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## Assessing Mothers' Perception of Maternal Health Services in Rural Areas of Yatta, Hebron: A Pilot Study from Palestine

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## **Assessing Mothers' Perception of Maternal Health Services in Rural Areas of Yatta, Hebron: A Pilot Study from Palestine**

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### **Abstract:**

Access to high-quality care during pregnancy and childbirth is a challenge for women living in Al-Masafer of Yatta and Bedouin areas, considered C areas under Israeli administrative & security supremacy. Realizing clients' perception and satisfaction with the quality of maternal healthcare services will enable maternal health decision-makers & providers to assess the impact of their services on the clients' demands and perceptions. This study aims to measure women's perception of maternal health services provided in Al- Masafer of Yatta and Bedouin areas. A cross-sectional descriptive quantitative study of 59 women, selected purposefully from Al-Masafer of Yatta and the Bedouin areas, was conducted in September 2021. The mean age of the respondents was 28 years, with a range of 23-34 years old. After investigating their Perception of Maternal Health Services in Al-Masafer of Yatta, the mean of their answers was as the following: provided services: 2.87 was moderate, the professional

treatment: 2.80 was moderate, degree of obstacles facing women in access to reproductive health services: 3.50 was moderate, and health promotion provided to women: 1.92 was low, while the total overall mean 3.01 was moderate. Despite the obstacles faced by women to reach maternal health centers, the overall level of health care provided at maternal health centers was modest in both Al-Masafer of Yatta and the Bedouin areas.

**Keywords:** maternal healthcare, rural health, Al-Masafer, health promotion, professional behavior

فلسطين

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الملخص

يعد الحصول على رعاية طبية عالية الجودة خلال فترة الحمل والولادة تحدياً للأمهات اللواتي يعشن في مسافر يطا والمناطق البدوية التابعة لها، والتي تعد ضمن مناطق (ج) التابعة للسيطرة الإدارية والأمنية الإسرائيلية. إن إدراك تصور المراجعين للمراكز الصحية ورضاهم عن جودة خدمات الرعاية الصحية المقدمة للأمهات سيمكن صانعي القرار في القطاع الصحي من تقييم هذه الخدمات، ومدى تلبيتها لحاجات المراجعين. تهدف هذه الدراسة لقياس معرفة الأمهات لخدمات الأمومة الصحية المقدمة في مسافر يطا والمناطق البدوية التابعة لها. ولدراسة هذا الهدف أجريت دراسة مقطعية وصفية كمية ل 59 امرأة تم اختيارهن بشكل هادف من مسافر يطا الريفية، والمناطق البدوية التابعة لها في أيلول 2021، وحسب هذه الدراسة كان متوسط عمر الأمهات اللواتي شاركن في هذه الدراسة هو 28 سنة، وتراوحت أعمارهن بين 23 و34 سنة، وبعد التحقق من تصور الأمهات عن خدمات صحة الأمومة المقدمة لهن في مسافر يطا كانت الإجابات كالتالي: الخدمات المقدمة: ( 2.87 ) متوسطة، العلاج المهني: ( 2.80 ) متوسط، درجة المعوقات التي تواجه الأمهات للوصول إلى مراكز الإنجاب والخدمات الصحية: ( 3.50 ) معتدلة، تعزيز الصحة المقدمة للأمهات: ( 1.92 ) منخفضة، في حين كان المتوسط الإجمالي: ( 3.05 ) معتدلاً. وتخلص الدراسة إلى الرغم من المعوقات المذكورة فإن المستوى العام للرعاية الصحية المقدمة في العيادات كان متواضعاً في كل من مسافر يطا والمناطق البدوية التابعة لها.

**الكلمات المفتاحية:** صحة الأم، الصحة الريفية، المسافر، تعزيز الصحة، السلوك المهني

**Introduction:**

According to the World Health Organization (WHO) definition of maternal health, maternal health refers to women's health before pregnancy, during pregnancy, childbirth, and postnatal (Unicef, 2016). It is well accepted that, according to the ideal maternal health system, all women worldwide have the right to access seamless medical healthcare with links to behavioral, economic, and social support. Moreover, they also would be engaged with this system before, during, and after pregnancy (Unicef, 2016; PCBS 2017, PCBS 2021).

