

## Evaluation of clients' expectations and perception gap regarding the quality of primary healthcare service in healthcare centers of Gorgan

Ghanbar Roohi\*<sup>1</sup>, Hamid Asayesh<sup>2</sup>, Ali Akbar Abdollahi<sup>3</sup>, Ali Abbasi<sup>4</sup>

Received: 09/29/2010

Revised: 02/28/2011

Accepted: 04/30/2011

1. Dept. of Nursing Services Management, School of Nursing and Midwifery, Golestan University of Medical Sciences, Gorgan, Iran

2. Dept. of Medical Emergency, School of Paramedicine, Qom University of Medical Sciences, Qom, Iran

3. Dept. of Internal Medicine and Surgery Nursing, School of Nursing and Midwifery, Golestan University of Medical Sciences, Gorgan, Iran

4. Dept. of Internal Medicine and Surgery Nursing, School of Paramedicine, Golestan University of Medical Sciences, Gorgan, Iran

---

Journal of Jahrom University of Medical Sciences, Vol. 9, No. 3, Fall 2011

### Abstract:

#### Introduction:

As human societies advance, health systems will encounter new needs to satisfy. Considering the fact that clients compare quality of service with their expectations, we conducted the present study to evaluate the gap between clients' expectations and perceptions of quality of primary healthcare service.

#### Material and Methods:

In an analytical study, we evaluated 225 healthcare recipients in healthcare centers of Gorgan through random stratified sampling. We used SERVQUAL questionnaire to assess expectations and perceptions of quality of healthcare service in five dimensions of tangibles, reliability, responsiveness, assurance, and empathy. Data were analyzed using descriptive statistics and Wilcoxon's test on SPSS software.

#### Results:

The clients were aged 14-57 years, with 89.7% of them females. There was significant gap between clients' expectations and perceptions of quality of services. The largest gap was found in the dimensions of reliability and empathy (-1.47) and the smallest was found in the dimension of tangibles (-1.11). We found significant discrepancies between clients' expectations and perceptions in all five dimensions. Among 22 statements of the questionnaire, the largest and smallest gaps pertained to the staff's belief in efficiency of services and staff's appearance, respectively.

#### Conclusion:

We found considerable gaps in all dimensions. Considering the limitations in resources and equipment, identifying clients' expectations and perceptions will help managers to improve the quality of their services through modification of organizational processes.

**Keywords:** Primary Healthcare Service, Quality Assessment, Patient Satisfaction

---

#### Introduction:

Quality holds a particular place in the field of healthcare service, as the critical responsibility for maintaining a society's wellbeing relies on this field (1). For this

reason, managers and authorities are increasingly preoccupied with the idea of optimal utilization of resources in order to satisfy the needs and expectations of their societies (2). Many managers consider

---

\* Corresponding Author, Address: Department of Nursing Services Management, School of Nursing and Midwifery, Golestan University of Medical Sciences, Beginning of Shastkalateh Road, Gorgan, Golestan  
Tel: 09111702143, Email: roohi\_43@yahoo.com

organizational efficiency to be the equivalent of client-oriented management (3). On the other hand, novel approaches in management define quality of services as the client's requirements, that is, the client's expectations of quality of services (4). One factor influencing good management is accepting the clients' perceptions and expectations as the major determinant of quality (5). Since clients or service recipients evaluate the quality of services through comparing their own expectations and perceptions of the services provided (6) and there is often a discrepancy between managers' opinion of the clients' perceptions and expectations and the real expectations of the latter, quality of service is susceptible to jeopardy (7). One reason for this discrepancy is lack of direct contact with clients and studying their perceptions and expectations. Thus, decision-makers will fail to determine the priorities correctly and as a result, the quality of services will not be able to satisfy clients, creating a quality gap (8). Previous researches indicate that service recipients do not think of quality as actions and behaviors exclusively, but the idea of quality involves their mental processing and interpretation, as well (9, 10). Numerous factors influence the degree of service quality. A study by Muntlin in healthcare centers reported factors such as friendly atmosphere in workplace, clean environment, supportive environment, equipment and skills, and staff's characteristics to affect perception of quality (11). Andaleeb studied some dimensions of quality of service in Bangladesh, including responsiveness, assurance, rapport, discipline and forgiveness, to conclude that they greatly influence healthcare services (10). Mike states five dimensions for services, namely tangibles (physical space and conditions of the service area, including facilities, equipment, staff and communication pathways), reliability

