



Assessing the Quality of Health Services Provided to Women Under the Health Care Plan: Khorasan Razavi Province

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Abstract

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Background: Women's health is considered as one of the indicators of efficiency and success of the health system of countries, and promoting the health of this group requires the provision of quality services. Accordingly, the present study aimed to investigate the quality of health services provided to women after the implementation of the health care plan in 2018.

Methods: In this cross-sectional study, 400 women visiting comprehensive health care centers affiliated with Mashhad University of Medical Sciences were selected as the participants using multi-stage cluster sampling. The data in this study were collected using the SERVQUAL questionnaire and analyzed with SPSS 20.

Results: The mean scores of the clients' expectations and perceptions were 4.97 ± 0.87 and 3.41 ± 0.42 and the mean score of the service quality gap was 1.55 ± 0.44 . The highest mean quality gap score was related to reliability (1.73 ± 0.53) and the lowest mean quality gap score was related to the tangible and physical dimension (1.48 ± 0.54) followed by the service assurance dimension (1.48 ± 0.53).

Conclusion: This study showed that despite the implementation of the Health Transformation Plan, the quality of services in the studied centers was still lower than the service recipients' expectations. Thus, given the importance of providing health services during the COVID-19 pandemic for its prevention, health care center managers need to be aware of clients' expectations, identify problems leading to their dissatisfaction, and use quality management strategies to improve the quality of services and promote women's health.

Keywords: Service quality, Health care providers, Women, SERVQUAL model, COVID-19



Introduction

In 1978, the World Health Organization (WHO) set its goal of “Health for All by 2000” and declared primary health care (PHC) as the key to achieving it. At the turn of the twenty-first century, primary health care was emphasized more than ever in the 2003 UN Human Development Report and the 2008 WHO Report (1). The PHC system is still a useful mechanism for achieving justice and promoting health. That is why in 2019 the WHO motto was “primary health care for universal health coverage” (2). In particular, the COVID-19 outbreak in late 2019 revealed the fact that the use of universal health coverage through the efficient utilization of the extensive primary health care (PHC) network is essential for better management of the disease and the reconstruction of the health system in the post-crisis period (3).

PHC refers to health care services that are available to everyone in the community. These cares will be the first point of contact of members of the community with the health system of the country. Besides, all health services and some medical services will be provided at the same level or will be referred to the next levels so that people can benefit from quality services (4). The high quality of these services can increase satisfaction, optimize costs, and increase benefits in organizations providing health services (5, 6) so that WHO emphasizes the importance of quality in providing health services and considers the access to quality health care for all members of society as a way to achieving sustainable development (7).

Quality of services has been considered as a strategic factor for service providers (5). Given the risky nature of services in the health sector and their relevance with human health, improving and ensuring the quality of services is essential for the health system and people (8). In Iran, the provision of quality health services has been highlighted in the national upstream documents such as general health policies and the Fourth, Fifth, and Sixth Five-Year Economic, Social, and Cultural Development Plans (9-10).

To this end, the Ministry of Health, as the main authority in charge of health in the country, implemented the Health System Transformation

Plan with an approach to improve the quality of services and justice (11). This plan includes various interventions and packages, the second phase of which was implemented on May 22, 2017, with a focus on PHC and to make reforms in the field of health (12). One of these reforms is the implementation of the Family Health Transformation Plan. Before the plan was executed, each of the health center experts provided part of the health services to all covered households. Different medical units including midwifery, vaccination, pediatric, etc. were organized similarly. Therefore, the Family Health Transformation Plan was implemented to offer integrated services and improve the quality of services provided to households. Under this plan, each expert acted as a health care provider to provide all the required services to a certain number of households and take the necessary follow-up for patient referral, care, and education (13).

Women as a group of service recipients play an important role in the development of health at the individual, family, and social levels. Thus, making planning and taking action to promote their health can reduce morbidity and death due to diseases in the female population and also lead to positive changes in family and community health (14). Given women’s special biological characteristics, greater vulnerability, and also their essential role in maintaining the health of family and society, promoting their health is one of the most basic goals of community health in line with the development goals of the third millennium and sustainable development objectives (15-19) since the health system of countries can help promote the health of this group by providing quality health services and increasing the effectiveness of care.