Maternal complications and poor prenatal outcomes are highly associated with the non-utilization of prenatal delivery care services. Women in rural areas have more limited access to healthcare services than their urban counterparts (ACOG, 2014). One study showed that effective prenatal outcomes could reduce maternal complications (Shaw et al., 2006). Another study conducted in an ethnic Chinese rural area showed that maternal health and safety could obviously be enhanced by using maternal health services. However, unfortunately, there is a lack of utilizing these services. 93% of participants in this study believed that urban hospitals could provide maternal health services better than rural health centers (Wu et al., 2019). Also, pregnant women face several barriers to accessing maternity care in rural places, including often needing to travel long distances to reach facilities that provide obstetric services (Rayburn, 2012).

In another study, participants in Vietnam stated that women's use of maternal healthcare was influenced by economic constraints and cultural norms impeding their childbearing autonomy (Graner et al., 2010). Therefore, increasing maternal healthcare services is essential for improving women's health in these rural areas.

A study in Tanzania in 2009 revealed that the late initiation of antenatal care was to avoid having to make several visits to the clinic, lack of money, and fear of encountering wild animals on the way to the clinic. Also, despite the benefits of postnatal care, there was a lack of postnatal care for the mothers, and shortages of staff, equipment, and supplies were common in Tanzania (Mrisho et al., 2009). Another Tanzanian study conducted in 2015 showed ambivalence in the quality of health services due to the decline in material resources, which has been considered a barrier. On the other hand, the same study showed that mothers' perception of maternal health services was beneficial with the awareness of poor postpartum complication services (Mahiti et al., 2015). Although the United States of America (USA) is considered one of the developed countries, a study conducted about the quality of maternal care in rural areas of the USA showed that there was a shortage of maternal care providers. The study indicated that up to 40% of all U.S. counties were rural and lacked qualified childbirth providers (Kozhimannil et al., 2016). A qualitative study in Malawi revealed that to enhance women's health outcomes, they need to use expensive medical resources and services like women's perspective on the quality of maternal health (Machir and Palamuleni 2018). Another qualitative study in Sudan mentioned some barriers facing health workers in delivering maternal care services, such as lack of medical equipment and supplies, lack of supervision and training opportunities, low salary, and the absence of other non-financial incentives. All these barriers were significant elements of health workers' de-motivation and low performance, poor management, and staff coordination. Furthermore, security instability resulting from political conflicts further impacts service delivery (Muga and Alam, 2018). However, on the other side, a study in 2014 showed a high level of

satisfaction with the quality of maternal healthcare services at the primary healthcare level in Nigeria despite the poor quality of services provided (Nnebue et al., 2014).

Generally, considerable number of women is not receiving care in Palestine according to the ideal maternal health system mentioned above. Thus, women in Palestinian rural communities face unique challenges that make it harder to reach healthcare facilities. Because maternal healthcare is a growing concern in rural Palestine, rural maternal healthcare is a priority, encouraging the Centers of healthcare and the Ministry of Health (MOH) services to focus on improving rural maternal health outcomes.

This research, conducted in September 2021, examined the responses of women's perception of reproductive health services from Yatta, a Palestinian city in the Hebron Governorate. Yatta is located in the southern part of the country and has a population of approximately 69,852 (PCBS 2017). The data of the 2017 census reveals that 47.3% of the population is less than 15 years, 49.5% are in the age group of 15-64 years, and 2.3% are 65 years and above. Palestine is a low-middle-income country, where resources are stretched at the best times (PCBS 2021). In the Hebron Governorate, to which Yatta belongs, the population is more than 750,000.

