



Swedish Science Pioneers
Developing World Journal Series

Journal of Clinical Research & Governance

www.jcrg.sciencepub.se



Research Article

Customer Quality and Maternity Care in Tabriz Urban Health Centers and Health Posts

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Keywords:

Customer quality
Self-management
Self-care
Maternity care
Pregnancy care

Abstract

Purpose: Customer Quality (CQ) refers to customer's characteristics related to the consumer knowledge, skills and confidence to be actively participating with health team in right decision making, appropriate activities, changing environment and their health related behaviors. The Purpose of this study was to assess customer quality of maternity care from the perspective of pregnant women during pregnancy in Tabriz, Iran.

Methods: A cross-sectional study was conducted with 185 pregnant women in their ninth month of pregnancy who received maternity care from urban health centers and health posts in Tabriz. All participants were selected randomly from 40 health centers and health posts. Customer Quality was measured using CQMH_CQ questionnaire. Questionnaire content validity was reviewed and confirmed by 10 experts and its reliability was confirmed based on Cronbach's alpha index ($\alpha = 0.71$).

Results: All participants achieved stage 1 scores of Customer Quality; 81% reached the actual action stage. Only 14% reported the highest Customer Quality score and ability to change the action by changing health and environment. Participants registered in health centers at the second trimester of pregnancy, reported a higher Customer Quality score, reflecting higher capacity for self-care and self-management.

Conclusion: Empowering pregnant women by engaging them in the service delivery process and decision making can promote customer quality and pregnant women's ability for good decision making and appropriate action. In addition, encouraging health care providers to improve customer's capabilities could have an important role in this process.

DOI: [10.13183/jcrg.v1i1.15](https://doi.org/10.13183/jcrg.v1i1.15)

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Introduction

Quality has been defined by many experts in a number of different ways and from several viewpoints (Crosby, 1979; Donabedian, 1980; Maxwell, 1984; Peters, 1987; Juran, 1988) [1]. The Institute of Medicine has defined quality as the 'degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge' [2]. But there is no universally accepted definition of quality of care. At the other hand most of studies on the quality of health care focused on the technical and service aspects of care but the essential role of user Features in the quality of services and its effect on output and impact of service has been less attention. Based on

a model provided by the Tabrizi and colleagues (2007) quality in health services assessed from three dimensions: service, technical and customer quality [3].

While the technical quality (TQ) refers to the clinical and technical aspects and service quality (SQ) refers to non-health aspects of care such as: access, respect and confidentiality, customer quality (CQ) focuses on service user or customer features. Customer quality refers to knowledge, skills and confidence of health care user to be actively participant in the health team to right decision making, appropriate activities and change their environment and health related behavior. From this viewpoint people how use healthcare services are the costumer and if take good role in their daily life such as good diet habits, hygiene and physical activity may be also a co-

producer of his or her health [4]. Customer quality refers to knowledge, skills and confidence of health care user to be actively participant in the health team to right decision making, appropriate activities and change their environment and health related behavior. Prenatal care is such care during pregnancy by providing services to pregnant women donors are offered and the information necessary for receptor to assist decision-making process is about service [5]. Health system and healthcare facilities are responsible for ensuring access to maternity services for all women and for quality of delivered services. But pregnant women are ultimately responsible for making informed choices about services they are receiving during pregnancy period [6]. And in recent years focus shifted the emphasis back onto the mother's key principal role in pregnancy and child birth and empower them to improve care during pregnancy and childbirth [7].

On the other hand, pregnancy is one of the most popular and important condition and maternity care is one of the cost effective services in health care systems. According to this definition of quality, pregnant women as the customers of healthcare system have major role in the quality of received services and those outcomes. Pregnant women's ability and capacity to take appropriate action during pregnancy period has the central role in promoting quality and improving pregnancy outcomes.

Health of pregnant women affected by service factors, which sometimes they not able to alter some of them but they can change and manage some situation and risk factor [8, 9]. customer involvement in decision making process and patient control have the most important effect in increasing patient satisfaction, sense of patient empowerment and self-esteem and improving perception of experience enhancing emotional well-being [10]. Another benefit of patient empowerment and Patient-centered care (PCC) and reason for developing it, is good outcome and cost effectiveness of provided care and greater satisfaction of customer [11].