According to Drucker, “if something cannot be measured, it cannot be managed”. Therefore, by evaluating the quality, it is possible to identify the shortcomings of the programs and take action to solve the root problems (20). Hence, one of the most effective strategies in improving the quality of health care services is to identify the main bottlenecks in this area and evaluate and recognize their current situation scientifically (21). One of these strategies is to use the SERVQUAL model proposed by Parasuraman et al. based on the theory of service quality gap (22). Following this model, two questionnaires

were developed to measure the quality of health services by comparing different aspects of clients' expectations and perceptions (reliability, responsiveness, assurance, empathy, and tangibles). These questionnaires have been used in several studies (8, 23, 24).

Despite the emphasis of international organizations on primary health care (PHC), most service quality assessment studies have focused on the treatment sector while health service quality assessment has received less attention. In particular, after the implementation of the Health Transformation Plan, the quality of services offered under this plan has not been evaluated in any study. Thus, following the implementation of this plan in Iran, it is necessary to review the success or failure of reforms in primary health care and measure the quality of services provided. Moreover, after the COVID-19 outbreak, the importance of quality health services in Iran has increased significantly. Accordingly, the present study aimed to assess the quality of health services provided to women following the health transformation plan in health centers in Khorasan Razavi Province.

Methods

This cross-sectional study was conducted in 2018 in comprehensive health service centers affiliated with Mashhad University of Medical Sciences. The sample size was estimated as 400 persons via a pilot study. The participants were selected using multi-stage cluster sampling. In the first stage, health centers in the north, south, east, and west of Mashhad (4 clusters) were identified. Then, the centers located in each cluster were coded and a center was randomly selected from the center codes by drawing lots. In the final stage, the sample size was estimated in proportion to the population covered by each of the four comprehensive health care centers (Vahdat, Silo, Hasheminejad, and Ab-o-Bargh). The participants in each center were selected systematically based on the household file number in the center. Thus, a random number was selected from the file numbers by a simple lottery method, and then the next participants were selected by adding the interval number to the first household code.

The data were collected using the SERVQUAL questionnaire (22). The reliability

and validity of the questionnaire were assessed in the study by Heidarnia et al. using exploratory and confirmatory factor analysis with CFMIN/df of 3.897 and comparative fit index (CFI) of 0.997; thus, the reliability and validity of the questionnaire had already been confirmed (25). In addition to demographic characteristics, SERVQUAL includes two subscales of perception and expectation (each with 22 items) measuring the participants' expectations of the services provided (optimal status) as well as their perceptions of the current situation. The difference between the scores on these two scales shows the quality gap in each dimension of the services provided. The dimensions of service quality are tangibles (4 items), reliability (4 items), service providers' responsiveness (4 items), assurance (5 items), and empathy (5 items). The items in the questionnaire were scored on a five-point Likert scale from very high (5) to very low (1). In this questionnaire, the scoring of each question was from 1 to 5 (5 = very high to 1 = very low). The maximum and minimum total scores of the questionnaire were 22 and 110, respectively. The maximum and minimum scores for tangibles, reliability, and responsiveness were 4 and 20, respectively. Besides, the maximum and minimum scores in the two dimensions of assurance and empathy were 5 and 25, respectively (22). Finally, to compare the two dimensions of service quality with each other, the total score of each dimension and total score of quality were divided by the number of items, and an average score (out of 5) was reported for all dimensions and the overall quality of services.

The reliability of the questionnaire was assessed by calculating the Cronbach's alpha and the results confirmed the reliability of the instrument (the Cronbach's alpha for all dimensions was above 0.80). Moreover, as the questionnaire was a standard instrument, there was no need to assess its validity again.

Before distributing the questionnaires among the participants, the objectives of the study were described for the participants and written consent was obtained from those who agreed to participate in the study.

The data were analyzed using SPSS 20 and reported as percentage, mean and standard

deviation. Mann-Whitney U and Kruskal-Wallis tests were used to compare quantitative variables based on demographic variables, as they did not follow a normal distribution.

This research project was approved by the ethics committee of Torbat Heydariyeh University of Medical Sciences under the code of ethics IR.THUMS.REC.1396.43.