(ability to render service in a reliable manner), responsiveness (inclination to help and collaborate with clients), assurance (staff's competence and ability to induce a sense of trust and assurance in clients), and empathy (specific treatment of each client with respect to his/her characteristics so as to satisfy) (12). In order to assess quality, certain measurements (e.g. time schedule of processes, accuracy of processes, manner of conduct of processes, etc) must be made so that the gap between quality of service and clients' expectations is found (3). The main step for crossing this gap would be to identify clients' expectations and perceptions of quality of service, as well as the size of the gap. The aim of the present study is to assess the possible gap between quality of services and clients' expectations with the hope that its findings will provide a basis for improving quality of service as well as clients' satisfaction, thus encouraging people to use the service further.

### **Material and Methods:**

This is an analytical study conducted in Gorgan in 2009. Our study units consisted of 225 individuals who received primary healthcare services in urban healthcare centers. Sampling was conducted in a stratified manner with appropriate assignment of units. Inside each stratum, samples were selected randomly without allocation. Our study population consisted of the population covered by six urban healthcare centers (16 urban bases). The study units referred to a base or healthcare center in Gorgan at least once, and consented for participation in the study. If the questionnaire were not completed thoroughly, the individual would be eliminated from the study. Data collection tool consisted of two questionnaires: a demographic questionnaire and the SERVQUAL questionnaire developed by

Berry et al (13). This questionnaire evaluates quality in service organizations in five dimensions of tangibles, reliability, responsiveness, assurance and empathy. Overall, it includes 22 statements scored using a 5-score Likert scale. After explaining the objectives of the study and obtaining their informed consent for participation, the study units responded to the 22 questions twice. On the first trial, they expressed their perception of the services provided (clients' perception of quality of services) and on the second trial, they expressed their expectation of the services as they should have been provided (clients' expectation of quality of services). Thus, the expectation and perception scores were determined for each individual. The internal reliability of SERVQUAL questionnaire was reported to be equal to 0.90 by Lee (14), 0.93 by Duffy (15) and 0.90 by Lin (16). In Iran, Kebriaie used this questionnaire in a pilot study on 20 individuals, and then amended it to the Iranian healthcare environments to be used on 300 healthcare service recipients in healthcare centers of Kashan (17). It has also been used in Iranian studies by Aghamollaei and Mohammadi (18, 19). In the present study, faculty members confirmed the scientific validity of the questionnaire using content validity. We conducted a pilot study on 30 individuals to evaluate the internal reliability of the questionnaire to find Cronbach's  $\alpha$  equal to 0.86 for 22 questions of expectation and Cronbach's  $\alpha$  equal to 0.91 for 22 questions of quality of services. Data were analyzed on SPSS software version 16, using descriptive statistics and Wilcoxon's test. P values  $< 0.05$  were considered significant for all tests.

### Results:

The mean age of participants was  $28 \pm 7.5$  years, ranging from 14 to 57 years. Out of 225 participants, 201 (89.3%) were women. 124 individuals (56.36%) received services over 5 times, 52 (23.64%) received services from 3 to 5 times, and the rest received services once or twice. 27 individuals (12.22%) had elementary school education or lower, 139 (62.89%) were educated in middle school or high school, and the rest had university education. 60.09% were housewives, 23.77% were clerks and the rest were employed otherwise. 83 individuals (36.89%) referred for immunization, 26 (11.56%) for family planning, 45 (20%) for prenatal care, 42 (18.67%) for infant growth monitoring and the rest for other therapies or services.