Empowered Patients have necessary "knowledge, skills, positive attitudes, and self-awareness to influence their own behavior and improve the quality of their lives" [12].

According to Barbara et al. [13] women's perception and experiences about health services is more important factor than personal and systemic factors in doing decision making process. Brown emphasized that, in many studies on obstacles to prenatal care don't cite "consumer" views and in health program's designing women's experiences neglected [14]. According to Tang et al. about long term situation like diabetes and pregnancy in customer empowering process policymaker and care provider must pay more attention to their daily decisions about health status which is (nutrition, physical activity) very important, Healthcare services in these cases must be delivered with good cooperation and communication between doctors and patient; So patients can take the appropriate decisions based on the received [15]. So, this study aimed to assess customer quality of maternity care from the perspective of pregnant women during pregnancy period.

Methods

A cross-sectional survey conducted with 185 pregnant women in their ninth month of pregnancy who were received maternity care from the urban health centers and health posts in Tabriz in 2010-11. All participants were selected randomly from 40 health centers and health posts. Customer Quality measured using CQMH_CQ [16]. Validity of The study questionnaire was confirmed through a piloted study by 10 experts and its reliability was confirmed based on Cronbach's alpha index ($\alpha = 0.714$). This instrument measures attributes relevant to our definition of Customer Quality in four important stages of empowered customer: 1) believing those role is important, 2) having the confidence and knowledge necessary to take action, 3) actually taking action to maintain and improve one's health, and 4) staying the course even under stress. Raw Customer Quality scores were calculated by adding up the responses to

all 16 questions as follows: "Strongly Disagree = 1", "Disagree = 2", "Agree = 3", "Strongly Agree = 4" and "Not Applicable = 5". Any responses of "N/A" or "Missing Value" up to a maximum of 3 responses for each person were interpolated to apply the average raw score for each missing or N/A item. Raw scores were transformed as indicated by Tabrizi et al. and customized cut-off points were used to identify Customer Quality score for each stage of self-management (Table 1). About 213 pregnant women invited to participate in the study, but 185 questionnaire were completed (86%). Frequencies and percentages were used to describe demographic information of pregnant women. Independent Samples Test, ANOVA flowed by Tukey HSD Post Hoc Test were conducted to compare customer quality score between categorical variables. Data analyzed using the SPSS17 statistical package. P values ≤ 0.05 were considered as statistically significant.

Table 1. Customer Quality scores cut-off points for self-management.

Self-management stage	Customer Quality scores
One	16 or lower
Two	16.1 to 50
Three	50.1 to 83
Four	83.1 and above

Table 2. Self-reported characteristics of study participants.

Characteristics	No	%	
Age(year)	Under 20 years	18 10	
	20 – 30 years	128 70	
	over 30 years	37 20	
Education	Illiterate	11 6	
	Elementary & Mid school	76 41	
	High school	85 46	
Tertiary		13 7	
	care receiving place	Health center	128 69
		Health post	57 31
History of pregnancy	1	103 56	
	2	47 26	
	≥ 3	34 18	
Specialist provider	Yes	125 68	
	No	60 32	
Planned pregnancy	Yes	108 58	
	No	77 42	
occupation	home worker	167 90	
	worker	18 10	
Having health insurance	Yes	160 87	
	No	20 13	

Table 3. Self-reported Customer Quality scores of study participant.

Self-management stage	NO	%
believing the patients' role is important	0	0
having the confidence and knowledge necessary to take action	9	5.0
actually taking action to maintain and improve one's health	146	80.7
staying the course even under stress	26	14.4

Results

The majority of study participants aged between 21 and 30 years (71%), 41% completed secondary education and only 7%

completed tertiary level. the majority of participants had a health insurance (86%) and mostly were housewives (90%). About two third of participants received care from health center and only 58% of them have Planned pregnancy (Table 2).

According to self reported customer quality score 14.4% of participant achieved highest level of Self-management stage and none of them started at stage one. Only 5% of participants didn't reach the action stage and most of participants (95%) reported take action in facing with health related problem and only 15% of them staying the course of action even under stress (Table 3).

