



## ORIGINAL ARTICLE

# Patients' Reported Experience Measures with Primary Care Physicians in Bahrain

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## Abstract

**Background:** Patients' experience is divided into relational and functional, in which the former is related to the relationship in terms of the treatment, while the functional experience is related to healthcare facilities. Patients' experience differs from patients' satisfaction in which the former tests the interaction that patients have with the healthcare system in the ideal way, rather than patients' expectation from the encounter. There are limited studies in the Middle East region regarding patients' experience.

**Objective:** The aim of the study was to establish a cornerstone for patients' experience in primary healthcare centers in Bahrain.

**Methods:** The study was a cross-sectional one where a validated questionnaire consisting of 10 questions was used. A sample of 50 patients was taken from each of the ten randomly selected healthcare centers. The patients were approached after ending their consultation at the general clinics. A total of 502 patients participated and their response was analyzed and included in the final results.

**Results:** Patients' experience in primary healthcare centers in Bahrain scored a mean of 42.4 out of 50, 84.8%. More than 70% of the responders answered the questions as very good and excellent. In terms of statistical significance, the timing of the consultation, nationality, and consultation fees yielded a *p*-value of 0.017, 0.011, and 0.005, respectively. On the other hand, results of patients' experience scores regarding patients' gender, doctors' gender, age, education level, and marital status were statistically not significant.

**Conclusion:** Bahrain's mean score for patients' experience in primary health centers was 84.8%.

**Keywords:** Bahrain, Consultation, Middle East, Patients' Satisfaction, Primary Health Care

## Introduction

Worldwide patients' experience has been a popular research topic. Many studies have been conducted to gain an overview of what it really encompasses. As a patient, an experience does not only revolve around the health care system and the doctor providing it, but also involves every person encountered in the process such as nurses and staff members.<sup>1</sup> Furthermore, a patient's experience is divided into relational and functional experiences; it takes into account the healthcare facilities along with staff members. A relational experience takes into account the relationship between the patient and the physician in terms of treatment while the functional experience is more practical targeting the utilized facilities.<sup>2</sup> These aspects together form the ultimate patient experience in which it differs from patients' satisfaction where the former tests what is ideally supposed to happen in a healthcare facility rather than meeting individual expectations.<sup>1</sup>

Healthcare has always been taught in a patient-centered approach. However, the current prominence of patients' experiences is possibly the result of greater emphasis in terms of improving administration accountability of the healthcare for proper resource distribution.<sup>3</sup> This is especially true since it has been demonstrated that the most crucial driver of the overall patient experience and satisfaction is related to the physician's communication and relationship with the patient despite the differences in patients' characteristics.<sup>4</sup> Furthermore, it has been concluded by previous studies that a positive experience relates to higher satisfaction which affects the patients' health outcomes; this is partially due to more compliance witnessed with higher satisfaction levels.<sup>3</sup>

In the Gulf Cooperation Council countries, healthcare has been mainly government-based and free of charge for citizens. However, Bahrain witnessed an enormous increase in the population over the past decade leading to an increased load on this sector and on physicians that might have led to an alteration in the patients' experience. Unfortunately, data regarding patients' experiences in this part of the world is still limited. Thus, this study aimed to establish a foundation for patients' experience in primary health care centers in Bahrain

by studying the relational patients' experience.

## Materials and Methods

### *Study Design*

This study was designed as a cross-sectional study and was conducted in primary healthcare centers in Bahrain.

### *Questionnaire and measures*

In order to measure patients' experience, a validated questionnaire developed by Dr. Stewart Mercer and colleagues as part of a Health Service Research Fellowship funded by the Chief Scientist Office of the Scottish Executive (2000-2004) was used.<sup>5</sup> The questionnaire is available free of charge for research and consists of ten questions regarding the relational patient experience with the doctor rated on a scale range of poor, fair, good, very good, and excellent. This was given a score of one, two, three, four, and five, respectively, making ten the minimum score and fifty the maximum score with higher values indicating a better score. The Questionnaire was named the consultation and relational empathy (CARE) measure questionnaire and stated that more than two missing or not applicable answers should be excluded from the analysis. Furthermore, those with one or two missing or not applicable answers would be replaced by the average of the final score.

