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Quality of Antenatal Care in Governmental Primary Health Care Centers in the Gaza Strip as perceived by Nurses and Midwives: An Indication for Policy Change

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Abstract

Introduction: Providing antenatal care (ANC) to pregnant women has positive impact on the health of mothers and their newborns. Provided ANC should be of high quality to have such an impact .

The aim of this study was to assess the quality of ANC services provided by the governmental primary health care centers in the Gaza Strip as perceived by nurses and midwives providing ANC to this group of health service users .

Design: A cross sectional descriptive design was used in this study. Participants of the study were all nurses and midwives (55 participants) who provide ANC at governmental primary health care centers in the Gaza Strip .

Results: Results showed that about half (50.9%) of the participants were between 36 – 45 years, the majority of them (72.7%) have more than 10 years of work experience. 40% of participants hold a diploma in midwifery and about one third of them (34.4%) were from Gaza Governorate. Results showed high scores of all study variables and domains. Participants thought that emotional support was the most essential feature of quality of antenatal care and that they are following the national standards criteria related to providing ANC .

Conclusion: The results of this study showed that nurses and midwives working at the governmental primary health care centers are providing their clients a high quality ANC service according to national guidelines of ANC. However, this was the perception of the nurses and midwives who provide the services . An assessment of the quality of delivered ANC as perceived by service users is needed to get a full picture of the actual quality of ANC services.

Keywords:

*Antenatal care,
Gaza Strip,
Palestine,
midwives, pregnancy*

Introduction:

Antenatal care (ANC) includes systemic supervision (examination and providing advice) of women during pregnancy to ensure normal pregnancy with delivery of healthy babies from healthy mothers through early diagnoses, treatment and prevention of complications during pregnancy (Gloyd, Chai, & Mercer, 2001; Mansur, Rezaul, & Mahmudul, 2014;

Renkert & Nutbeam, 2001). According to WHO and UNICEF (2003), offering health information and services during ANC to pregnant women can significantly improve mothers' health and their newborns. According to de Jongh, Gurol-Urganci, Allen, Zhu, and Atun (2016), integrated ANC service delivery results in improved uptake of essential

health services for women, earlier initiation of treatment, and better health outcomes.

In fact, some studies claimed that providing good quality ANC had contributed to improving maternal health and reducing maternal mortality rates (Campbell, Graham, & group, 2006; Dowswell et al., 2015; Ekman, Pathmanathan, & Liljestrand, 2008). Moreover, providing ANC has positive impact on the utilization of postnatal healthcare services (Chakraborty, Islam, Chowdhury, & Bari, 2002) and improves use of skilled birth attendance services (Anastasi et al., 2015). Therefore; ANC provides an entry for interventions which give health workers the opportunity to detect risky conditions that need further interventions and accordingly refer them for early management which will lead to better maternal and neonatal outcomes (Afulani, 2015).

But in order to achieve good outcomes, provided ANC services should be of high quality (Simkhada, Teijlingen, Porter, & Simkhada, 2008). There are several definitions of quality of care but the Institute of Medicine (IOM) defines it 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" (Institute of Medicine, 2001). On the other hand, the Agency for Health Care Research and Quality (AHRQ) defines it as "doing the right thing for the right patient at the right time in the right way to achieve the best possible result" (Agency for Healthcare Research and Quality, 2017).

Quality of care is hard to measure as it has several dimensions that are not easily captured in a few variables. The WHO (2018) defined quality of care as "the extent to which health care services provided to individuals and patient populations improve desired health outcomes. In order to achieve this, health care must be safe, effective, timely, efficient, equitable

and people-centered." To be safe, provided health care should minimize risks and harm to clients, including reducing medical errors and avoiding preventable injuries. Effective means to provide services that are based on scientific knowledge and evidence-based guidelines. These services should be provided in a timely manner and without unnecessary delays. Moreover, provided care should be delivered in a manner that maximizes resource use and avoids waste. Care should be delivered in an equitable manner without variations in quality due to personal characteristics such as gender, race, ethnicity, geographical location or socioeconomic status. Finally, provided care should be people-centered and health care providers should take into account the preferences and aspirations of individual clients and the culture of their community (WHO, 2018).

The World Health Organization (WHO) recommends at least four visits during the antenatal period (WHO, 2016). The WHO estimates that approximately 80.5% of pregnant women globally (this includes 71.8% of women in low-income countries) had at least one ANC visit during pregnancy during 2005–2012 (Global Health Observatory Data Repository WHO, 2013).