Results

From the 460 questionnaires distributed among women in the four health centers, 400 questionnaires

were returned, and thus the response rate was 87%. Of a total of 400 participants, 98% (384) were married and 89.5% (358) were under 40 years old. A total of 220 women (55%) had academic education and the rest had a high school diploma or lower education. To examine the relation between demographic variables and the service quality gap, the non-parametric Mann-Whitney U and Kruskal-Wallis tests were used. The results showed a statistically significant relation between the service provider unit and the service quality gap ($P < 0.05$) (Table 1).

Table 1. The distribution of the participants' demographic characteristics and their relation with the service quality gap

Variable	Categories	Frequency (%)	The service quality gap (Mean ¹ ±SD)	The service quality gap (IQR ² , Median)	P-value
Age	< 40	358(89.5)	1.54±0.64	1.56, 0.44	0.51
	≥ 40	42(10.5)	1.45±0.75	1.49, 0.42	
Education	High school diploma & lower education	180(45.0)	1.59±0.59	1.53, 0.43	0.47
	Academic education	220(55.0)	1.55±0.68	1.58, 0.45	
Marital status	Single	8(20)	1.59±0.86	1.55, 0.44	0.71
	Married	392(98.0)	1.55±0.64	1.55, 0.43	
Health care center	Vahdat	150(37.5)	1.50±0.73	1.51, 0.38	0.28
	Silo	70(17.5)	1.50±0.27	1.51, 0.34	
	Hasheminejad	80(20.0)	1.55±0.72	1.67, 0.57	
	Ab-o-Bargh	100 (25.0)	1.66±0.74	1.55, 0.46	
	Pediatric & vaccination	184(46.0)	1.61±0.68	1.62, 0.41	
Unit	Midwifery	150(37.5)	1.55±0.59	1.52, 0.48	0.04*
	Geriatric	66(16.5)	1.45±0.70	1.47, 0.39	

1. $0 < \text{Mean} < 5$

2. Interquartile range

The mean score of the participants' expectations and perceptions were 4.97 ± 0.87 and 3.41 ± 0.42 , respectively. The mean score of the service quality gap was 1.55 ± 0.44 .

The mean scores for different subscales related to the participants' expectations, perceptions, and the service quality gap are shown in Table 2.

Table 2. The mean scores for the expectations, perceptions, and service quality gap

Subscales	Expectations	Perceptions	Service quality gap
	Mean ± SD	Mean ± SD	Mean ± SD
Tangibles and Physical	4.98±0.9	3.49±0.53	1.48±0.54
Reliability	4.97±1	3.23±0.50	1.73±0.53
Responsiveness	4.98±1	3.48±0.50	1.49±0.52
Assurance	4.96±0.12	3.47±0.51	1.48±0.53
Empathy	4.97±1	3.38±0.49	1.58±0.50
Total	4.97±0.87	3.41±0.42	1.55±0.44

The highest mean scores for the participant's expectations were related to the tangibles (4.98 ± 0.9) and the responsiveness (4.98 ± 0.10) and the lowest mean score was related to assurance (4.96 ± 0.12). Moreover, a survey of the participants' perceptions indicated that the highest score was related to tangibles (3.49 ± 0.53) and the lowest score was related to reliability

(3.23 ± 0.50).

A comparison of the participants' expectations (the ideal situation) and perceptions (the current situation) indicated that the greatest service quality gap was related to reliability (1.73 ± 0.53) and the smallest gaps were related to tangibles (1.48 ± 0.54) and assurance (1.48 ± 0.53), respectively.

Discussion

The present study explored the quality gap of services provided under the health care providers plan in comprehensive health service centers in Mashhad after the implementation of the health system transformation plan using the SERVQUAL model and surveying the clients who visited these centers. A survey of the service recipients indicated that the quality of services and facilities provided was lower than they expected. In a study conducted by Safi et al. on (male and female) clients in the health centers affiliated with Northern Tehran Health Center using the SERVQUAL questionnaire in the spring of 2013, the mean perception, expectation, and overall quality gap scores were 3.49, 4.24, and 0.75, respectively (8). Despite the similarity of the scores of clients' perceptions in this study and the present study, the clients in the present study had greater expectations perhaps due to the increase in people's expectations over time and the implementation of the health transformation plan. Since the government announced the implementation of the transformation plan aimed to increase financial protection and the quality of services, and efforts were made in this regard. As a result, people's expectations of health care services gradually increased. Teshnizi et al. carried out a systematic review and meta-analysis of all studies conducted in Iran on the quality of health services with the SERVQUAL questionnaire. In this review article, patients' perceptions were lower than their expectations with a mean difference of 1.64, which was very close to the value obtained in the present study (26). Given that all the reviewed studies had been conducted before the health transformation plan was put into force or in the first months of the plan, it can be suggested that the quality of services after the implementation of the transformation plan was not much different from before the plan. Thus, increasing the budget of health centers and implementing projects without prior study and full knowledge of its various dimensions, will not necessarily lead to progress in providing services and increase community satisfaction. However, this claim requires further attestation.

