led services was 3.31. This figure is comparable to some studies and lower than other studies, particularly those from similar Arab cultures

Table 2 Mean satisfaction scores of inpatients with physicians' services according to patients' sociodemographic variables

Variable	Mean satisfaction
Sex	
Male	3.46**
Female	3.82
Marital status	
Married	3.73*
Single	3.41
Age group (years)	
15–29	3.42**
30–49	3.18
50+	3.48
Education	
Illiterate	3.71*
Elementary	3.74
Intermediate and secondary	3.69
University and above	3.48
Monthly income (Saudi riyals)	
< 4500	3.17*
< 6000	3.12
< 9000	3.15
9000+	2.78
Occupation	
Government employee	3.17**
Private	3.01
Labourer	3.67
Student	3.14
Unemployed	3.71

1 = 'dissatisfaction'; 5 = 'satisfaction'.

US\$ 1 = 3.75 Saudi riyals.

*Significant at $P < 0.05$; **Significant at $P < 0.01$.

[5]. This difference could be genuine and might be explained as a slight majority of doctors were non-Saudis. Because some are from non-Arabic speaking countries and because of cultural and social differences, fluent communication with patients is sometimes difficult. On the other hand, interpreting differences among studies without adequate information about meth-

Table 3 Mean satisfaction of patients with physician services by ward

Ward	Mean satisfaction
Male surgical	3.10
Female surgical	3.81
Male medical	3.42
Female medical	3.75
Obstetrics	4.10
Paediatrics	3.72

odology, study population, health system characteristics and sociocultural values and attitudes is difficult [10]. Patient satisfaction with physician care is determined by many factors such as job satisfaction of physicians, delivery models and organizational structures [13–19].

In the present study the highest mean satisfaction scores were for consideration of patient conditions, opinions and preferences while planning care, and for maintaining patient privacy during physical examination. This might be because physicians are very sensitive to cultural issues in the Saudi context. On the other hand, the lowest mean satisfaction scores were for

Table 4 Multiple regression analysis of sociodemographic variables on mean satisfaction score for inpatient services

Variable	Regression coefficient
Sex	0.238**
Age	-0.204**
Marital status	0.298*
Education	0.018
Income	0.016
Occupation	-0.015

*Significant at $P < 0.05$; **Significant at $P < 0.01$.

physicians providing the family with adequate information regarding the patient's condition and treatment plan and for physicians not knowing the individual condition of each patient. This might be explained by unsatisfactory physician communication skills. Undergraduate training of physicians needs a major reform to allow for training in communication and interaction skills through the early and continuous exposure of medical students to patient care. The establishment of continuing education programmes in communication skills and intensive Arabic lessons for non-Arabic speaking physicians is also needed.

Female inpatients were satisfied with most physician-led services. This was likely to be the result of the greater courtesy that is often given to females than males. It is also quite likely that the physicians acted in accordance with Saudi cultural etiquette, which tends to treat women more respectfully than men in various public and social circumstances. Some researchers have found the sex of the attendant physician influences patient satisfaction [20,21]. They found that both male and female patients attended by female doctors were more satisfied than those attended by male doctors. Education level was also associated with patient satisfaction. Those with university degrees were less satisfied than those with less education. This finding agreed with many similar studies [5,11,14]. Married people also were more satisfied than single

people. This finding was similar to a previous study in Riyadh that measured overall patient satisfaction [4]. In previous studies, older subjects were generally less active and more satisfied than younger subjects [3,22]. In our study, the oldest group of patients were also more satisfied with physician care. The middle-aged group (those aged 30–49 years) of patients in our study were least satisfied with physician services. This might be because they have the most exposure to health services outside of the country and therefore they may be more critical. Other studies have found a similar association [12,22].

In conclusion, this study has identified aspects of physician-led services at King Khalid University Hospital that may require remedial intervention for improvement. As a way of bringing about change, the management should communicate the findings of this study to all physicians at the hospital to make them aware of the problems. Re-education of physicians to care for all patients equally, regardless of sex or level of education, may be another strategy to improve the quality of care. In addition, further studies on quality of care may necessary to provide clues about expectations or perceptions of care during hospitalization of Saudi patients. Such information may provide a benchmark to adjust the existing level of care provided by physicians to the satisfaction of patients.

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