Although the questionnaire has been developed and validated in English, it was translated into Arabic by one of the researchers and one native individual and later put together as one final questionnaire. Both translators had Arabic as their mother language and English as their second language. The Arabic questionnaire was translated back to English by two individuals who had English as their mother language and Arabic as their learned language to ensure validity. The final questionnaire set in Arabic was distributed to a group of patients as a pilot study to accomplish face validity and reliability for this population.

### *Sample Selection*

Bahrain's primary care centers consist of 28 healthcare centers grouped based on geographical location. The consultation time for each patient in the general clinic was eight minutes between 7am and 2pm during the morning shift. Furthermore,

different health centers have different consultation timings in the evening shift based on their opening hours.

Two health centers from each of the five health regions were selected randomly. Each health center was approached in two different shifts, morning and evening shifts, when the consultation time was eight minutes per patient.

### ***Sample Size***

It was estimated that 385 subjects were needed for this study to achieve a 95% confidence interval and a margin of error of 5% according to Cochran's sample size formula. Furthermore, Mercer *et al.* published a paper in 2005 to determine the relevance and practical use of the CARE measure questionnaire in general practice to determine the population number needed. It was estimated that 50 patients per practice were needed to obtain a reliable estimate of the mean score.<sup>6</sup> Thus, a target of 50 patients was set for each health center making the final target number as 500 patients for the ten health centers which were approached conveniently during data collection days.

### ***Inclusion and Exclusion Criteria***

Patients leaving a general clinic after a consultation with a family physician or general practitioner in the primary care centers on days of data collection who agreed to participate were included. All patients leaving from specialized clinics were excluded. The exclusion criteria also included pediatric patients, patients unable to care for themselves, patients with vision problems impairing their ability to read or complete the questionnaire, and patients unable to complete the questionnaire in Arabic or English.

### ***Data Collection***

Data collection was done by six of the researchers over a two-week period in February 2020. Patients leaving from all general clinics post-consultation on the day of data collection in the selected health center were approached until 50 participants were achieved.

The purpose of the research was explained verbally

by a consensus explanation and verbal consent was obtained initially. If approval was obtained, the questionnaire was given to the patient and he/she was asked to sign a written consent and complete the questions independently without the aid of the researchers. Once the questionnaire was submitted, a team member would skim through the questions to ensure that all questions were answered. In case of a question that was missed, the patient was asked if they would like to review their paper to fill the missing questions.

### ***Ethical Consideration***

Patients were assured confidentiality upon questionnaire distribution. They were also asked not to disclose their names or the names of their doctors. Verbal and written consent was obtained. The Research committee in the Ministry of Health in Bahrain approved the study's submitted protocol.

### ***Data Management and Analysis Plan***

The Data collected was entered in SPSS version 23 and analyzed with the aid of a statistician. The frequency of responses and percentages of categorical variables were computed along with the mean and standard deviation for continuous variables. The significant difference between the mean of two groups was demonstrated using t-test. As for the significant difference in the mean between more than two groups, ANOVA was used. A *p* value of <0.05 was considered statistically significant.

### ***Results***

A total of 506 patients were surveyed and 502 patients were included in the analysis; four patients were excluded due to incomplete questionnaires. The name of the randomly selected health centers and the distribution of patients across them are demonstrated in Table 1 showing an even distribution across the health centers. The maximum number of patients in a health center was 51 and the minimum was 49. The study population was obtained over two shifts, morning and evening. Table 2 demonstrates that 252 patients were included from the morning shift and 250 patients from the evening shift. The table also demonstrates different patients' characteristics.

**Table 1:** The number of participants who answered the questionnaire across each surveyed Health Centers in 2020 with a sum of 502 participants.

Health Center	n (%)
BBK Hidd	50 (10)
BiladAlQadem	51 (10.2)
Yusuf Engineer	50 (10)
Sitra	49 (9.8)
Budaiya Coastal	51 (10.2)
NBB Arad	51 (10.2)
AlHoora	50 (10)
Jidhafs	51 (10.2)
Jaw and Askar	49 (9.8)
Kuwait	50 (10)
<b>Total</b>	<b>502 (100)</b>

**Table 2:** The demographic characteristics of the 502 participants who were included in the results after being surveyed in 2020.