In other studies, the quality of services provided by health centers and the satisfaction of clients with different aspects of the services were

reported to be at an average level. For example, Esfandiyari Nejad et al. reported that pregnant women's satisfaction with the services received from health centers in Ahvaz was moderate (27). Furthermore, Mirzaee et al. reported the quality of postpartum care provided in health centers in Mashhad in 2013-2015 at a moderate level (28). However, some studies reported a low level of client satisfaction in Syria, Tabriz, and Tehran (29-31). Likewise, studies conducted in health centers of Urmia and Kashan using the SERVQUAL model also showed a gap between perceptions, expectations, and also different aspects of quality (32-33). Other studies conducted by Tarrahi et al in Khorramabad, Kashfi et al. in Ahvaz, and Mohammadi and Mohammadi in Zanjan reported a negative quality gap and showed that the level of patients' expectations of health centers was higher than their perceptions (34-36).

The provision of health services at the first level includes basic and priority health care in all countries, which is often provided by governments for free or at very low costs. Therefore, health care staff are paid a fixed salary plus a small amount of performance-based allowance. Thus, this method of payment may reduce employee's motivation for providing quality services. However, providing quality and timely health services during the outbreak of the COVID-19 pandemic, especially new services to prevent the development of the disease, and launching the 4030 system to monitor the health status of the population covered by health centers is essential. As a result, one of the solutions is to train medical staff and all health care providers so that they understand the importance of respecting the rights of clients as system customers and take steps to increase their satisfaction and promote the quality of services.

The results of the present study showed that clients' expectations were very high in terms of all aspects and they assigned higher scores to responsiveness and tangibles and the lowest score to quality assurance. In other words, the clients had the highest expectations in terms of responsiveness and the lowest expectations for assurance. In contrast, Safi et al. (8) and Ghanbari et al. (6) who studied clients in health centers affiliated with North Tehran Health

Center and Shahid Beheshti University of Medical Sciences using the SERVQUAL questionnaire reported that the highest scores were assigned to assurance (4.40 out of 5 and 6.24 out of 7) and the lowest scores were assigned to empathy (4.04 out of 5 and 5.70 out of 7). Therefore, a sense of trust and security, and medical staff's knowledge (as components of assurance) were more important for the clients. However, the present study showed that the clients were more concerned about physical space, staff appearance, modern equipment, and the provision of quality services without delay and according to the schedule. Given that the difference in the expectations of people in different regions of the country probably reflects shortcomings in related factors, officials of health centers in each region can identify the shortcomings and problems according to clients' attitudes and take actions to eliminate barriers and compensate for the shortcomings in the region.

Analysis of the participants' expectations revealed that the highest score was assigned to the tangibles and the lowest score was assigned to reliability. This finding suggested that things were not done following the standards, and the staff were not motivated enough to do their job, services were not provided properly and on time to clients, and clients' records were not properly kept. Safi et al. (8) and Ghanbari et al. (6) reported the highest scores for assurance (3.70 out of 5 and 6.03 out of 7) and the lowest scores for empathy (3.36 out of 5) and tangibles (4.75 out of 7) as components of the clients' perceptions. Accordingly, it can be argued that clients would have high perceptions about an aspect of services, if they have the greatest expectations about it. It may be concluded that health centers at different times have tried to meet clients' expectations, but there is a significant quality gap between clients' expectations and perceptions. One reason is that the measures taken following the Health Transformation Plan to meet clients' expectations have not received adequate scientific support. However, before any corrective action, it is necessary to first weigh the various aspects of the issue and then make changes based on expectations and priorities.