Our findings indicate that the participants evaluated staff's empathy as the most important dimension and tangibles as the least important dimension of healthcare service. Dimensions of reliability, responsiveness and assurance ranked second through fourth. In all 5 dimensions, we found gaps between expectations and perceptions with expectations exceeding the perceptions (negative gap). The mean quality of service gap was -6.52. The greatest quality gap score pertained to empathy (-1.48) and the smallest to the physical and tangible dimension (-1.11). Dimensions of reliability, assurance and staff's responsiveness followed it. Wilcoxon's test revealed that the gap between respondents' expectations and perceptions was significant overall as well as for all dimensions ( $p < 0.000$ ) (Table 1).

Table 1: Scores of perceptions, expectations and quality of service gap in healthcare centers of Gorgan in 2009 for each dimension

Dimensions of quality of service	Perception M (SD)	Expectation M (SD)	Quality Gap	Wilcoxon's test value
Physical and tangible	15.50 (2.13)	16.61 (1.88)	-1.11	-5.94
Reliability	20.11 (4.29)	21.58 (4.45)	-1.47	-6.52
Staff's responsiveness	15.34 (2.39)	16.56 (2.22)	-1.22	-5.95
Assurance	15.75 (2.29)	17.00 (2.10)	-1.25	-6.72
Empathy	19.54 (4.98)	21.02 (4.60)	-1.48	-5.82
Overall quality	86.26 (12.46)	92.78 (11.73)	-6.52	-7.24

P value = 0.000

The findings of the present study indicates that the greatest expectation score pertains to availability of precise and complete medical records from the reliability dimension (M=4.57, SD=3.43) while the lowest score pertains to staff's appearance and composure from the tangibles dimension (M=4.13, SD=0.55).

Moreover, the highest perception of quality score pertains to provision of service on first visit from the reliability dimension (M=4.16, SD=3.22) whereas the lowest score pertained to access to healthcare personnel

on demand from the assurance dimension (M=3.87, SD=0.73).

The mean gap scores pertaining to discrepancies between expectations and perceptions of quality of service reveal that the largest quality gap is felt in staff's belief in efficiency of services, while the smallest gap is found in staff's appearance and composure. Wilcoxon's test indicated significant gaps for all statements except for staff's appearance and composure ( $p < 0.000$ ) (Table 2).

Table 2: Mean difference in scores of expectations and perceptions of quality of service in healthcare centers of Gorgan

Rank	Largest Quality Gap	Mean Difference in Scores	Wilcoxon's test Z Value	P Value
1	Staff's belief in efficiency of services	-0.54	-4.89	0.000
2	Availability of precise and complete medical records	-0.49	-5.07	0.000
3	Hygiene status of healthcare center	-0.42	-6.42	0.000
4	Current trust in healthcare staff	-0.39	-5.85	0.000
5	Use of appropriate equipment for rendering services	-0.35	-5.52	0.000
	Lowest Quality Gap			
1	Staff's appearance, composure and hygiene	-0.08	-1.54	0.123
2	Provision of services on first visit	-0.13	-5.13	0.000
3	Access to staff on demand	-0.21	-4.27	0.000
4	Feeling secure and calm when contacting staff	-0.25	-4.19	0.000
5	Appropriateness of times spent on services	-0.26	-4.51	0.000

### Conclusion:

The findings of the present study indicate a significant gap between expectations and perceptions of services, consistent with findings of Aghmollaie, Mohammadi, Kebriaie, Lin and Sajadi Hazave (16-20). Moreover, we found the greatest quality gap in the dimension of empathy, which is consistent with the findings of Aghamollaie

(18). During recent years, urbanization has diminished emotional rapport and empathy among individuals in workplace. In order to resolve this issue, it may be proper for authorities to hold workshops for rapport establishment skills to improve empathy in healthcare staff.

Kebriaie reported the greatest gap in the dimension of responsiveness (17).

