



## Patients' experience of health care providers in outpatient and day surgery in hospitals Riyadh City, Saudi Arabia

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### ABSTRACT

*Introduction:* Patient's experience in the outpatient and day care surgery is the need of the hour to improve the health care services. This paper describes patients' experience of outpatient and ambulatory surgery in both public and private hospitals in Riyadh City, Saudi Arabia. The aim is to assess the patient experience and its effect on the quality of care services and on meeting patients' demands. *Materials and Methods:* A cross-sectional survey was administered that consisted of the following six dimensions: demographical information, before the procedure, day of the procedure, communication about procedure, recovery, and general opinion. *Results:* Results of logistic regression analysis showed a "good patient experience" in the participants' response of the following 10 items on the survey: the educational level was significant in terms of giving the patient the necessary information before the procedure, instructions to the patient for getting ready for procedure, ensure patients were comfortable, explaining the procedure in easy way, giving written instructions at discharge, preparing the patient for what is expected during recovery, and patient rating their own overall mental and emotional health. *Conclusions:* According to our results, hospital professionals and staff members require more training to reform the health system and facilitate communication. Even though the overall situation of the hospitals was fair, but an improvement strategy should be planned to match the customers' demands to attain the proper level of quality in all aspects.

**Keywords:** Patient Experience, Patient satisfaction, Outpatient surgery, Quality care.

## 1. INTRODUCTION

Recent technological advances have affected the medical, industrial, and military fields, but patient safety remains a major public concern worldwide, which naturally reflects his experience. According to the World Health Organization, there are ten facts regarding patient safety. These facts are: patient harm is the 14<sup>th</sup> leading cause of global disease, 1 in every 10 patients is harmed, unsafe medication harms millions and costs billions of dollars, 15% health spending is wasted dealing with all aspects of adverse events, investments in reducing patient safety incidents can lead to significant financial savings, hospitals infections affects 14 out of every 100 patients admitted, more than one million patients die annually from surgical complications, inaccurate diagnosis affect settings of care and harm unacceptable number of patients, overall medical exposure to radiation is a public health safety concern and finally administrative errors account for up to half of all medical errors in primary care. As the huge medical field has advanced, patient experience has become a major issue. Patients evaluate not only their outcome but also amenities such as their privacy, staff interaction, impersonal care, and having enough needed information of what they going to face in their journey (Gomez, 2002). Medical experts have developed a number of definitions. The most well-known definition is the Carolinas Healthcare System definition, which is "the sum of all interactions, shaped by an organization's culture, that influence patient perceptions, across the continuum of care. Many Organization for Economic Co-operation and Development i.e. OECD countries have developed evaluation programs to measure the patient experience, because it is an important component of ensuring the quality of care. This measurement helps to understand the current experience status and serves as a piece of infrastructure for ideal future design. The aim of this study is to assess the patient's experience in the outpatient setting or with one-day surgery in Riyadh hospitals and medical centers to improve the quality of care services and to meet patient's demands in such situations.

The patient experience consists of the sum of all actions in a health care organization, including the patient's expectations, interactions, clinical or nonclinical treatment, and the entire care journey. In general, the patients' responsiveness, values, needs, and being respected are the main good indicators for receiving care. Along with these indicators, care effectiveness, and safety complete the framework for quality and progress in healing.

A previous study was conducted in four outpatient centers in Madison, Wisconsin, to improve preoperative information regarding follow-up and anesthesiology preoperation preparation to assess the impact of an intervention on the patients' clinical outcomes and staff quality. The results showed the appropriateness and accuracy of patient responses regarding satisfaction and the use of open-ended questions (Carayon et al., 2006). Another study measuring patients' experience of a day surgery found that 90% of the patients were very pleasant within the first 24 hours (Kangas-Saarela, 1999). An additional study conducted in 144 different care centers in The Netherlands evaluated the the client experience and quality improvement using the Consumer Quality Index and applied nine scales to examine shared decision making, information, body care, safety, and other factors (Triemstra et al., 2010). To ensure quality improvement, research performed at Beth Israel Deacons Medical Center in Boston, Massachusetts, led the authors to develop a specific intervention to improve appointment scheduling and reduce access time (O'Neill et al., 2012.) Governments are also interested in measuring patient outcomes using hospital surveys, and research on this topic indicated that there has been an improvement in all means, except for doctor communication (Elliott et al., 2010). Patients and their families have a direct influence on policies, practices and programs measurements of healthcare quality. One study found a significantly association between measurements of the climate of patient safety and the Quality of Working measure (Anhang et al., 2014). The C level and Clinic refers to the patient experience as "Patients First," which consists of safe care, high-value care, high-quality care, and satisfaction. Researchers have studied the importance of the patient's voice as an essential building block in ensuring patient safety and of course the quality of care provided. A survey was developed regarding this matter, and its results led to an increase in the compliance with both state and federal health information laws (Hundt et al., 2005).