An analysis of the difference between the mean scores of expectations (the ideal situation) and perceptions (the status quo) indicated that the

highest quality gap was related to reliability and the smallest gap was related to tangibles and assurance. A study on clients in the health service centers in Jabalah, Latakia Province (Syria), by Asaad et al. (29) reported similar results. Furthermore, Matin et al. (37) found that the largest gap in the quality of services provided to clients in urban health centers in Kermanshah Province was related to reliability. In Safi et al.'s study, the largest gap was related to tangibles (0.88) and the smallest gap was related to empathy (0.68) (8). Sabahi Bidgoli et al. who surveyed the women visiting health centers in Kashan found that empathy accounted for the greatest gap (0.60) and responsiveness accounted for the lowest gap (0.41) in the service quality (33). Sharifirad et al. (38) who studied women visiting Isfahan health centers and Ghanbari et al. (6) found that the largest and smallest gaps were related to tangibles and assurance, respectively. However, Teshnizi et al. (26) who conducted a systematic review of all studies in this field in Iran reported the greatest gap in terms of empathy (1.03) and the lowest quality gap in terms of responsiveness (1.22). This finding was not supported in the present study. Service quality gaps can occur for a variety of reasons including managers' perceptual gaps in attention and analysis of data related to patients' expectations and demands, incorrect design of work processes, disregard for patient behavior when offering services, defective services offered by staff, and their insufficient training on how to deal with clients, professional behavior, insufficient information, and the creation of false expectations in the patient, ultimately leading to a gap between clients' expectations and their perceptions of the services received.

The present study did not find any significant relation between the participants' demographic variables and service quality dimensions. Similarly, a systematic review by Teshnizi et al. showed except for gender and education, other demographic variables were not significantly associated with the service quality gap (26).

One of the limitations of the present study was the non-cooperation of officials in some centers. To solve this problem, the researcher made some arrangements and provided some information to the officials about the significance of the study.

Conclusion

Although one of the main goals of the government in implementing the health system transformation plan was to improve the quality of health care services, the results of the present study showed that after the implementation of this plan, the quality of services was still inadequate and could not meet people's expectations. Thus, the health care providers plan as one of the significant developments in the health sector in recent years needs some revision and more careful planning on the part of officials and decision-makers to improve the situation by enhancing the quality of health care

services, and this, in turn, can improve women's health and subsequently promote community health.

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Conflict of interest

The authors declared no conflict of interest.

