Quality of Care for Pediatric Leukemia Patients at a Hospital in Sana'a as Perceived by Patients' Attendants

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ABSTRACT

Introduction: Quality of health care services can be measured through assessing patients' satisfaction. Therefore, to evaluate the health care quality, it is important to measure patient's attendant perceptions. SERVPERF questionnaire is used to evaluate health care. It has five dimensions: assurance, empathy, reliability, tangibility, and responsiveness.

Aims & Objectives: This study aimed to measure the quality of health services provided to patients in the Pediatric Leukemia Center at Al-Kuwait University Hospital in Sana'a as perceived by patients' attendant using SERVPERF questionnaire.

Place and duration of study: Pediatric Leukemia Center, Al-Kuwait University Hospital, Sana'a, Republic of Yemen; for one year from 03/06/2018 to 02/06/2019.

Material & Methods: This cross-sectional study was conducted after approval from Faculty of Medicine Sana'a University. Informed consent was taken from 145 participants. Modified SERVPERF questionnaire was used after validation (Cronbach's alpha 0.92). Response rate was 93.7% and 136 questionnaires were analyzed. The questionnaire had 11 questions related to the demographic data of the patient and attendant, followed by 38 questions (with scale from 1 to 5) related to five dimensions of quality health service; reliability, responsiveness, assurance, empathy, and tangibility. Data was analyzed using SPSS 20.0.

Results: Mean±SD scores of the reliability, responsiveness, assurance, empathy, and tangibility dimensions were 3.90±0.51, 4.20±0.56, 4.33±0.54, 4.03±0.7, and 3.57±0.73 respectively. The highest score was for the assurance dimension and the lowest was for the tangibility. There were no significant differences in patients' attendants perceptions attributed to gender, age and education.

Conclusion: This study shows high scores in the assurance, responsiveness, and empathy dimensions but lower scores in the reliability and tangibility dimensions. This indicates the need for logistic support, equipment, and medications for the center.

Keywords: Quality of healthcare, patient satisfaction, service quality

INTRODUCTION

Quality health services are more satisfying for the beneficiaries. It generates a positive perception in society about health services. For achieving the maximum public health benefits, medical techniques and science application is required as well as not exposing the public to risks. Quality level is a balance between benefits and risks. Patients demonstrate high awareness level towards the availability and the quality of the different provided health care dimensions.[1]Improving health care quality is a complex and difficult task. The quality of health care varies to great extent. Adequate data and methods to assess quality are needed to evaluate and therefore improve quality of health care.[2] Human factor is considered the most significant when evaluating the quality of health services.[3] which reflects the important role of the patient-doctor relationship and hence emphasizing on the competence of doctors in clinical practice and their capability in instilling security and confidence in the patients and

ultimately gaining their patients' trust.[4] Health care quality is conveyed by satisfaction of the patients and therefore measuring perceptions of the patients is important when evaluating the quality of healthcare.[5] Satisfaction of the patient is influenced by factors related to the patient e.g. education, the capacity to manage stress, pain intensity, and psychological wellbeing. It is also influenced by external factors e.g, admission type, emergency or outdoor patient. Health care professional has to tailor patient care according to these factors.[6]

SERVPERF scale is a contextually and culturally appropriate questionnaire to measure patients' satisfaction. It is considered as a superior tool to evaluate health care quality[7] as it has better discriminate validity, better convergence and reliability.[8] The impact of health care quality on patients' satisfaction is measured using five dimensions i.e., assurance, empathy, reliability, tangibility, and responsiveness. Al-Damen (2017) found that the quality of health care as perceived by patients has an impact on patients' satisfaction with reliability having the most influence.[9] Almoajel (2014) highlighted the importance of paying attention to the opinions of patients and has recommended studying patient's satisfaction to improve quality care and to achieve the goals of high-quality health services.[10]

Aims and Objectives: This study aimed to measure the quality of health services provided to patients in the Pediatric Leukemia Center at Kuwait University Hospital in Sana'a as perceived by patients' attendant.

MATERIAL AND METHODS

After approval by the Faculty of Medicine Sana'a University, this cross-sectional study was conducted for one year from 03/06/2018 to 02/06/2019 at the Pediatric Leukemia Center, Kuwait University Hospital, Sana'a, Republic of Yemen. Informed consent was taken from the 145 participants fulfilling the inclusion criteria i.e., males and females and first-degree relatives of a leukemia patient aged ≤ 16 years. All registered patients for the above-mentioned period were included.

