Quality of life of Iranian and Afghan pregnant women in rural Iran

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Abstract

Background. *Pregnancy is a unique experience in a woman's life, which comes with physiological, metabolic, social, and psychological changes. The combination of these changes along with migration, may reduce the quality of life of pregnant women and mothers. This study aims to determine the quality of life in rural pregnant women.*

Methods. *A cross-sectional study was conducted. Three hundred pregnant Iranian and Afghan women who attended the public health centers in regional Tehran, Iran, were systematically selected and included in the study. Different dimensions of health status were investigated using the standard health-related quality of life questionnaire (SF-26) through interviews. SPSS version 23 was used for data analysis.*

Results. *The psychological health subscale (38.00) in the Iranian pregnant women and the physical health subscale (38.83) in the Afghan pregnant women had the highest scores. The lowest score was in social functioning subscale in both groups (20.59 in Iranian and 21.22 in Afghans). In general, Iranian mothers had lower scores compared to Afghan mothers. There was a relationship between the quality of life of Iranian pregnant women, their level of education and family's monthly income (P <0.05), and between the quality of life of Afghan pregnant women with the lesser number of pregnancies (P <0.05).*

Conclusions. *In rural Iran, the quality of life score and its subscales is comparably low in both Iranian and Afghan pregnant women. Interventions are needed to improve the quality of life in this vulnerable population.*

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Introduction

Pregnancy-related physiological and biochemical changes affect women's physical and mental health, making women vulnerable a.nd mitigating their quality of life (QoL) (1). The World Health Organization (WHO) defines QoL as a person's perceptions of life according to the culture and value system in which they live and the relationship of these perceptions with their goals, expectations, standards and priorities (2). QoL is a completely subjective matter and people's perceptions are based on different aspects of life (3). Health-related QoL emphasizes on the physical, psychological, and social dimensions of life and is influenced by one's beliefs, feelings, and expectations (4). While pregnancy is a natural phenomenon, it is a stressful and vulnerable period due to physical, psychological and social changes that affect women's ability to perform routine daily activities (5). Understanding pregnant women's QoL is crucial, since those who have lower QoL reportedly have more pregnancy complications. Such complications require treatments causing increased stress (6).

Immigration is one of the health risk factors that influence physical and psychological health. This influence is particularly significant in women through stress, fear, different access to resources, experiences of prejudice and violence, and different access to safe work and housing (7-10). Reduced access to healthcare services in a new country significantly affects the QoL of immigrants (11). Pregnant immigrant women face many challenges, such as lack of health insurance, financial difficulties, insufficient language proficiency, lack of access to an interpreter, cultural differences in health-related views, health literacy, and racial or dialect discrimination (12).

Iran is the host to one of the largest and most protracted urban refugee situations in the world and has provided asylum to refugees for four decades. According to the last official government estimates relating to the Amayesh IX in 2014, a total of 951,142 Afghan refugees were believed to have resided in Iran. In addition to refugees, there are approximately 2.5 million Afghans who live in Iran, inclusive of passport holders and undocumented Afghans (13). In recent years, however, the government of Iran has gradually been introducing policies conducive to solutions for refugees and the attainment of rights for the Afghan population living in Iran, enhancing access to education, healthcare, and livelihood services to refugees with minimal financial aid from the international community; nevertheless, many of them lack satisfactory access to the response to basic needs, due to illegal immigration. In addition, the hyperinflation in recent years, the decline in rural population and economy, the reduction of the young workforce in agriculture, and the increase in the settlement of unskilled and low socio-economic Afghan migrants has led to an increase in the neglect of vulnerable groups such as children, mothers and the elderly in rural areas (14).

Afghan migrants are mainly refugees who have entered Iran to escape wars. Evidence indicates lower pregnancy care and higher prevalence of pregnancy complications in Afghan women compared to Iranian women (15). A recent study, investigating 424 Afghan women in an urban setting in Iran found that 56% of the participants reported at least one adverse pregnancy outcome in their recent pregnancy, which is higher than Iranian women (15, 16). So providing an effective antenatal care would be an important factor to help pregnant refugee Afghan women to adapt themselves to a new country, preventing adverse birth outcomes (15). To the best of our knowledge, no study has compared the QoL of Afghan and Iranian women in rural Iran. Improving women's health is significantly associated with the improvement of national health.

Since pregnant immigrant Afghan women's health in rural areas is understudied, this study aims to investigate and compare QoL in Iranian and Afghan women in rural areas in the province of Tehran.