Antenatal care provision and accessibility is generally good in Palestine (Yousef, 2016). This is also true for women living in the Gaza Strip, as antenatal care is provided free of charge at the primary health care centers that belong to the Palestinian Ministry of Health or UNRWA (United Nation Refugees Work Agency). However, not all patients take advantage of this free service, as some women prefer to use private services and others don't receive antenatal care for a variety of reasons such as place of living or economical reasons (Naim et al., 2016) .

Unfortunately, little is known about the quality of ANC that Palestinian women residing in the Gaza Strip receive or the factors associated with it. Therefore; this study aimed to assess the quality of ANC services provided by the governmental primary health care centers in the Gaza Strip as perceived by nurses and midwives providing ANC to this group of health service users .

The results of this study can serve as a guide for health policy makers in order to design appropriate interventions and policies to improve the quality of ANC services provided by health care professionals working at the governmental primary health care centers in the Gaza Strip.

Material and Methods

A descriptive cross-sectional design was used in this study. The target population for this study was all nurses and midwives who provide ANC at the governmental primary health centers in the Gaza Strip. The eligibility criterion was having experience of at least six months in providing ANC at the time of data collection. Because their number is small, a census sample was used which consisted of all 55 nurses and midwives working at the antenatal care units at governmental primary health care centers in the Gaza Strip.

Instrument

The instrument used to collect data for this study was a self-administered questionnaire that was developed by the researchers based on literature review. Besides the demographic data, the questionnaire contained three major domains. The first domain included nine items and it evaluated nurses' and midwives' attitude toward antenatal care. The second domain consisted of 14 items and it evaluated antenatal care provided during the first visit from the perspective of nurses and midwives.

Finally, the third domain of the questionnaire included 13 items and it evaluated quality of antenatal care during the second and third trimester of pregnancy. Participants were asked to rate their responses to the items on a 5-point Likert scale where 1= very rare, 2 = rare, 3 = neutral, and 4 = sometimes, and 5= always). Moreover, the questionnaire contained an open-ended question that focused on the challenges facing health care providers in providing antenatal care services at the governmental primary health care centers in the Gaza Strip .

Prior to conducting the study, the questionnaire was examined for face and content validity by four experts in the field of antenatal care. Upon their request, a few modifications were done. Then the questionnaire was pilot tested by seven participants to get the feedback about the length and clarity of questionnaire items. A positive feedback was reported by the participants. Reliability of the questionnaire was assessed using Cronbach α and it was 0.88 which reflects a high reliability of the instrument .

Data Collection

The questionnaire was distributed to all nurses and midwives who met the inclusion criterion at all governmental primary health care centers in the Gaza Strip that provide ANC service. Questionnaires were handed by a member of the research team to all potential participants. Responses were returned by sealed envelopes to ensure anonymity and confidentiality of participants and to minimize bias. Participants were provided with an informed consent stating the purpose of the study and the confidentiality of the information gathered.

Ethical considerations

Prior to conducting this research study, ethical approval and permission to conduct this study was obtained from the Human Resources Department at the Palestinian Ministry of Health. A cover sheet was attached to the questionnaire that explains the purpose of the study. Each participant was asked to sign a consent paper prior to participation .

Statistical Analysis

Data Analysis was done using SPSS version 20. Prior to statistical analysis, data was cleaned and checked for accuracy of data entry. Different statistical measures were used to analyze data including frequencies, means and one way ANOVA test to examine the differences among the means of some variables of the study .

Results

Characteristics of participants :

All targeted participants (n=55) returned completed questionnaires with a response rate of 100%. About half of the participants (50.9%) were within the age group between 36 and 45 years and majority of them (72.7%) have more than 10 years of work experience. 40% of the participants hold a diploma in midwifery and about one third of them (34.4%) are from Gaza Governorate (table 1).