References

- Jalalvandi F, Arasteh P, Safari Faramani R, Esmailivand M. Epidemiology of Pediatric trauma and its patterns in western Iran: a hospital-based experience. *Glob J Health Sci.* 2015; 8(6):139-46. doi: 10.5539/gjhs.v8n6p139.
- Binagwaho A, Adhanom Ghebreyesus T. Primary healthcare is the cornerstone of universal health coverage. *BMJ.* 2019; 365: l2391. doi:10.1136/bmj.l2391.
- Raofi A, Takian A, Akbari Sari A, Olyaeemanesh A, Haghighi H, Aarabi M. COVID-19 pandemic and comparative health policy learning in Iran. *Arch Iran Med.* 2020; 23(4):220-234. doi: 10.34172/aim.2020.02.
- Mohammadi N. Determining the challenges of knowledge translation in the primary health care system and presenting solutions: a case study in Kerman University of Medical Sciences. Master thesis, School of Health Information and Management, Kerman University of Medical Sciences, Kerman, Iran; 2018. [In Persian]
- Kazemeini SK, Mohammadi F, Owlia F. Evaluation of satisfaction rate of patients admitted to yazd shaheed sadoughi burn hospital in first nine months of the year 2011. *The Journal of Toloo-e-Behdasht.* 2011; 11(4):91-102. [In Persian]
- Ghanbari S, Ramezankhani A, Mehrabi Y. The quality of family planning services in health care centers of Shahid Beheshti University of Medical Sciences: comparison of clients, providers, and program managers' viewpoints. *J Health Field.* 2013; 1(1):20-29. doi: 10.22037/jhf.v1i1.4625. [In Persian]
- Huang YY, Li SJ. Understanding quality perception gaps among executives, frontline employees, and patients: the outpatient services in Taiwan hospitals. *Qual Manag Health Care.* 2010; 19(2):173-84. doi: 10.1097/QMH.0b013e3181db647f.
- Safi MH, Fereydounfar AA, Arshi SH. Quality of primary health services in the clinics of shomal health center of Tehran. *Journal of Community Health.* 2015; 2(3):172-181. [In Persian]
- Khayyati F, Motlagh ME, Kabir M, Kazemeini H, Gharibi F, Jafari N. The role of family physicians in case finding, referral, and insurance coverage in rural areas. *Iranian J Publ Health.* 2011; 40(3):136-139.
- Nejatzadegan Z, Ebrahimipour H, Hooshmand E, Tabatabaee SS, Esmaili H, Vafaenajar A. Challenges in the rural family doctor system in Iran in 2013-14: a qualitative approach. *Family Practice.* 2016; 33(4):421-5. doi :10.1093/fampra/cmw033.
- Ramezankhani A. Diabetes, health development, and public participation. *J heal Interfac.* 2016; 43(5):2-3. [In Persian]
- Piroozi B, Moradi G, Esmail Nasab N, Ghasri H, Farshadi S, Farhadifar F. Evaluating the effect of health sector evolution plan on cesarean rate and the average costs paid by mothers: A case study in Kurdistan province between 2013-2015. *Hayat.* 2016; 22(3):245-54. [In Persian]
- Ministry of Health and Medical Education. A set of instructions for the health system transformation program; 2014. Available from http://treatment.sbmua.ac.ir/uploads/HSE_Chapter_930207_1400.pdf. [In Persian]
- Keshavarz Z, Simbar M, Ramezankhani A, Pourreza A, Alavi Majd H. The priorities of policymaking for health promotion behaviors of female workers: a sequential mixed-method study. *Journal of Payavard Salamat.* 2016; 10(1):36-50. [In Persian]
- Ahmadi B, Babashahy S. Women health management: policies, research, and services. *Social Welfare Quarterly.* 2013; 12(47):29-59. [In Persian]
- Mazure CM, Espeland M, Douglas P, Champion V, Killien M. Multidisciplinary Women's health research: the national centers of excellence in women's health. *J Womens Health Gend Based Med.* 2000; 9(7):717-24. doi: 10.1089/15246090050147628
- Rezaee N, Salsali M, Jahantigh M. Identification of women's health dimensions: a review on qualitative studies. *Iranian Journal of Nursing Research.* 2015; 10(38):118-30. [In Persian]
- World Health Organization. Women and health: today's evidence tomorrow's agenda. World Health Organization;