Demographic characteristics	n (%)	
Age	<30	170 (33.9)
	30 – 39	122 (24.3)
	40 – 49	98 (19.5)
	50 – 59	73 (14.5)
	≥60	39 (7.8)
	Total	502 (100)
Timing	Morning	252 (50.2)
	Evening	250 (49.8)
	Total	502 (100)

Gender	Male	238 (47.4)
	Female	264 (52.6)
	Total	502 (100)
Doctor's Gender	Male	203 (40.5)
	Female	298 (59.5)
	Total	501 (100)
Marital Status	Single	112 (22.3)
	Married	373 (74.3)
	Others	17 (3.4)
	Total	502 (100)
Nationality	Bahraini	424 (84.6)
	Non Bahraini	77 (15.4)
	Total	501 (100)
Education Level	Below secondary	58 (11.6)
	Secondary	208 (41.4)
	University	236 (47)
	Total	502 (100)
Consultation Fee	Free	486 (96.8)
	Paid	16 (3.2)
<b>Total</b>	<b>502 (100)</b>	

Table 3 represents the number of patients responding to each question from all health centers. More than 70% of the respondents answered “excellent” followed by “very good” in all aspects. The question with the highest percentage in the “excellent” score was for the doctor really listening to the patient representing 60.8% of total answers for this question. This was followed by 59.6% of “excellent” in the doctor letting one tell their story.

**Table 3:** Results of 502 answered questionnaires regarding patients' experience in health centers in Bahrain in 2020. Values are numbers (%)

	Poor	Fair	Good	Very Good	Excellent
Making you feel at ease	7 (1.4)	19 (3.8)	76 (15.3)	135 (27.2)	259 (52.2)
Letting you tell your story	4 (0.8)	16 (3.2)	59 (11.8)	123 (24.6)	298 (59.6)
Really listening	6 (1.2)	26 (5.2)	52 (10.4)	113 (22.5)	305 (60.8)
Being interested in you as a whole	10 (2)	24 (4.8)	72 (14.4)	122 (24.4)	271 (54.3)
Fully understanding your concerns	4 (0.8)	21 (4.2)	83 (16.6)	152 (30.4)	240 (48)
Showing care and compassion	9 (1.8)	21 (4.2)	81 (16.3)	137 (27.5)	250 (50.2)
Being positive	5 (1)	22 (4.4)	67 (13.4)	137 (27.5)	268 (53.7)
Explaining things clearly	5 (1)	23 (4.6)	74 (14.7)	138 (27.5)	262 (52.2)
Helping to take control	12 (2.4)	20 (4.1)	87 (17.6)	142 (28.8)	232 (47.1)
Making a plan of action with you	16 (3.2)	29 (5.8)	74 (14.9)	136 (27.4)	242 (48.7)

Table 4 and 5 show the score's mean and standard deviation demonstrating the relationship between patients' experience scores and demographic characteristics using ANOVA and post hoc test as well as t-test. It was demonstrated, based on  $p$ -values, that the difference in results in patients' experience scores in terms of patients' gender, doctors' gender, age, education level, and marital status was not statistically significant,  $p$ -value  $>0.05$ , with age, marital status, and education level having a small effect size (eta squared= 0.01). As for the difference between health care centers' scores, a significant

difference was demonstrated,  $p$ -value 0.001, with a moderate effect size (eta squared= 0.07).

T-test verified that the timing of the consultation and nationality played a significant role in the results in favor of better results in the morning shift and with Bahraini patients with a  $p$ -value of 0.02 and 0.01, respectively, and a small effect size (eta squared= 0.01). Furthermore, a  $p$ -value of 0.01 in favor of free consultations in comparison to those who had a paid consultation was demonstrated with a small effect size as well (eta squared= 0.01).