Patient diversity is also important. The results of a study conducted in Northern England found that better patient outcomes reflected their good socioeconomic backgrounds (Twiddy et al., 2018). Anesthesiologists have the responsibility of optimizing patients' preoperative medications (Vetter et al., 2014). The definition of patient experience is not only about satisfaction, even though this is a major component. The findings of a study of 3592 questionnaires mailed to five National Health System hospitals in Scotland elucidated that patients' satisfaction scores are limited, and more detailed questions would be useful to achieve improvement (Jenkinson, 2002). Recovery is a major factor in the patient experience as well. A qualitative study was conducted to describe the experience of postoperative recovery and the factors influencing it. The authors reported that staff members are responsible for the patient experience during hospitalization, but they can subsequently help patients to take care of themselves (Allvin et al., 2008). In a study conducted to determine the clinical and quality indicators related to unplanned admissions of more than 10,000 patients, the authors concluded that good-quality ambulatory surgery could be provided and surgeons and anesthesiologists should coordinate to help patients select the best way to decrease complications (Martín-Ferrero et al., 2014). Another interesting study in San Antonio, Texas, during the COVID-19 pandemic concluded that the outpatient management of

fracture fixation helps in minimizing the use of health care resources and infection transmission, indicating that outpatient surgeries are safe and feasible for most patients (Bullock et al., 2020). In 1995, the Agency for Healthcare Research and Quality in the United States developed the Consumer Assessment of Healthcare Providers & Systems (CAHPS) for inpatients, and in 2012, the Outpatient or Ambulatory Surgery (OAS) CAHPS was developed, which been used in our study. The survey did not directly ask patients how satisfied they were with care, but it covered all the important topics and concentrated on quality aspects that could be assessed by the patients. Leaders and managers who apply these surveys should employ innovative members or initiatives to improve them for a better patient experience (Hoke, 2018). The CAHPS survey was implemented in the Dutch Social Insurance System and proved to be a reliable and a promising tool (Delnoij et al., 2006).

An observational study was conducted to assess the experience of day surgery in patients undergoing laparoscopic cholecystectomy in two governmental secondary care hospitals in the Kingdom of Saudi Arabia (KSA). The results indicated that 88% of patients were discharged immediately after surgery and the rest within 24 hours. The overall complication rate was 1.5%. Many patients reported high satisfaction, which means that such day surgery is safe and feasible and could be applied to other procedures (Ghnam et al., 2017). Because the patients' impression about services provided is very important in improving the quality of healthcare and healthcare workers, it is essential to assess all services during the patient journey to ensure that they meet patient demands. Thus, we conducted this study to assess the patient experience of outpatient and ambulatory surgery services in Riyadh City medical centers and hospitals.

## 2. MATERIAL AND METHODS

### Ethical Approval

This study received Institutional Review Board approval from King Fahad Medical City, Riyadh, Saudi Arabia, according to Good Clinical Practice guidelines (IRB No. 20-586E). Informed consent to participate in the study was obtained from the subjects before start of the study. Data were collected from September to November 2019.

### Design

The study was a cross-sectional survey. We used a convenience sampling technique.

### Tool

We designed a patient questionnaire based on similar questionnaires from the OAS CAHPS (both the English version and a version that had been translated to Arabic. The survey questions contain six parts, begins with choosing the type of organization (either public or private); providing demographic information such as age, gender, educational level, and health status; and then answering questions regarding the following 29 points.