Table 1: Demographic characteristic of participants

Variable	Frequency	%
Age of participants		
29 - 35 years	15	27.3
36 - 45 years	28	50.9
More than 45 years	12	21.8

Variable	Frequency	%
Years of experience		
10 years and below	15	27.3
11 - 20 years	31	56.4
More than 20 years	9	16.3
Level of education		
Diploma in Nursing	14	25.4
Diploma in Midwifery	22	40.0
BSc in Nursing & diploma in midwifery	9	16.4
BSc in midwifery	10	18.2
Place of living		
North governorate	11	20.0
Gaza governorate	19	34.6
Mid Zone governorate	7	12.7
Khanyounis governorate	13	23.6
Rafah governorate	5	9.1

Nurses and midwives' attitude regarding antenatal care

Participants showed a positive attitude toward providing ANC (table 2). The means of participants' responses ranged between 4.31 "I think that every pregnant woman in my country has an easy access to antenatal care health services" and 4.78 "I think that emotional support is the most essential feature of quality of antenatal care". The total score for all the items of this domain was 41.25 (\pm 3.23) out of a maximum potential score of 45 (9 items x 5)

Table 2: Evaluation of health participants' perception regarding antenatal care

No	Dimension	Mean	SD
1.	I follow the national standards criteria when providing care to pregnant women during my work.	4.76	.45
2.	I think that staff and health care providers' characteristics can contribute to quality of their care.	4.65	.70
3.	I think that every pregnant woman in my country has an easy access to antenatal care health services.	4.31	.74
4.	I give my client enough counseling about the component of clinical process for antenatal care	4.69	.63
5.	I pay attention to know the risk factors during pregnancy as illness-prevention strategy.	4.67	.58
6.	I feel that sharing information by health care providers is identified as a key aspect of quality antenatal care	4.51	.84
7.	I think that involving women as active partners in their care was recognized as an essential feature of quality of antenatal care	4.44	.71
8.	I agree that providing women with information and allowing them to make informed decisions is very important.	4.64	.62
9	I think that emotional support is the most essential feature of quality of antenatal care.	4.78	.63
Total score		41.45	3.23

Evaluation of antenatal care during the first visit from the perspective of participants

Table 3 shows participants' evaluation of provided ANC during the first visit of clients to antenatal care

centers at the governmental primary health care (PHC) centers in the Gaza Strip. Participants of this study gave high scores for all items that evaluate quality of care provided at the first antenatal visit. Scores of this subscale ranged between 3.76 "I think that the age of health care providers can affect the quality of antenatal care delivered to pregnant clients" and 4.98 "I take the client's' past and present medical and obstetrical history properly". The total score for all the items of this domain was 66.53 (\pm 3.21) out of a maximum potential score of 70 (14 items x 5) .

Table 3: Evaluation of antenatal care during the first visit from the perspective of participants

No	Dimension	Mean	SD
1.	I use the desired welcoming and warm greeting approach during the first visit.	4.87	.39
2.	I respect the client and encourage her to ask questions.	4.85	.36
3.	I explain, observe and ask for signs of danger.	4.89	.31
4.	I ask her to do the required routine lab investigations such as (CBC, blood group, RH, and urine analysis).	4.96	.19
5.	I prepare the client for Ultra Sound properly.	4.58	.96
6.	I follow the proper way to measure weight and height of the clients.	4.95	.23
7.	I ask about Tetanus Toxoid if needed.	4.91	.29
8.	I take the client's' past and present medical and obstetrical history properly.	4.98	.13

No	Dimension	Mean	SD
9.	I provide counseling to the client about her hygiene, sleeping and rest patterns, diet, fluid requirements and morning sickness.	4.82	.43
10.	I counsel the client about her Folic Acid supplementation.	4.95	.23
11.	I think that the age of health care providers can affect the quality of antenatal care delivered to pregnant clients.	3.76	1.45
12.	I think that the level of education of health care providers can affect the quality of antenatal care delivered to pregnant mother clients.	4.58	.71
13.	I think that the area of work of health care providers can affect the quality of antenatal care delivered for pregnant clients.	4.67	.55
14.	I provide the client an appointment for next visit and advise her to come on time.	4.75	.75
Total score		66.53	3.21

iron supplementation, good nutrition, and risk factors during pregnancy." The total score for all the items of this domain was 61.73 (\pm 3) out of a maximum potential score of 65 (13 items x 5).