Al-Masafer (figure 1) is the collection of 19 Palestinian hamlets in the Bedouin areas of Yatta in the Hebron district of the southern West Bank, which lies 24 km from Hebron city with latitude and longitude coordinates of 31o22'48"N 35o10'51"E. These hamlets lie within the municipal border of Yatta city. Al-Masafer hamlets of Yatta are classified as Area C, which means it is under complete Israeli military control. Therefore, the people suffer from continuous attacks by the Israeli army and settlers. In addition, the Israeli government is trying to transfer the people from their lands by





A cross-sectional descriptive quantitative study of a total number of 59 participants responded (95% response rate) to the questionnaires. The questionnaire was completed and returned immediately. Assistance by trained data collectors was made available.

In the sections on dimensions of mother perception of maternal health services, respondents were asked to respond “Always” or “often” or “Sometimes” or “ever” or “never” to the items.

A score of 5 was given to answers that reflected good perception, and a score of zero was designated for answers that reflected bad perception. The total score ranged from 1 to 5, with high scores indicating a positive and a good mother’s perception of maternal health services.

The Cronbach alpha coefficient of the services is 0.87, professional behavior 0.88, obstacles 0.89, and health promotion 0.90, respectively, indicating acceptable internal consistency.

### **Statistical analysis:**

The data were analyzed using a Statistical Package for Social Sciences SPSS (version 26). The frequency distribution of independent variables (sociodemographic and study characteristics) was computed for all 59 participants. Mother's perception of maternal health services scores according to demographic characteristics were compared with independent- samples t-test and one-way analysis of variance (ANOVA) as appropriate.

### **Results**

The first section (Table 1) of the instrument described the demographic characteristics such as marital status and place of residence. The subjects' demographic characteristics (including number and percentage) are

demonstrated in Table 1, along with the mean of mothers' perception of maternal health services.

**Table 1: Demographic data and mean of perception of maternal health services**

Variable	Sub-Variable	Frequency	Percent	Mean ± SD	P-value
<b>Clinic type</b>	Mobile	55	93.2	3.55±1.20	0.23
	Fixed	4	6.8	3.39±1.24	
<b>Age in years</b>	<22	11	18.6	3.05±1.20	0.13
	23-28	18	30.5	3.12±1.22	
	29-34	19	32.2	3.11±1.19	
	>35	11	18.6	3.43±1.20	
<b>Marital status</b>	Married	57	96.6	3.45±2.00	0.55
	Divorced	1	1.7	3.43±1.66	
	Widow	1	1.7	3.381±1.70	
<b>Education level</b>	Basic	27	45.8	2.95±1.05	0.03
	Secondary	17	28.8	3.02±1.08	
	University	5	8.5	3.35±1.06	
<b>Current job</b>	House-wife	58	98.3	3.33±1.15	0.01
	Employee	1	1.7	3.57±1.25	
<b>*Income</b>	<1500	11	18.6	2.45±2.23	0.25
	1500-2499	32	54.2	3.10±1.31	
	2500-3499	13	22.2	3.31±1.28	
	3500-4499	1	1.7	3.43±1.26	
	>4500	1	1.7	3.67±1.29	
<b>Number of children</b>	<3	18	30.5	3.25±1.22	0.45
	3-5	24	40.7	3.55±1.27	
	>5	17	28.8	3.21±1.18	
<b>Number of previous pregnancies</b>	1	3	5.1	2.75±2.20	0.44
	2-4	23	39.0	3.04±1.02	
	5-7	20	33.9	3.15±1.10	
	>8	13	22.0	3.17±1.19	
<b>Pregnant</b>	Yes	19	32.2	3.23±1.04	0.42
	No	40	67.8	3.01±1.12	

<b>Pregnancy period</b>	No	40	67.8	3.01±1.12	0.52
	<3	6	10.2	3.11±1.10	
	3-6	12	20.3	3.34±1.12	
	>6	1	1.7	3.30±1.22	
<b>Total</b>				3.01±1.23	

\*Israeli shekels (\$ 1 ~3.35 shekels).