- Pre-procedure (two questions)
- Day of the procedure (six questions)
- Communication about the procedure (five questions)
- Postoperative recovery (nine questions)
- General opinion (seven questions) related to the following:
  - Overall rating of surgery center/hospital
  - Overall health status
  - Willingness to recommend

### Subjects

The target population of this study included all outpatient or ambulatory surgery patients in Riyadh City medical centers and hospitals who had undergone a procedure during the past 12 months.

### Data Collection process

The survey was conducted online through social media channels, to collect as many numbers of responses as possible and in various settings in Riyadh City hospitals and medical centers.

### Sample Composition

A total sample of participants was 352. Most respondents were from private (n=212, 60.2%). The median age of the respondents is 26–35 years. The distribution of age is shown in table 1 below. The majority of them have bachelor graduate (n=223, 63.4%).

### Setting

The study setting was Riyadh City outpatient hospitals and ambulatory medical centers, either public or private.

### Statistical Analysis

We used SPSS version 22 for data collection, descriptive and inferential analysis. Logistic regression analysis was used to determine statistical significance. We collected survey responses from 352 participants. Comparisons between groups will be made with the value of significance kept under 0.05 using Chi square test.

## 3. RESULTS

**Table 1** Sample Composition

Demographics	Classification	Frequency	%
Type of medical center	Public	140	39.8
	Private	212	60.2
	Total	352	100.0
Participant gender	Male	87	24.7
	Female	265	75.3
	Total	352	100.0
Participant age	18–25	65	18.5
	26–35	133	37.8
	36–45	84	23.9
	46–55	50	14.2
	Above 55	20	5.7
	Total	352	100.0
Participant education level	Less than high school	9	2.6
	High school graduate	48	13.6
	Bachelor graduate	223	63.4
	Postgraduate	72	20.5
	Total	352	100.0

As shown in the tables 1 & 2, a binary logistic regression was performed to ascertain the effects of hospital, gender, age, and education level on the likelihood that the participants had a good patient experience. The logistic regression model was statistically significant ( $p < 0.05$ ). Men were 2.15 times more likely to report a good patient experience than women. An increase of 1 point on the scale of education level increased the probability of a better patient experience on the outcome variable by 1.97. There was significance in the two questions regarding whether the patient had a good experience when provided the information needed before the procedure and the instructions to get prepare for the procedure. When we asked patients about the hospital facility and staff and how they evaluated the environment through these questions, patients reported good experience with significance in two points: when doctors and nurses treated the patient with respect and courtesy and when they made sure the patient was comfortable. In terms of the check-in process, facility cleanliness, helpfulness of the clerks and receptionists, and treating patients with respect were associated with not having a good experience.

The communication dimension showed significance in two questions. Patients reported a good experience when the procedure was explained in an easy to understand manner and when they were provided with written instructions from the facility upon discharge. On the other hand, patients reported a "not good experience" when anaesthesia and its side effects were explained in an easy to understand way. Patients reported a good patient experience when they were informed about what to expect during the recovery period, whereas the other questions were not significant (patient provided information of what to do if they experienced pain, vomiting or nausea, bleeding, and infections and if they had one of them). Patients reported a good experience when rating their overall mental and emotional health, whereas they reported not having a good experience when they rated their overall health; this difference was significant. Finally, the result of the last part in the questionnaire, if they have any positive or negative comments:

Many participants complained of late appointments of procedures, unless they were able to book earlier through personal relationships.

**Table 2** Logistic Regression

		B	S.E.	Wald	df	Sig.	Exp(B)
Demographics	Hospital	.093	.275	.115	1	.735	1.097
	Gender	.745	.292	6.497	1	.011*	2.106
	Age	.159	.121	1.715	1	.190	1.172
	Education level	.679	.206	10.861	1	.001*	1.971
	Constant	-2.476	.993	6.222	1	.013*	.084
Before the procedure	Give you the information needed	-.828	.272	9.280	1	.002*	.437
	Instructions about getting ready for procedure	-.836	.254	10.815	1	.001*	.433
	Constant	4.109	.477	74.208	1	.000*	60.891
About environment	Check-in process smoothly	-.506	.271	3.499	1	.061	.603
	Clean facility	.076	.348	.048	1	.827	1.079
	Clerks & receptionists helpful	-.249	.338	.542	1	.461	.779
	Clerks & receptionists treat patient with respect	-.330	.379	.762	1	.383	.719
	Doctors & nurses treat patient with respect	-1.129	.336	11.249	1	.001*	.324
	Doctors & nurses make sure patient comfortable	-.514	.248	4.287	1	.038*	.598
	Constant	5.545	.607	83.504	1	.000*	255.958
Communication about the Procedure	Explain the procedure	-.826	.304	7.367	1	.007*	.438
	Explain anesthesia in easy way to understand	-.539	.280	3.696	1	.055	.584
	Explain side effects of anesthesia in easy way	.189	.307	.377	1	.539	1.208