Considering the fact that Kerbiaie's study was conducted in 2004, it appears that organizational systems have improved in responsiveness ever since. The recent years observed the development of patients' rights charter, and an increasing attempt to realize it. The improved gap between expectations and perceptions in the dimension of responsiveness may be due to this reason.

Furthermore, our findings indicate the smallest gap to pertain to the dimension of tangibles, including appropriate facilities, equipment and staff as well as appropriate communication pathways (7), which is consistent with findings of Berry et al, Gagliane and Lim (6, 21, 13). The small gap in this dimension may be accounted for by the enhanced equipment and facilities in healthcare centers during the recent years. Since the tangibles dimension influences the service recipients considerably, provision of proper physical conditions is particularly essential.

Service recipients reported staff's empathy to be the most important dimension, and tangibles and physical conditions to be the least important dimension of healthcare service. Dimensions of reliability, responsiveness, and assurance ranked second through fourth. In Kebriaie's study, reliability was found to be the highest, and empathy the lowest (17). On the other hand, Aghamollaie reported assurance as the most desirable dimension and empathy as the least desirable dimension (18). According to Adrienne, assurance ranked highest and tangibles ranked lowest (22). Lim conducted a study on Singaporean patients to conclude that responsiveness as the lowest and assurance as the highest dimensions in ranking (6). Dotehine reported the highest and lowest dimensions to be empathy and assurance, respectively (23). Mike found assurance to be the highest dimension and tangibles the least important (12) Lim placed responsiveness, assurance and empathy after

reliability in decreasing order of importance (6). Comparing these findings reveals that clients do not have identical perceptions of different dimensions of healthcare service. This may be due to different nature of services, different characteristics of clients or facilities of healthcare organizations. Consequently, managers cannot run their organizations based on personal knowledge, experiences or traditional methods in order to provide high-quality service to their clientele (3). On the other hand, limitation of resources, inefficient use of available resources and the ever-increasing healthcare costs highlight the need for novel managerial skills (8). Therefore, success in this field requires adaption of an appropriate strategy to involve staff and identification of clients' expectations and perceptions in order to improve efficiency and organizational processes, satisfy needs and expectations of the clients for the present time and the future. It appears that most managers are content with low expectations of their clients. Nevertheless, in some cases, low expectations may reflect poor marketing and notification about the organization's capabilities. Informing the clients about these capabilities may raise their expectations rationally and realistically, leading to improvement of quality of service. The managers need to pay extra attention to this issue.

Service recipients reported the tangibles and physical dimension as the least important among dimensions of healthcare service, which is in line with findings of Mohammadi and Youssef (19, 24). There is evidence suggesting that although the setting's hygiene and cleanliness, modern equipment and apparent beauty may be effective in satisfying customers, they cannot compensate for low quality of service (9). It appears that while most managers in healthcare organizations attempt greatly to obtain credits for purchasing equipment and

physical supplies, the clients have greater expectations in other dimensions. Using SERVQUAL, the recipients' expectations may be determined and the quality of service may be enhanced.

**Conclusion:** Considering the significant gap between clients' expectations and perceptions of quality of service which may be due to the nature of services, different characteristics of clients and facilities and equipment of healthcare centers, it appears that managers may benefit from

identification of clients' expectations and perceptions to develop an appropriate and comprehensive strategy for improvement of organizational processes and satisfaction of clients' needs in the present and future, despite the limitation in resources and the ever-increasing healthcare costs.

**Acknowledgement:** The authors appreciate the collaboration and contribution of deputy of research at technology and authorities at healthcare centers and bases of Gorgan who helped us with this study.