Average score of customer quality according to the customized cut-off points that have been used by Tabrizi et al is 67.79 [16] (Table 4).

Study results that customer quality scores of women who evaluate overall quality of received services better is more than who believed quality of her received care is weak (63.3 for weak vs. 66.6 for good vs. 71 for excellent, P= 0.007). Customer Quality Score of pregnant women who Receiving care from midwives was significantly different from those did not (72.5 vs. 66.8, P=0.009). Comparing customer quality score according to registration time in health centers was significantly different. So must, women who register in second trimester take greater score than who register in first trimester (66.9 vs. 71.2, P=0.038). Similarly, participants who had regular care reported higher C.Q score than who haven't regular care (68 vs. 51, P_value =0.034). Moreover participants with higher education level, older age, those received continuous care from GP and people who worked outside had better customer quality scores but there was not statistically significant. There was no statistically significant relationship between customer quality score and other demographic factors and history of pregnancy characteristics (Table 4 and 5).

Discussion

Pregnancy and childbirth are the most important health conditions which need greater attention to improving its quality. Furthermore looking to quality as a complex with more element that were affected from each other, take a central role to empowering and participating costumer in service delivery to increase overall quality of delivered health services.

In this study there was no statistical association between education level and C.Q score; But Gabrysch and Campbell found that Mother's education consistently associated with health behaviour of pregnant women by increasing knowledge and empowering them to participate in service delivery process and they demand better services from care giver [17]. According Cross-Sudworth et al well educated mothers reported feeling highly confident, well supported and appropriately informed Bekker and Lhajoui Education is an important factor in improving health and well-being of mother and also Astone et al found children and grandchildren health status [18]. Our finding could be due to the weakness of educational system in empowering women and demonstrate health system weakness in public education. So, evidence shoes that Women with higher Health knowledge expected to receive high quality and appropriate services and they are more likely to be more preventive care-seeking.

Also participants who received care from gynecologists had fewer Customer Quality Score than those received care from midwives (66.8 vs. 72.5). Pregnancy and child birth is a routine condition that does not need much more specialist care and women who have enough self steam can take better care in primary health care services.

Table 4. Mean Customer Quality score and proportion of self-management in terms of demographic.

Characteristics	Customer Quality Score				P	
	Mean ± (SD)	Stage 2 %	Stage 3 %	Stage 4 %		
Total	67.79± (11.29)	5.0%	80.7%	14.4%		
Demographics						
age	Under 20 years	64.3 (13.01)	11.8%	76.5%	11.8%	0.355
	20 – 30 years	67.9(11.56)	5.6%	78.6%	15.9%	
	over 30 years	69.1(9.61)	.0%	88.9%	11.1%	
Education	Illiterate	64.6 (11.14)	9.1 %	81.8 %	9.1 %	0.389
	Elementary & Mid school	68.1 (10.9)	4 %	82.7 %	13.3 %	
	High school	67.3 (11.73)	6.1%	80.5 %	13.4%	
	Tertiary	72.1 (10.62)	0 %	69.2 %	30.8 %	
occupation	home worker	67.4 (11.32)	5.5%	81.0%	13.5%	0.177
	Worker	71.2 (10.67)	22.2%	77.8%	.0%	
Having health insurance	Yes	68.0 (10.97)	4.5%	81.4%	14.1%	0.472
	No	66.3 (13.26)	8%	76%	16%	
History of pregnancy	1	68.6 (12.06)	4.9%	77.5%	17.6%	0.482
	2	66.1 (9.63)	6.4%	85.1%	8.5%	
	≥ 3	67.9 (11.09)	3.2%	83.9%	12.9%	

Table 5. Mean Customer Quality score and proportion of self-management in terms of History of pregnancy.