Table 4: Evaluation of the quality of antenatal care during the second and third trimester

No	Dimension	Mean	SD
1.	I advised the client about her iron supplementation, good nutrition, and risk factors during pregnancy.	4.93	.33
2.	I follow the guidelines to do abdominal examination.	4.71	.74
3.	I examine lower limbs for any abnormalities (Edema, varicose vein and Deep Vein Thrombosis).	4.78	.53
4.	I listen to her complaints carefully.	4.91	.35
5.	I give her the needed emotional support	4.78	.42
6.	I provide counseling to the client about breast changes and prepare her for breast feeding process.	4.80	.45
7.	I ask the client if she chose where she wants to deliver her baby.	4.49	.66
8.	I ask her to prepare a package of clothes for her and her baby.	4.65	.48
9.	I teach clients about the signs of true labor pain.	4.78	.46
10.	I teach clients about breathing exercise during labor.	4.53	.60

Evaluation of the quality of antenatal care during the second and third trimester

Table 4 shows participants' evaluation of provided ANC during the second and third trimesters provided at the antenatal care center in the governmental PHC centers in the Gaza Strip. Participants gave high scores to all items of this subscale. Scores ranged between 4.49 "I ask the client if she chose where she wants to deliver her baby" and 4.93 for "I advised the client about her

No	Dimension	Mean	SD
11.	I teach clients about appropriate diet during labor time (ie. yogurt, dates, and juice).	4.84	.42
12.	I inform clients about the benefits of exclusive breast feeding for at least the first six months	4.80	.40
13.	I instruct clients about vaccination schedule for her baby.	4.73	.56
Total score		61.73	3.43

unavailability of needed supplementation and nutrition for pregnant women (14 participants), shortage of computer equipment and lack of skills to use it (11 participant), and lack of educational materials about pregnancy (10 participants). Moreover; nine participants reported that inadequate electricity and inadequate fuel for generators were major barriers. Several participants reported that the number of qualified staff members to cover the antenatal care services was inadequate. This is besides shortage of equipment required to provide quality antenatal care. Other concerns reported by some participants included the huge workload on the existing staff which prevented them from engaging in continuing professional education, shortage of some laboratory tests, lack of motivation, lack of management support, not receiving their full salary for long periods of time and finally the long distance between the work of some health care providers and their place of living.

Impact of demographic variables on study results

One way ANOVA results revealed that all demographic variables (age of participants, years of experience and level of education) had no statistically significant impact on any of the three subscales (health care providers' attitude regarding antenatal care, evaluation of antenatal care during the first visit from the perspective of health care providers, and evaluation of the quality of antenatal care during the second and third trimester). In all cases, the p values were more than .05 as it ranged between 0.167 and 0.859.

Analysis of the open-ended question

The questionnaire included the following open-ended question: "What challenges you faced during your work." Analysis showed that 33 participants answered this question. Participants added several comments that enriched the results of this study. Several barriers to providing high quality antenatal care were reported. These barriers included the following: lack of privacy as there is no private places for examining pregnant women which violates her right for privacy (25 participants),

Discussion

The results of this study revealed high satisfaction of nursing and midwifery staff toward their provided antenatal care in primary health care centers in the Gaza Strip. With all domain scores over 4 on the Likert scale.

These results reflect the ambition of pregnant women who want a positive pregnancy experience, including four subthemes: maintaining physical and sociocultural normality; maintaining a healthy pregnancy for mother and baby (including preventing and treating risks, illness and death); effective transition to positive labor and birth; and achieving positive motherhood (including maternal self-esteem, competence, autonomy) (Downe, Finlayson, Tunçalp, & Metin Gülmezoglu, 2016) .

Evaluation of nurses and midwives' attitude regarding antenatal care

In this study, 95.6% of participants thought that emotional support was the most essential feature of quality of antenatal care (table 2). While another study reported similar results to ours (Sword et al., 2012), this was not the case in a study conducted in Northern Nigeria where the domain of health counseling received the highest score (McNabb et al., 2015). Nevertheless; the importance of women being treated with respect has been well recognized in previous research (Lori, Yi, & Martyn, 2011; Parry, 2008; Tillett, 2009). Listening, which is a component of providing emotional support, has been mentioned as an essential component of high quality care in other studies (Sheppard, Zambrana, & O'malley, 2004; Wheatley, Kelley, Peacock, & Delgado, 2008). Moreover, results of this study show that the great majority of nurses and midwives provide their clients with enough counseling about the component of clinical process for antenatal care. In a similar study conducted in the Kingdom of Saudi Arabia, it was reported that the attitude towards the quality of antenatal care was fair to low (Habib, Hanafi, & El-Sagheer, 2011). Other researchers (Rumbold et al., 2011) found that only 52% of women received antenatal education which is much less than the results reported in this study. Also, the results of our study showed that 86.0% of participants reported that every pregnant woman who lives in the Gaza Strip has an easy access to antenatal care services. A similar result was reported by Al-Ahmadi and Roland (2005) in Saudi Arabia while Mansur et al. (2014) reported low access rate to ANC in Bangladesh. The high rate of accessing ANC reported in this study could be related to the fact that ANC is provided free of charge to pregnant women in the Gaza Strip and to the high level of education among women in childbearing age in Gaza. Some studies reported that convenience of care, including access to service, is considered an important consideration when providing health care (Shaffer, 2002; Sword et al., 2012).