Methods

A cross-sectional study was conducted in which the study population included pregnant Iranian and Afghan women in rural Tehran province in 2018. A simple random sampling was conducted and 14 rural healthcare centers were chosen out of 28 centers. A sample size of 300 was selected according to the number of Afghan and Iranian women in each center using Cochran's formula (95% confidence and standard deviation of 0.5 and 5%margin of error). All women attending the rural health centers were eligible to participate in the study, unless they were diagnosed to be in a high risk pregnancy category including vaginal bleeding, placenta previa, plantar peria, cervical cerclage, multiple pregnancy, assisted reproductive pregnancy, threatened abortion, chronic medical diseases (hypertension and diabetes), history of recent or recurrent miscarriage, history of mental disorder before pregnancy, the occurrence of major and adverse events in the last two months.

A validated survey was used for data collection, through a questionnaire containing two sections. The first section asked participants about their demographic characteristics; and the second section about their QoL, which consisted of the standard WHO health-related QoL questionnaire (SF-26). SF-26 is a general questionnaire of QoL measurements. This questionnaire has 24 questions in four subscales (physical health, mental health, social functioning and living environment) and two general questions to assess health status and QoL. This questionnaire has been translated into

Persian and the Cronbach's alpha showed a good reliability (0.70) (17). SPSS version 23 was used for data analysis.

Results

A total of 300 surveys were completed; 150 by Afghan women and 150 by Iranian women. Demographic characteristics of the participants are presented in Table 1. The majority of Afghan (96.7%) and Iranian (93.3%) participants had no personal income and they were dependent on their husbands' income, which ranged between 0.8 and 1.5 million Toman (equals to $266 to $500 USD at the time of data collection) for 45.3% of Iranian and 52.0% of Afghan families (according to the National statistics Centre of Iran, the mean income in rural areas was 2.33 million Toman, namely US$ 777). The majority of Afghan women (86%) were legal immigrants. In terms of emotional support, only 3.3% of Iranian and Afghan participants reported to have received emotional support from their husbands.

In terms of different aspects of QoL, the highest score for Iranian participants was "mental health" (38±10.04) and for Afghan participants was "physical health" (38.83±11.09). The lowest score for both groups was "social functioning". QoL was found to be approximately similar in both groups and no statistical difference was found between Iranian and Afghan women in terms of different subscales of QoL (Table 2).

Education was associated with QoL in Iranian participants at the 5% significance level. According to the beta coefficient (-0.209), by increasing the standard deviation of education by one unit, the QoL of Iranian pregnant women decreased by 9%. The other factor associated with QoL in Iranian participants was their household income, which had the same association as education. The number of pregnancies was the only factor associated with Afghan women's

Table 1 - Demographic characteristics of the participants in the study

Variables		Iranian pregnant women				Afghan pregnant women			
		frequency	percent	cumulative percent	Mean ± st.d	frequency	percent	cumulative percent	Mean ± st.d
Age	<20	12	8	8	30.10± 10.208	20	13.3	13.3	20.85± 10.236
	20-25	39	26	34		45	30	43.3	
	25-30	44	29.3	63.3		42	28	71.3	
	30-35	36	24	87.3		27	18	89.3	
	35-40	15	10	97.3		13	8.7	98	
	40-45	4	2.7	100		3	2	100	
Education	illiterate	6	4	4	2.74 ± 0.886	66	44	44	1/95 ± 1/079
	9 year	54	36	40		43	28.7	72.7	
	12 year	74	49.3	89.3		32	21.3	94	
	14 year	5	3.3	92.7		1	0.7	94.7	
	16 year	11	7.3	100		8	5.3	100	
Number of pregnancy	0	2	1.3	1.3	2.15 ± 0.951	-	-	-	2.59 + 1.663
	1	37	24.7	26		41	27.3	27.3	
	2	61	40.7	66.7		50	33.3	60.7	
	3	39	26	92.7		25	16.7	77.3	
	4	9	6	98.7		18	12	89.3	
	5	2	1.3	100		6	4	93.3	
	≥6	-	-	100		9	6	100	
Type of pregnancy	wanted	135	90	90	1.15 ± 0.301	135	90	90	1.15 ± 0.301
	unwanted	15	10	100		15	10	100	
Spouse education	illiterate	9	6	6	2.43 ± 0.736	62	41.3	41.3	1.76 ± 0.739
	9 year	79	52.7	58.7		63	42	83.3	
	12 year	53	35.3	94		24	16	99.3	
	14 year	7	4.7	98.7		1	0.7	100	
	≥16 year	2	1.3	100		0	0	100	
Type of residence	temporary	127	84.7	84.7	1.15 ± 0/362	85	56.7	56.7	1.43 ± 0.497
	permanent	23	15.3	100		65	43.3	100	