	Get written instructions when discharge	-.568	.234	5.888	1	.015*	.567
	Constant	4.796	.743	41.611	1	.000*	120.978
About recovery	Prepare to what expected during recovery	-.653	.228	8.171	1	.004*	.520
	Give information of what to do when pain	-.375	.209	3.228	1	.072	.687
	Is there pain	.322	.229	1.984	1	.159	1.380
	Give information of what to do when nausea or vomiting	.191	.236	.659	1	.417	1.211
	Is there nausea or vomiting	.020	.322	.004	1	.951	1.020
	Give information of what to do when bleeding	-.344	.257	1.786	1	.181	.709
	Is there bleeding	.016	.559	.001	1	.977	1.016
	Information of what to do when you infected	-.430	.266	2.605	1	.107	.651
	Is there infection	.633	.560	1.278	1	.258	1.883
	Constant	3.047	1.382	4.861	1	.027*	21.049
About patient health	Rate overall health	-.306	.198	2.404	1	.121	.736
	Rate overall mental & emotional health	-.464	.156	8.890	1	.003*	.629
	Constant	2.917	.390	56.012	1	.000*	18.487

\*= Statistically Significant

Another important point for patients was that a lot of doctors, nurses, and even staff members did not properly provide the patients with the information they needed, and the patients indicated that they should have been informed about expected symptoms after the procedure. Patients indicated that it was important for providers to treat patients with respect and to not differentiate between them (i.e., that they should be treated equally). Some of the participants stated that hospitals should improve

in all services and that there should be a system to ensure the quality of care of all hospital staff. One of the claims was that nowadays, doctors and nurses do not “sacrifice” as much as they used to and that they have lost their “human sense.”

On the other hand, there was much participant appreciation toward the survey. They stated that the survey was clear, wonderful, and beneficial. In addition, some of the participants were pleasant to the hospital they had the surgery in due to the quality of care (i.e., King Faisal Specialist Hospital, National Guard Hospital and King Saud City).

#### 4. DISCUSSION

We conducted this study to assess the patient experience with outpatient and ambulatory surgery in Riyadh City hospitals and medical centers. A 29-question survey was distributed, and 352 responses were collected. Results were analyzed through logistic regression. The study findings showed that the participants had a “good patient experience,” as reflected by ten points of the dimensions in the survey. These points were as follows: male participants have rated their experience as “good” more than females, the educational level with each level increase, giving the patient the information they needed before the procedure, providing the patient with instructions for preparing for the procedure, doctors and nurses treating the patient with respect and courtesy, ensure that patients were comfortable, explaining the procedure in an easy to understand manner, providing written instructions upon discharge, informing patient about what to expect during recovery, and patients rating their own overall mental and emotional health (Bullock et al., 2020). On the other hand, other characteristics were associated with patients reporting that they had “not a good experience,” including hospital; age; smooth check-in process; facility cleanliness; helpful clerks and receptionists; patients treated with respect and courtesy; receiving an explanation of anesthesia and its side effects in an easy to understand way; receiving information about what to do if experiencing pain, vomiting or nausea, bleeding, and infections, and if they had one of these symptoms; and rating their own overall health (Hoke, 2018).