As shown in Table 1, the survey showed that the mean age of the women was 28 years. Most were married (96.6%), and all had at least Basic education (45.8%). The Table also showed that the majority of women were between the 29 to 34 age group (32.2%), followed by the 23 to 28 age group (30.5%), then less than 22 age group (18.6%), and lastly above 35 years old (18.6%). Most of them were not pregnant (66.1%).

In order to see the significance of demographic variables with mother's perception of maternal health services dimensions, the results of the p-value depicted in Table 1 showed that there is no significant association except for Education level, with the highest score for university level (3.35±1.06, P-value= 0.03) and employment status with the highest score for employed women (3.57±1.25, p-value=0.01).

To measure mothers' perception of maternal health services, this study focused on the following four dimensions: the services provided in the clinics, the professional behavior, obstacles faced by women in accessing healthcare services, and health promotion activities.

Table 2 shows the responses to questions structured to the clinical services provided in healthcare centers like blood pressure, pulse, temperature, and urine analysis.

**Table 2: Perception of services provided in the clinics**

No.	Services	Mean	SD
1.	Weight is taken on each visit to a clinic	4.81	0.71
2.	Physical abdominal assessment is performed on each visit	4.71	0.81
3.	Heart rate is checked on each visit	4.64	0.98
4.	Lower extremities examination is performed on each visit	4.59	0.87
5.	Temperature is measured on each visit	4.22	0.62
6.	Urine analysis is performed on each visit	4.07	1.36
7.	Blood glucose is checked on each visit	3.75	1.28
8.	O2 saturation is checked on each visit	3.69	1.85
9.	Nutritional supplements and medications are provided in the clinic without the need to buy from the pharmacy outside the clinic.	2.85	1.67
10.	Height is taken on each visit	2.37	1.78
11.	Physical assessment is performed on each visit	2.24	1.42
12.	The performance at the clinic is well organized	2.05	1.53
13.	All needed vaccines are provided at the clinic	2	1.38
14.	A regular blood test is performed at the clinic	1.95	1.15
15.	Breast assessment is performed on each visit	1.83	1.22
16.	During pregnancy, nutritional supplements such as iron and folic acid have been provided to you through the clinic	1.8	1.39
17.	Your blood group is tested in the clinic's lab	1.76	1.3
18.	The clinic is ready for emergency cases	1.63	1
19.	Blood pressure is measured on each visit to the clinic	1.36	0.87
20.	During pregnancy, abdominal ultrasound is performed in the clinic	1.1	0.69
	Total	2.87	0.32

From Table 2, most participants indicated they had good clinic services. The overall mean is moderate with 2.87 (SD= 0.32, range= 1-5). We noticed that measuring weight is the highest service provided to pregnant women while the ultrasound test is the least service.

Table 3 shows mothers' perceptions of professional behavior practiced by providers in maternal healthcare centers like registration process, privacy, psychological status, and language.

**Table 3: Perception of professional behavior**

No.	Behavior	Mean	SD
1	The midwife's/nurse's behavior is appropriate	4.86	.392
2	You have difficulty in the registration process	4.80	.714
3	There is respect and understanding for women's privacy	4.66	.734
4	The midwife speaks in understandable language	4.63	.763
5	The midwife speaks in sequence and understands the language	4.59	.722
6	The midwife speaks in a calm and concerned way	4.54	1.072
7	Handwashing is performed by the midwife before and after dealing with the client	4.49	1.006
8	The midwife listens to clients' complain with concern	3.53	1.194
9	Treating all patients equally without any discrimination	2.97	1.082
10	The clinic allows you to have a companion during the examination process	2.80	1.460

11	The fetus's health status is explained to you during the examination	2.68	.990
12	The midwife helps you to be ready for the examination	2.63	1.401
13	Doctor's behavior is appropriate	2.51	1.382
14	The doctor performs hand washing before and after dealing with the client	2.47	1.490
	Total	2.8	0.27

As presented in Table 3, the behavior of maternal healthcare providers is an essential element of quality as they positively and negatively influence how women and their families perceive and experience maternal healthcare. The overall perception mean score for maternal healthcare providers' behavior toward the quality of services was 2.8 (SD 0.27), implying that the majority perceived the quality of health services to be moderate.