Twenty five participants of this study reported a lack of privacy in the ANC facilities of governmental primary health care centers. This could be related to the limited space at the clinic, as in some cases there were three midwives working in the same room. Privacy is a priority when patients are being assessed and when discussing personal information with antenatal care providers (Heaman, Sword, Akhtar-Danesh, & Bradford, 2012). In another study, privacy was identified as an important issue during providing health care (Novick et al., 2011).

Evaluation of antenatal care during the first visit from the perspective of health care providers

The results of this study showed a high quality of ANC during the first visit from the perception of participants. Results showed that 99.64% of participants take past and present medical and obstetrical history properly from their clients and that 99.27% of them ask the women to do the routine lab investigations needed such as CBC, blood type, blood sugar, and urine analysis. Moreover, the results showed that 98.91% of participants follow the proper way to measure weight and height. A similar study conducted in Bangladesh showed that only 42.6% of women had their height measured and 78% of them had their weight measured during the antenatal visits (Mansur et al., 2014).

On the other hand, only 75.27% of the participants thought that the age of health care providers can affect the quality of care delivered to pregnant women. According to the participants, there was a positive relationship between the age of the health care providers and the quality of ANC service provided to pregnant women. This sounds logical as older health care providers have more experience and they are more familiar with protocols and guidelines pertaining to ANC and they have more skills to perform needed tasks. On the other hand, younger providers could have more up-to-date

knowledge, more enthusiasm and more evidence-based practice skills.

Evaluation of the quality of antenatal care during the second and third trimester

The results of this study showed that a high quality ANC was provided during the second and third trimester from the perspective of participants to pregnant women living in the Gaza Strip. Participants provided counseling to pregnant women about iron supplementation, good nutrition, risk factors, and examining pregnant women for signs and symptoms of high risk pregnancy such as lower limb edema, varicose veins and deep vein thrombosis. A similar study conducted by Mansur et al. (2014) showed that only 67.5% of pregnant Bengali women were assessed for anemia (by examining their eyelid), 59.7% were examined for ankle edema, and only 54.8% received counseling about high risk pregnancy. On the other hand, the same study found that 90.5% of pregnant women received advice about nutrition and 94.8% of them received iron supplements .

Results of this study also showed that most of the participants claimed that they teach pregnant women about breathing exercises (mean for this item was 4.53) during labor and assessed where each woman wanted to deliver her baby .

Relationship between demographic variables of participants and provided ANC

Results of this study showed that there was no significant difference of the means of health care providers' demographic variables such as age and years of experience and different domains of the study variables. Absence of significance between participants' characteristics and study variables could be attributed to strictly following the guidelines of ANC imposed by the Ministry of Health.

Since the beginning of the year 2016, directors of antenatal care departments announced two guidelines to be used in all governmental clinics in dealing with pregnant women, one of them for normal pregnancy and the other for high risk pregnancy. All staff working at ANC had received proper training to follow these guidelines. According to Tillett (2009), following guidelines was identified as an important factor in promoting quality prenatal care. Several researchers identified that staff and care providers' characteristics are structural elements of the quality of prenatal care. Antenatal care providers who are knowledgeable and confident contribute to higher quality prenatal care (Heaman et al., 2012; Sword et al., 2012; Tandon, Parillo, & Keefer, 2005).

Conclusion and Recommendations

This study aimed to assess the quality of ANC services provided by the governmental primary health care centers in the Gaza Strip as perceived by nurses and midwives who provide ANC at the governmental primary health care centers. Findings showed high scores of all study variables reflecting high quality of ANC provided by governmental health care centers at the Gaza Strip. Since the participants included in this study were nurses and midwives who deliver ANC services at the governmental health care settings, results could be biased. Therefore; the research team recommends that a similar study to be conducted to assess quality of ANC services provided by governmental health care centers from the perspective of clients who receive ANC services to give a full perspective and evaluation of quality of ANC provided by staff at governmental primary health care centers in the Gaza Strip .

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