A validated modified SERVPERF questionnaire was used. The questionnaire was validated for language, question comprehension, appropriateness, and applicability by a pilot sample of 25 i.e 5 health professionals and 20 patients' attendants. After validation, data from the 145 participants was collected and the response rate was 93.7% i.e., 136 questionnaires were analyzed. Cronbach's alpha was 0.92. The first part of the questionnaire consisted of 11 questions related to demographic data of the patient and relative. The second part of the questionnaire contained 38 questions (with scale from 1 strongly disagree to 5 strongly agree) related to five dimensions of quality health service; 12 questions for the reliability dimension, 8 questions for the responsiveness dimension, 7 questions for the assurance dimension, 6 questions for the empathy dimension, and 5 questions for the tangibility dimension.

Data was entered and analyzed using SPSS 20.0. Quantitative data was described using Mean ± SD. Qualitative data was described using frequencies and percentages. T-test was used for comparisons based on gender. ANOVA test was used for comparisons based on age and education.

RESULTS

The participants included 63 (46.3%) females and 73 (53.7%) males, aged 23-60 years, 22% university graduates, 27% high school graduates, 23% did primary school, and 28% illiterate.

The obtained Mean ± SD score for the reliability dimension was 3.90±0.51 with the highest score recorded for the question "I trust the doctors and health workers working in the centre" i.e. 4.6±0.56. The question "availability of blood and its products in the blood bank of the centre" had the lowest score of 2.52±0.51 Table-1. The second dimension in which responsiveness had a Mean ± SD score of 4.20±0.56 with the highest score 4.46±0.71 for the question "the centre calls and informs the patient's relatives about the date and time of each chemotherapy session" and the lowest score for the question "availability of services around the clock" i.e., 3.90±1.08 Table-2.

Sr.No	Question	Mean± SD
01	I trust the doctors & health workers working in the center	4.60±0.56
02	The center provides adequate information about the disease, its treatment & complications	4.10±1.0
03	The center provides sufficient information on how to care for a sick child	4.21±0.92
04	The center provides all the investigations that the patient needs for free	3.57±1.17
05	The center's pharmacy provides all themedicines needed by the patient for free	3.04±1.21

Sr.No	Question	Mean± SD
06	The center provides the doses of chemotherapy free of charges	4.01±1.01
07	The center provides the doses of chemotherapy on time	4.42±0.86
08	Blood types and its derivatives are always available in the blood bank inside the center	2.52±1.37
09	The center's management is interested in hearing patient's complaints	3.60±1.05
10	The center facilitates registration and processing procedures	4.04±0.94
11	The center maintains accurate records and files of patient's health	4.40±0.83
12	The center is committed to providing health services on time and correctly from the beginning	4.26±0.78
	Relibility Dimension	**3.90±0.51**

Table-1: Scores of the participants in the reliability dimension.

Sr.No	Question	Mean± SD
01	Patient's files & record are retrieved whenever needed	4.35±0.80
02	The staff responds to the needs of patient's, no matter how busy they are.	4.07±0.97
03	The patient's file is extracted at each visit	4.43±0.72
04	The medical staff & employees of the center respond promptly to inquires	4.27±0.85
05	The center's provides the required health services quickly and at an appropriate time	4.07±0.83
06	The center calls & informs the patient's relatives about the date & time of each chemotherapy session	4.46±0.71
07	Health services are available in the center around the clock	3.90±1.08
08	I feel that the employees have the desire to help me	4.07±0.97
	Responsivness Dimension	**4.20±0.56**

Table-2: Scores of the participants in the responsivness dimension

The dimension assurance scored the maximum amongst the five dimensions with a Mean ± SD of 4.33±0.54 with the question ''would you advise other leukaemia patients to visit the centre'' scoring the highest i.e 4.49±0.69 Table-3. The dimension empathy scored 4.03±0.70 with the question 'the management and staff prioritize patient's care'' scoring the highest i.e 4.13±0.88 whereas the question ''the centre working hours are flexible and can be visited anytime'' scoring the lowest i.e 3.82±1.09 Table-4. The dimension tangibility had the lowest score amongst the five dimensions with a Mean ± SD of 3.57±0.73 and

the question ''the centre has modern medical equipment'' scored the lowest i.e 3.13±1.23 Table-5.