We noticed that the appropriate midwife behavior was the most professional behavior for pregnant women, while the doctor's hand washing was the least.

The obstacles women faced in access to healthcare services like cleanness, benches, and shortage of resources are shown in table 4.

**Table 4: Perception of obstacles faced by women in accessing health care services**

No.	Obstacles	Mean	SD
1	Toilets are available in the clinic	4.56	.987
2	The examination place is clean	3.61	1.051
3	The closure of the road from time to time due to occupation effect negatively received services	3.54	1.356

4	Clean drinking water is available in the clinic	3.05	1.395
5	I receive the service whenever I need	2.88	1.288
6	Clinic benches are available	2.56	1.557
7	There is sufficient staff to perform all tasks	2.29	1.314
8	Shortage of equipment and resources are the main reasons for the low level of health care services	2.27	1.375
9	The facility of transferring the client to another health center or hospital when it is needed	2.19	1.293
10	All required health services are founded in the clinic	1.97	1.299
11	Suitable ventilation in the clinic	1.95	1.345
12	Clinic working hours are suitable	1.49	.989
13	Clean and sterile equipment is used during the examination	1.44	1.087
14	I find it difficult to reach the clinic	1.29	.645
15	The staff of the clinic contacted me in case I didn't attend	1.17	.592
	Total	3.50	0.43

As shown in Table 4, we noticed that toilet availability was the highest perceived obstacle facing women in access to healthcare services, while contacting the staff to the women in case they did not attend was the last. The overall mean score for women's obstacles in access to healthcare services was 3.5 (SD 0.43), implying moderate obstacles faced by women to access healthcare services.

The instrument also measured perceptions of health promotion activities like instructions for self-care, exercise for pregnant, and breastfeeding, as shown in Table 5.

**Table 5: Perception of health promotion activities**

No.	Health promotion activity	Mean	SD
1	Instructions about the care of an infant after delivery	4.86	.472
2	Distribute flyers for women about reproductive matters such as (pregnancy, childbirth, postpartum, and family planning).	4.58	1.177
3	Exercises instructions for women	4.49	.858
4	Instructions and advice about breastfeeding	3.92	1.715
5	Instructions and advice about family planning	3.81	1.306
6	Information about the physiological and psychological changes women face during pregnancy and after delivery	3.78	1.068
7	Tips on healthy nutrition for women to improve reproductive health	3.47	1.251
8	Instructions on how to deal with physiological and psychological changes during pregnancy and after delivery	2.80	1.284
9	Courses on physical and psychological preparation for childbirth	1.93	.980
	Total	1.92	0.34

We notice that instructing the care of an infant after delivery is the highest health promotion instruction given to women while giving physical and psychological preparation for childbirth is the least one. However, the overall perception means score for health promotion was 1.9 (SD 0.34) (Table 5), implying that most perceived health promotion instruction as low.



**Discussion:**

This study investigated mothers' perception of maternal health services in Al-Masafer of Yatta, a rural area in the southern part of the West Bank of Palestine. Although the perspectives of women in Al-Masafer and Bedouin area concerning maternal health care service delivery are still indicated to have different challenges in terms of access, the quality of maternal health care delivery, in itself, has remained a significant barrier affecting the immediate use of prenatal, intranatal and postnatal care services.

Rural maternal healthcare has become one of the most critical health issues worldwide. Unfortunately, women living in rural communities are less likely to receive prenatal care. A lack of access to maternal care can result in several adverse maternal outcomes, including premature birth, low birth weight, maternal mortality, severe maternal morbidity, and severe postpartum depression. Therefore, high-quality maternal health programs in rural communities are needed to access high-quality healthcare services before, during, and after pregnancy (Unicef, 2016; Gladys, 2019; PCBS, 2021; Ogochukwa et al., 2021).