**Table 4:** Relationship (ANOVA) between patients' experience mean score and demographic characteristics of 502 surveyed participants in 2020

		Mean(SD)	95% CI	$P$ .value	Effect size eta squared
Age	<30	42.3(8.0)	41.1 to 43.5	0.97	0.001
	30-39	42.6(7.6)	41.3 to 44.0		
	40-49	42.2(8.1)	40.6 to 43.8		
	50-59	42.9(8.2)	41.1 to 44.8		
	>60	42.0(8.8)	39.2 to 44.9		
Health centre	Kuwait*	45.2(6.1)	43.4 to 46.9	0.001	0.07
	BBK Hidd*	44.4(7.2)	42.4 to 46.5		
	Budaiya Coastal*	44.3(6.2)	42.6 to 46.1		
	Sitra	43.4(8.7)	40.9 to 45.9		
	BiladAlQadem	43.6(7.4)	41.6 to 45.7		
	Yusuf Engineer	43.0 (7.7)	40.7 to 45.1		
	NBB Arad	40.8 (8.3)	38.4 to 43.1		
	Jaw and Askar	40.4(10.7)	37.4 to 43.6		
	Jidhafs*	40.1 (7.9)	37.9 to 42.3		
	AlHooraa*	39.1 (6.9)	37.0 to 41.0		
Marital status	Single	42.7 (7.6)	41.5 to 43.0	0.9	0.0009
	Married	42.3 (8.2)	41.5 to 43.0		
	Others	43.4 (7.7)	39.75 to 47.4		
Education	Below secondary	41.8 (9.2)	39.4 to 44.2	0.8	0.0007
	Secondary	42.5 (7.7)	41.5 to 43.6		
	University	42.5 (8.0)	41.4 to 43.5		

Cohens effect size .01 = small effect, .06 = medium effect, .14 = large effect

\*significant difference in mean score

**Table 5:** Relationship (t-test) between patients' experience mean difference score and demographic characteristics of 502 participants in 2020

		Mean(SD)	Mean Diff.	95% CI of mean Diff.		P**	Eta squared
				Lower	Upper		
Respondent's Gender	Male	42.1(8.0)	-.71	-2.1	0.73	0.35	.001
	Female	42.7(7.9)					
Doctor's Gender	Male	42.3((8.3)	-0.2	-1.6	1.2	0.78	.001
	Female	42.5(7.8)					
Nationality	Bahraini	42.8(8.0)	2.5	0.8	4.5	.01	.01
	Non Bahraini	40.3(7.8)					
Timing	Morning	43.3(7.7)	1.7	.30	3.1	0.02	.01
	Evening	41.6(8.2)					
Consultation fee	Free	42.6(8.0)	5.3	1.3	9.3	0.01	.01
	Paid	37.3(7.3)					

Cohens effect size .01 = small effect, .06 = medium effect, .14 = large effect

\*\*significant difference in mean score t-test (2-tailed) for Equality of Means)

## Discussion

A population of 506 patients equally distributed between health centers and between morning and evening shifts was surveyed. A total of 502 questionnaires were analyzed after applying the exclusion criteria based on the CARE measure questionnaire criteria. The mean overall score representing the patients' experience was 42.4 out of 50, with a maximum score of 50 and a minimum score of 10. This concludes that Bahrain is considered to have a very good patient-reported experience. Although this study included the patients' experience with the doctor from ten aspects, the overall result was similar to a study conducted in Nigeria which studied patients' general experience reporting an 84% satisfaction in terms of relationship with staff including doctors.<sup>7</sup> This might serve as an indicator that despite continuous changes in healthcare, patients in Bahrain still have a positive experience.

Furthermore, the majority of responses across all practices reached a level of "excellent" followed by "very good" representing more than 70% of patients with the highest "excellent" score, 60.8%, in response to the question stating whether the doctor really listens to you. In terms of patients' perspectives on the doctor making a plan with them, 48.7% scored "excellent". On the other hand, a study conducted in the primary care setting in five

different countries, United States, United Kingdom, Australia, Canada, and New Zealand, about the overall patient experience found that all five countries did not engage their patients in treatment plans and missed opportunities when it came to tackling patients' ideas and concerns.<sup>8</sup> Furthermore, a previous study conducted in Bahrain concluded that 48.9% of participating patients preferred a passive role in decision making at the primary care level which might explain the high score in this area.<sup>9</sup>

Primary care is crucial in providing a high-performance system making the identification of certain issues in the current system imperative.<sup>8</sup> It was shown that patients' gender, age, education level, and marital status as well as doctors' gender did not affect the perception of patients' experience. On the other hand, consultation timing, nationality, health care centers, and consultation fees affected patients' perception.