Sr.No	Question	Mean± SD
01	I feel safe when dealing with the medical staff at the center	4.42±0.80
02	The medical staff is highly skilled and experienced.	4.25±0.88
03	The employees of the center are distinguished by high morals	4.32±0.82
04	The center maintains confidentiality of patient information	4.21±0.80
05	Management & Staff always strive to satisfy the patient	4.26±0.73
06	The center has good reputation among the community	4.34±0.72
07	Would you advise anyone else suffering from Leukemia to visit this center	4.49±0.69
	Assurance Dimension	**4.33±0.54**

Table-3: Score of the participants in the assurance dimension.

Sr.No	Question	Mean± SD
01	The staff understands the special circumstances of the patients	4.10±0.93
02	The staff has the ability to provide personalized care to patients.	4.05±0.92
03	The staff is keen to provide psychological & moral support to patients	4.07±0.90
04	The management & staff prioritize patient's care	4.13±0.88
05	Satisfying the patient's need in a spirit of kindness & compassion	4.01±0.91
06	The center working hours are easy & flexible and can be visited any time	3.82±1.09
	Empathy Dimension	**4.03±0.70**

Table-4: Score of the participants in the empathy dimension.

Sr.No	Question	Mean± SD
01	The centre has modern medical equipment	3.13±1.23
02	There is noticeable attention to hygiene and sterilization in the center's facilities and toilets	3.88±1.11
03	The staff is very clean and presentable	4.44±0.58
04	There are well-equipped waiting rooms in the center	3.15±1.24
05	The food served is of good quality and sufficient quantity	3.26±1.12
	Tangibility Dimension	**3.57±0.73**

Table-5: Score of the participants in the tangibility dimension.

T-test showed no significant differences in patients relative's perceptions of health service quality dimensions between males and females (p-

value>0.05). ANOVA test showed no significant differences attributed to age and education. (p-value >0.05).

DISCUSSION

This study evaluated five dimensions in quality of health services; the assurance dimension had the highest score 4.33, followed by responsiveness with a score of 4.20, empathy with a score of 4.03, reliability with a score of 3.90, and the lowest score was of tangibility i.e 3.57. The question related to trusting the medical staff at the centre scored the highest amongst all questions i.e 4.60 whereas the question related to availability of blood and its products in the blood bank of the centre scored the least i.e 2.52.

In a study by Al-Damen 2017, the same quality dimensions were studied, and assurance scored the highest[9] similar to the finding by our study; whereas empathy scored the least which is different from our study where tangibility scored the least. This is also in contrary to the results of Zarei et al 2012 in which tangibility dimension scored the highest.[11] This could be explained in view of the lack of support to the medical centers in Yemen as no modern equipments are available and no financial support is provided to the health centers. On the other hand, empathy dimension scored high in our study i.e 4.03 which indicate that the health workers were perceived by patients' relatives to be compassionate and understanding to the suffering of their patients. Al-ghamdi 2014 also reported empathy dimension to have the highest influence on satisfaction of patients.[12]

Consistent with our results which found the assurance domain to score the highest, Zamil 2012 also reported assurance to have the highest score in private hospitals.[13] This reflects the feeling of security amongst the patients while they receive the health services and that health workers have adequate knowledge and decent behavior with patients, consequentially boosting their patient's confidence.

Similar to our study, Diab 2012 and Abdelgadir 2015 found no difference in the quality dimensions in relation to the demographic variables.[14,15] However, Al-Asad and Ahmad 2003 found gender and education to be predictors of patients' satisfaction with the quality of health care.[16] They found that female patients were more satisfied with the quality of health care than male patients and the less educated were also more satisfied. Also, Ozlu and Uzun 2015 found a significant difference in satisfaction of patients in the surgical clinics in relation to education.[17] It is

assumed that the less educated have less expectation and therefore are more satisfied with the quality of the provided care.

Limitations:
This study was confined to the Paediatric Leukaemia centre in Sana'a and did not include the centres in other cities of Yemen. It is recommended in future studies to include the other cities' centres in Yemen for a broader assessment of the quality of the health care services.

CONCLUSION

Our study showed that the assurance, responsiveness, and empathy dimensions scored well; however, reliability and tangibility scored less with the questions related to logistics and availability of equipments, investigations, blood products, and medicines scoring the least.

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