## References:

- Jackson S. Successfully implementing TQM within health care. *Int J Health Care Qual Assur (IJHQA)* 2000; 14(4): 157- 63.
- Hooman H. Development and Standardization of a Job Satisfaction Scale. Tehran: State Manage Train Center; 2002: 4-5. (Persian)
- Iameei A. Total quality management for training (TQM). Tehran: Ministry Health Med Educ; 1997: 43-4. (Persian)
- West E. Management matters: the link between hospital organization and quality of patient care. *Qual Health Care* 2001; 10(1): 40-8.
- Sharma B, Gadenne D. An investigation of the perceived importance and effectiveness of quality management approaches. *TQM Mag* 2001; 13(6): 433-43.
- Lim PC, Tang NKH. A study of patients expectations and satisfaction in Singapore hospitals. *Int J Health Care Qual Assur* 2000; 13(7): 290-9.
- Sewell N. Continuous quality improvement in acute health care: creating a holistic and integrated approach. *Int J Health Care Qual Assur* 1997; 10(1): 20-6.
- Parasuraman A, Zeithaml V A, Berry L:A conceptual model of service quality and its implications for future research. *Journal of Marketing* 1985; 49: 41-50.
- Cho WH, Lee H, Kim C, et al. The impact of visit frequency on the relationship between service quality and outpatient satisfaction: a South Korean study. *Health Serv Res* 2004; 39(1): 13-33.
- Andaleeb SS. Service quality perceptions and patient satisfaction: a study of hospitals in a developing country. *Soc Sci Med* 2001; 52(9): 1359-70.
- Muntlin A, Gunningberg L, Carlsson M. Patients' perceptions of quality of care at an emergency department and identification of areas for quality improvement. *J Clin Nurs* 2006; 15(8): 1045-56.
- Donnelly M, Wisniewski M, Dalrymple JF, et al. Measuring service quality in local government: the SERVQUAL approach. *Int J Publ Sector Manage* 1995; 8(7): 15-20.
- Berry L, Zeithaml VA, Parasuraman A. SERVQUAL: a multiple-item scale for measuring customer perceptions of service quality. *J Retail* 1988; 64(1): 12-20.
- Lee MA, Yom YH. A comparative study of patients' and nurses' perceptions of the quality of nursing services, satisfaction and intent to revisit the hospital: A questionnaire survey. *Int J Nurs Stud* 2007; 44(4): 545-55.
- Duffy JA, Duffy M, Kilbourne WE. A comparative study of resident, family, and administrator for expectations for service quality in nursing homes. *Health Care Manage Rev* 2001; 26(3): 75-83.
- Lin DJ, Li YH, Pai JY, et al. Chronic kidney-disease screening service quality: questionnaire survey research evidence from Taichung city. *BMC Health Serv Res* 2009; 9: 239.
- Kebriaei A, Akbari F, Hosseini M, et al. Survey on quality gap in primary health care in Kashan health centers. *J Qazvin Univ Med Sci* 2004; 31: 82-8. (Persian)
- Aghamollaei T, Zare S, Poodat A, et al. Customers' perceptions and expectations of primary healthcare services quality in health centers of Bandar Abbas. *J Hrmozgan Univ Med Sci* 2006; 11(3): 173-9. (Persian)
- Mohammadi A, Shoghli AR. Survey on Quality of Primary Health Cares in Zanjan District Health Centers. *J Zanjan Univ Med Sci* 2009; 16(65): 89-100. (Persian)
- Sajadi Hazave M, Shamsi M. Assessment of mothers' behavior about prevention of febrile seizure in children in Arak city: application of the Health Belief Model. *J Jahrom Univ Med Sci* 2011; 9(2) :34-40.
- Gagliane K, Hathcote J. Customer expectations and perceptions of service quality in retail apparel specialty stores. *J Retail* 1988; 64(1): 12-20.
- Adrienne C, Emma S. Assessing the quality of physiotherapy services using SERVQUAL. *Int J Health Qual Assur* 2002; 15(5): 197-205.
- Dotehine JA, Okland JS. Total quality management in services: part 3: Distinguishing perception of service quality. *Int J Qual Reliability Manage* 1994; 11(4): 6-28.
- Youssef FN, Nel D, Bovaird T. Health care quality in NHS hospitals. *Int J Health Care Qual* 1996; 9: 15-28.