This study adds to the previously accumulated literature in providing support for the idea that the patient voice is effective and plays a major role in regulating policies, designing practices, and offering demanded services (Martín-Ferrero et al., 2014). The last dimension of our survey consisted of the patient’s overall personal point of view, which can be used to eventually affect the quality of care through the innovation and evolution of patient care. Many respondents were highly concerned about the communication they received, and we should highlight that the doctors, nurses, and all hospital staff members are responsible for providing adequate communication (Kangas-Saarela, 1999). They should communicate well, provide essential information, and provide needed assistance to enhance the patient journey. Several questions regarding communication were included in our questionnaire, because of the high impact this factor has on the patient experience and speeding recovery (Elliott et al., 2010). Communication should be provided whether before the procedure, on the same day, after the procedure, or even during the recovery phase. Our results are in line with the findings of previous studies demonstrating that communication leads to a good patient experience and outcomes and reflects the patient’s personal situations (Carayon et al., 2006). The elements of all patients’ experiences are important and are essential indicators of quality. Thus, questions about communication or environmental dimensions should include dealing with patients and providing respect, being sure that the patient is comfortable, explaining any process, and providing emotional support. All of these factors correspond with the findings of previous studies (Anhang et al., 2014; Jenkinson, 2002).

The recovery phase is a critical period in the patient’s journey. Many patients do not know what to expect or what to do in certain situations. Instructions must be adequately provided to patients with regard to anesthesia complications, nausea or vomiting, bleeding, and infections. Doctors, nurses, anesthesiologists, and any other engaged professional should cooperate to educate patients (O’Neill et al., 2012). In some cases, complications can lead to harmful situations that are difficult to control; thus, patients should be well informed to help prevent these complications themselves. Emotional support is a major challenge, especially in procedures accompanied by rehabilitation (Vetter et al., 2014). Patients should be supported and cared for to ensure a successful recovery, as confirmed by the findings of earlier studies. All of the above mentioned aspects contribute to the quality of care. For this reason, care quality can either improve when these aspects are considered or worsen when individuals in charge do not consider their larger effects. Therefore, all organizations and professionals, whether leaders, managers, or staff members, should plan, work on, and set standards to meet the desired perceptions with efficiency and transparency and to improve the quality of care, with the goal of achieving the best outcomes to ensure a good patient experience (Twiddy et al., 2018).

The strengths of the study include hospital care providers were of different nationalities (i.e., they included both Saudis and non-Saudis), which helped prevent any struggles or barriers during the patient journey that could be due to different languages or racism. Questionnaires were directed to patients, who play a major role in quality care implementation and fulfillment. Finally, the survey was administered to all patients of outpatient and ambulatory surgery hospitals in Riyadh City, which increased the probability of a greater number of samples collected.

The limitation of the study is that the sample represented only one city (KSA). Thus, this research could serve as a pilot study for further research with a larger scope to improve the quality in Saudi hospitals. There was also a lack of time to conduct the study because of the short semester, and the reliability of the data could be improved with a larger sample size.

## 5. CONCLUSION

The study is to assess the patients' experience of outpatient & ambulatory surgery in Riyadh city hospitals & medical centers. An online survey was distributed among patients. After doing logistic regression to all dimensions, results were a "good patients experience" in ten points of the six dimensions. Environment when we asked the patient about the health professional and hospital staff, we can see good patient experience in last two points that the doctors and nurses has treat the patient with respect and courtesy and have make sure they were comfortable, but at the other hand clerks and receptionists treating patients with respect and courtesy and being helpful as it should bestowed no significance or a "not good experience" also as these two points: checking-in smoothly, facility cleanness. An important dimension which is communication showed good patient experience in explaining the procedure in easy way and giving written instructions when discharge, About the recovery it showed a good patient experience only in a single point which is preparing the patient to what expected during this period. The study results showed a good experience in the overall mental and emotional health while a not good experience in the overall health.

The study recommended that the health care providers should have more concern for their patients' emotional support. In addition, more attention should be paid to patients' rights and increasing their awareness. Finally, new strategies should be developed to achieve the ambitions and hopes contained within Saudi Vision 2030.

### Conflict of Interest

Authors declare no conflict of interest.

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### Informed Consent

Written & Oral informed consent was obtained from all individual participants included in the study. Additional informed consent was obtained from all individual participants for whom identifying information is included in this manuscript.

### Authors Contribution

All authors made best contribution for the concept, assessment and evaluation, data acquisition and analysis and interpretation of the data.

### Data and materials availability

All data associated with this study are present in the paper.

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