2009. Available from <https://apps.who.int/iris/handle/10665/44168>.
19. Colbert AM, Kim KH, Sereika SM, Erlen JA. An examination of the relationships among gender, health status, social support, and HIV-related stigma. *J Assoc Nurses AIDS Care*. 2010; 21(4):302-13. doi: 10.1016/j.jana.2009.11.004.
 20. Drucker P. If you can't measure it, you can't manage it. *Market Culture Blog*. 2015; 685-718.
 21. Ajam MSJ, Anjomshoa M, Mahmoudi S, Honarvar H, Mousavi SM. Assessing quality of healthcare service by the servqual model: a case study of a field hospital. *Journal of Military Medicine* 2014; 15(4):273-279.
 22. Parasuraman A, Zeithaml V, Berry, LL. SERVQUAL: a multiple- item scale for measuring consumer perceptions of service quality. *J Retailing*. 1988; 6(21): 12-40.
 23. Butt MM, de Run EC. Private healthcare quality: applying a SERVQUAL model. *Int J Health Care Qual Assur*. 2010; 23(7):658-73. doi: 10.1108/09526861011071580.
 24. Azizan NA, Mohamed B. The effects of perceived service quality on patient satisfaction at a public hospital in the state of Pahang Malaysia. *Asian Journal of Social Sciences & Humanities*. 2013; 3(2):307-23.
 25. Heidarnia M, Riazi-Isfahani S, Abadi A, Mohseni M. Cross-cultural adaptation and assessing validity and reliability of SERVQUAL questionnaire in hospital service quality. *Research in Medicine*. 2014; 38(2):98-105. [In Persian]
 26. Teshnizi SH AT, Kahnouji K, Teshnizi SMH, Ghani J. Assessing quality of health services with the SERVQUAL model in Iran. A systematic review and meta-analysis. *J Qual Health Care*. 2018; 30(2):82-89. doi: 10.1093/intqhc/mzx200.
 27. Esfandyari Nejad P, Najar S, Afshari P, Yaralizadeh M, Nezamivand Chegini S. Evaluation of pregnant women's satisfaction of presented prenatal care at Ahvaz health care centers. *The Iranian Journal of Obstetrics, Gynecology and Infertility*. 2016; 19(31): 13-22. [In Persian] doi: 10.22038/IJOGI.2016.7990.
 28. Mirzaee K, Oladi Ghadikolaee S, Shakeri MT, Mousavi Bazzaz SM. Evaluation of the quality of postpartum care based on bruce model in medical health centers of Mashhad city in 2013-2014. *The Iranian Journal of Obstetrics, Gynecology and Infertility*. 2015; 18(177):1-10. [In Persian] doi 10.22038/IJOGI.2016.6452
 29. Asaad B, Mahmoud H. Measuring the quality of health services in lattakia province patients' perspective (field study of health centers in Jableh city). *Journal of Social Economics Research*. 2016; 3(4):41-56. doi: 10.18488/journal.35/2016.3.4/35.4. 41.56.
 30. Tabrizi JS, Jafarabadi MA, Farahbakhsh M, Mohammadzede M. Customer quality and maternity care in Tabriz urban health centers and health posts. *Journal of Clinical Research & Governance*. 2012; 1(1):11-5. doi: 10.13183/jcrg.v1i1.15.
 31. Gholami M, Sohrabi Z. Check the quality of primary health care services provided at the health centers covered by the health centers in Baharestan city-2015. *Research Journal of Medical Sciences*. 2015; 9(3):143-6. doi: 10.36478/rjmsci.2015.143.146.
 32. Gholami A, Salarilak S, Gharaaghaji R, Sadaghiyanifar A, Moosavi Jahromi L. Quality gap in primary health care in Urmia health care centers, 2009. *Stud Med Sci*. 2010; 21(4):347-53. [In Persian]
 33. Sabahi Bidgoli M, Kebriaei A, Moosavi SG. The quality gap of family health care services in Kashan health centers: an Iranian viewpoint. *International Letters of Social and Humanistic Sciences*. 2016; 70:14-20. doi: 10.18052/www.scipress.com/ilshs.70.14.
 34. Tarrahi MJ, Hamouzadeh P, Bijanvand M, Lashgarara B. The quality of health care services provided in health care centers of Khorramabad using SERVQUAL model in 2010. *Yafte*. 2012; 14(1):13-21.
 35. Kashfi SM, Rakhshani T, Hashemi H. Evaluation of the quality of health services based on SERVQUAL model in ahvaz health care centers, Iran. *Caspian Journal of Health Research*. 2019; 4(1):1-5. doi: 10.29252/cjhr.4.1.1.
 36. Mohammadi A, Mohammadi J. Mohammadi A, Mohammadi J. Evaluating quality of health services in health centres of Zanjan district of Iran. *Indian J Public Health*. 2012; 56(4):308-13. doi: 10.4103/0019-557X.106422.
 37. Sharifi T, Hosseini SE, Mohammadpour S, Javan-Noughabi J, Ebrahimipour H, Hooshmand E. Quality assessment of services provided by health centers in Mashhad, Iran: SERVQUAL versus HEALTHQUAL scales. *BMC Health Serv Res*. 2021; 21:397. doi: 10.1186/s12913-021-06405-4.
 38. Matin BK, Rezaei S, Moradinazar M, Mahboubi M, Ataee M. Measurement of quality of primary health services by SERVQUAL model: evidence from urban health centers in the west of Iran. *Research Journal of Medical Sciences*. 2016; 10(5):475-80. doi: 10.36478/rjmsci.2016.475.480.
 39. Sharifirad GR, Shamsi M, Pirzadeh A, Farzanegan PD. The quality gap in primary health care services in Isfahan: women's perspective. *J Educ Health Promot*. 2012; 1:45. doi: 10.4103/2277-9531.104815.