In terms of the timing of the consultation, nationality, and consultation fees, results were better with morning shifts, Bahraini patients, and free consultations. Physicians' exhaustion and decrease in their performance later in the day might explain the results of better experience during morning hours. As for the nationality, a hypothesis of differences in cultures and backgrounds can be assumed due to difficulties such as language

barriers, cultural beliefs, and paid consultations. The difference between results of Bahraini and non-Bahraini patients deserves attention to further improve patients' experience especially since Bahrain is a growing cosmopolitan country and those who are non-Bahrainis are patients who have paid consultations. Similar results were demonstrated previously in the UK where it was concluded that ethnic minorities reported poorer experiences in comparison to native British. Light has been shed on this area and further investigated to show that some physicians might disadvantage such patients.<sup>10</sup> However, it is important to note that interpreting results from different ethnicities is challenging and must be done cautiously; as it was noted that different ethnicities report different experiences despite receiving similar care.<sup>11</sup>

Furthermore, a high statistical significance in terms of differences in scores across doctors from different health centers was demonstrated with the highest results seen with doctors from Kuwait health center and the lowest results seen from doctors in Al-Hoorah health centers. While analyzing the frequency of responses for each question, it was noticed that the majority of patients rated their responses as "excellent". Doctors in Kuwait health center had the highest rate of "excellent" in all questions across the population. Moreover, doctors in Al-Hoorah health center scored the least responses in the "excellent" column compared to doctors from other health centers with their results spreading across "good", "very good", and "excellent"; it is worth mentioning that despite doctors in Al-Hoorah health center having the lowest mean, they scored no "poor" responses. On the other hand, doctors in Jaw and Askar health center had a mean score of 80.9% but had the highest rate of "poor" response in all questions.

A study published from the neighboring Saudi Arabia concluded that patients' experience differed across their primary health care centers, as seen in this study, and were related as well to doctors' nationality which is a variable that has not been investigated in this research and might be of benefit for future studies to better understand determinants of patients' experience.<sup>12</sup> Therefore, these results across doctors from different health centers deserve

attention and further evaluation because patients' experience in the health care is translated into an indicator of its quality.<sup>2</sup>

Health care quality has significantly improved over the past years and is aimed to continue its development to serve society better. Studies have evaluated different pillars that make up the quality of care; a published systematic review concluded that patients' experience makes up one of these pillars and is associated with clinical effectiveness and patients' safety making this an important research area.<sup>13</sup>

### **Strengths and Limitations**

A strong point towards this study was using a validated questionnaire that was developed to measure patients' experience. Moreover, the sample size obtained was considered adequate according to Mercer et al. who published a paper in regards to the relevance and practical use of the CARE measure questionnaire in general practice after its development.<sup>5</sup> The adequacy was also supported by the consistency of the results in terms of the patients' experience across the ten health centers. However, due to the lack of resources, this paper had a limitation in which it only considered the relational patients' experience with the physician leaving behind the functional experience as well as the experiences with staff members, nurses, and healthcare facilities which collectively represent the overall patients' experience. The authors recommend the use of this research as a starting point for further studies in the country with the coverage of all 28 health care centers to better understand its quality of care.

### **Conclusion**

The mean score for patients' experience in primary care in Bahrain according to the CARE measure questionnaire was 84.8%. Presently, Bahrain is experiencing a significant change in its healthcare system in terms of management and future views. Such results would allow the country to establish a foundation in terms of where it stands in its patients' experience and provide an indication of its health system quality in terms of its primary care physicians.

## Conflict of Interest

The authors have no conflict of interest to report.

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