Characteristics	Customer Quality Score				P	
	Mean ± (SD)	Stage 2 %	Stage 3 %	Stage 4 %		
Total	67.79 (11.29)	5.0%	80.7%	14.4%		
History of pregnancy						
Care receiving place	Health center	68.3 (11.38)	4.0%	80.8%	15.2%	0.345
	Health post	66.6 (11.09)	7.1%	80.4%	12.5%	
Planned pregnancy	Yes	66.6 (10.52)	5.6%	83.2%	11.2%	0.085
	No	69.5 (12.18)	4.1%	77.0%	18.9%	
Continuous care by obstetric	Yes	66.8 (11.93)	6.5%	77.8%	15.7%	0.125
	No	69.5 (10.15)	2.8%	84.5%	12.7%	
Continuous care by GP	Yes	68.2 (11.4)	5.4%	79.8%	14.9%	0.075
	No	62.4 (8.35)	.0%	92.3%	7.7%	
Registration time in health center	First trimester	66.9 (11.23)	6.0%	80.6%	13.4%	0.038
	second trimester	71.2 (11.61)	2.6%	78.9%	18.4%	
	third trimester					
Overall evaluation of received service quality	weak	63.3 (9.18)	4.5%	90.9%	4.5%	0.007
	good	66.6 (10.11)	4.3%	87.1%	8.6%	
	excellent	71 (12.72)	6.1%	68.2%	25.8%	
Receiving care from midwife	Yes	72.5 (10.8)	.0%	78.1%	21.9%	0.009
	No	66.8 (11.17)	6.0%	81.2%	12.8%	

According to our findings women who evaluate quality of their received care better more likely to have greater Customer

Quality Score and better self management ability (63.3 vs. 71). Green and colleagues showed that a positive association between women's self-reported "sufficient amount" of information, and upper levels of control with describing their babies by positive words [19]; moreover, Kiely and Kogan found that unplanned pregnancy, negative view, do not know or recognize the signs of pregnancy, not valued or understood of prenatal care, fear of doctors, hospitals, procedures, parental discovery, deportation or problems with the immigration and naturalization service, fear that certain health habits will be discovered and criticized (smoking, eating disorders, drug or alcohol abuse), attitudes related to selected lifestyles (drug abuse, homelessness), attitudes related to inadequate social supports and personal resources excessive stress, denial or apathy, concealment are some of the barriers to the use of prenatal care [20]. Some studies indicate women's financial barriers were the most commonly cited obstacle to obtain suitable prenatal care. The second barrier was a low value placed on prenatal care. Other barriers include transportation difficulties, inhospitable institutional practices, and a dislike or fear of prenatal services [21-23].

The study found that women who had planned pregnancy have lower CQ score, also there was not statistically significant. Our founding's inconsistency with, Karacam et al and other studies revealed women with unplanned pregnancy had fewer positive prenatal practices compared with women with planned pregnancy, and indicate unplanned pregnancy encouraged negative behaviors during pregnancy [24]. This inconsistency can be had various reasons that need to be further investigated. Result demonstrates that women who register later to health center have greater CQ score. According Lee SH and Grubbs LM although pregnant teens reported similar self-care behaviors regardless of registration time to prenatal care, delaying to entering prenatal care could lead to poor pregnancy outcomes and can remain undetected when prenatal care [25].

Conclusion

One of the most important way to empowering women and increasing these participation in the health services and decision making is giving active role in care process, Shah and colleague revealed that pregnant women's participation could be improved by an intervention like take home – based record and maternity risk factor education [26]. Another way to promote mothers involvement in care processes is centering pregnancy group conceived by Sharon Rising in 1998 [27] and then developed, Group prenatal care contains the basic components of individual care about health care. However, by interactions with group facilitators, guest speakers, and pregnant women who are members of the group are gain additional education and support; so, it is a acceptable model for the care of first pregnancy and combine satisfaction, good outcomes, and effective delivery of care [28-30]. At the other hand encouraging provider to empowering pregnant women in self-care skills can make possible to improve maternity care, according this study finding most of women have skill and knowledge but they cannot maintain their ability under pressure and stressful condition and this fact illustrate important role of care provider in empowering pregnant women in facing with these condition.

Conflict of interests: The authors declare no conflict of interest.

Acknowledgement: Financial support was provided by Tabriz health services management research center of Tabriz University of Medical Science. We would like to thank eastern Azerbaijan, Tabriz department of health, and all of them in health post and centre that support for data collection. Also special thanks to all pregnant women for their patient and participation in this study.

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