In order to see the significance of the demographic variables with the mother's perception of maternal health services dimensions, our results depicted no significant association between the mother's perception of maternal health services and demographic variables. However, that does not apply to the Education level, which is significant for the university level and employed women.

Our findings indicated a positive effect of education and employment on mothers' perception of maternal health services. These findings are consistent with another study in India, where they proved that education

and employment positively affect antenatal care and postnatal care (Malik et al., 2021).

Obviously, rural areas worldwide lack health care services compared to urban areas; As a result, this may negatively impact women living in such rural areas (Gladys et al., 2019). Regarding the services provided in healthcare clinics to women in rural Al-Masafer of Yatta, we have noticed that some services, like taking weight in each visit and other services, such as ultrasound examination, were not provided. However, the overall mean is moderate in our case. It should be noticed that providing health services depends on the availability of these services in the health centers, which are mostly missing in rural places (Gladys et al., 2019).

As mentioned previously, the behavior of maternal healthcare providers in health care centers is an essential factor that reflects positive effects on women receiving healthcare services in rural areas. Our results indicated that the behavior of healthcare providers and the quality of health services provided were moderate in the rural Al-Masafer of Yatta, according to our study 2.8 (SD=0.27). No similar studies have been conducted in Palestine regarding the behavior of healthcare providers. However, some studies (Vickers et al., 2007; Yadav et al., 2020) indicated certain variations in healthcare services given by health providers.

Many studies (Beehler et al., 2012; Gladys et al., 2019) showed that many obstacles faced by women in access to healthcare services in rural places, like toilet availability, cleanliness of examination rooms, sterility of equipment, and other services. Women in this study faced many obstacles in Al-Masafer of Yatta when attending healthcare services. Toilet availability was the most significant obstacle facing women receiving healthcare services. Contact by the clinic staff was the least significant one, with a score of 3.5(SD=0.43), even though these obstacles were

moderate. These obstacles were due to many factors: For example, these healthcare places were far from urban health centers and were affected by the continuous attacks by the Israeli army and Israeli settlers, making healthcare services hard to reach for women in these rural places.

Indeed, proven health promotion positively affects a mother's health before, during, and after delivery and during child care (Joshua et al., 2018; Mahato et al., 2020). Our study indicated that giving instructions about infant care after delivery was the most provided health promotion activity, while giving physical and psychological preparation for childbirth was the least delivered. The overall mean score for the health promotion activities was 1.9 (SD 0.34), considered a low level. These findings proved that the rural places in Al-Masafer of Yatta need special health services to maintain proper health promotion for women and children to receive healthcare services and reduce their morbidity and mortality rate.

### **Strength and Limitation of the study:**

The study has focused on maternal health services in Al-Masafer of Yatta and the Bedouin areas. To our knowledge, the strength of this study lies in the fact that there were no similar studies conducted in similar rural areas like Al-Masafer of Yatta until conducting this work makes it worthy of investigation. Our study contributes to establishing database information to the literature data about health services provided to rural places in Palestine. On the other hand, despite these strengths, it is essential to note that we surveyed rural areas; this made it difficult to access the area due to lack of transportation due to poor infrastructure, lack of studies and articles conducted in Palestine in particular, and the Arab world in general about a similar topic, and difficulty reading and completing the questionnaire by illiterate women. In addition, as this study was done with

small sample size, the cross-sectional design used in this study made it impossible to address causality; hence our findings are demonstrated as associations rather than as indicating causality.

### **Recommendation:**

Regarding the Ministry of Health and Mobile clinic programs, it is important to increase health promotion activities given to women. The ministry also needs to provide all the necessary equipment and tools to conduct medical examinations for women in Al-Masafer of Yatta and Bedouin areas, conduct health courses for women in the region, and provide them with educational information about pregnancy and childbirth. Based on the recommendations we gathered from women, they focused on the need to work systematically in the clinic and provide vaccinations for children in all mobile clinics. Some women also mentioned the need for an ambulance for urgent cases, clinics spread across all areas to avoid driving long distances to receive health services. Finally, some women emphasized the importance of expanding and developing the MCH clinics.

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