Table 2 - Comparison of mean score of quality of life domains in Iranian and Afghan pregnant women

Quality of Life domain	Mean ± st.d (Iranian pregnant women)	Mean ± st.d (Afghan pregnant women)	T	P-Value
Physical health	37.83 ± 10.04	38.83 ± 11.09	21601.500	0.265
Psychological	38.00 ± 13.08	38.78 ±12.08	21235.000	0.359
Social relationships	20.59 ± 14.89	21.22 ± 15.52	22221.000	0.632
Environment	32.32 ± 14.17	35.20 ± 14.14	t = 1.7777	0.077
General health	27.29 ± 20.78	29.58 ± 18.38	21457.000	0.129

Table 3 - Relationships between quality of life and demographic characteristics in Iranian and Afghan pregnant women

variables	Iranian pregnant women				Afghan pregnant women			
	β	T	statistical significance	Standard error	β	T	statistical significance	Standard error
Age	0.009	0.111	0.912	0.790	0.082	1.003	0.317	0.814
Education	-0.209	-2.598	0.010*	0.010	-0.061	-0.738	0.462	0.933
Women's income	-0.209	-2.578	0.010*	1.054	-0.061	-0.718	0.452	0.930
Gravida	-0.204	-2.498	0.080	1.044	-0.209	-2.578	0.010*	1.054
Type of pregnancy	-0.203	-2.490	0.070	1.034	-0.204	-2.498	0.080	1.044
Spouse education	-0.205	-2.576	0.070	1.036	-0.051	-0.636	0.365	0.823
Spouse income	-0.206	-2.578	0.080	1.034	-0.058	-0.730	0.482	0.931

QoL; increasing the number of pregnancies by one unit reduces their QoL by 20.9%. No significant association was found for other demographic characteristics (Table 3).

Regression analysis of different subscales of QoL of Iranian participants showed that there is a direct and significant correlation between household income and the total score of physical health (β = 0.776 and t = 3.029), i.e. with increasing household income, the physical health of Iranian women increases. In terms of mental health, there was a direct and significant correlation between spouse support and total mental health score (β = 5.178 and t = 3.129), i.e. the emotional support of Iranian spouses has a direct effect on maintaining the mental health of pregnant women.

There was a correlation between the total score of Iranian social health and age (β = -0.320, t = -2.486), number of pregnancies (β = 0.517, t = 2.934), pregnancy month (β = 0.030, t = 2.172), household income (β = -0.431, t = -2.871) and spouse's emotional support (β = 1.801, t = 2.011). With increasing age and household income, the quality of social functioning of pregnant women decreases, but with increasing the pregnancy months and the emotional support from the husband, the quality of social functioning increases.

In terms of environmental health, there was a direct and significant correlation between the spouse's income and the total environmental health score of Iranian participants (β = 1.677, t = 4.423), indicating that the lack of income in the Iranian population reduces the environmental health.

Regression results for Afghan women showed that there was a significant negative relationship between the years after migration and physical health (β = -0.078, t = -2.199), i.e. pregnant women who recently immigrated to Iran had better physical health. No significant relationship was found between mental health and other subscales. Regression analysis of social functioning indicated that there was an inverse relationship between the spouse's income and the social functioning score (β = -0.483, t = -3.005). There was a significant negative relationship between environmental health and years since migration (β = -0.091, t = -1.946) and spouse's income (β = -1.394, t = - 3.723).

Discussion and Conclusions

The lowest score of QoL was in social functioning in both Iranian and Afghan pregnant women, which is in contrast with Mazloomi et al.'s study (18). Decreased social interactions, due to the limitations of pregnancy and lack of facilities and space for

social interactions, can contribute to the low score of social functioning (19). In the case of Afghan women, reduced interactions with relatives and friends and lack of participation in social gatherings and activities have reduced their social functioning.

The results of the relationship between QoL and demographic variables showed that education and income of Iranian pregnant women have a significant effect on QoL which is consistent with the findings of Mazloomi et al. (18) and Noureddini et al. (20). Increasing the level of education might reduce satisfaction levels with pregnancy conditions and limited physical activity might also affect women's income leading to lower QoL. In Afghan women, the number of pregnancies affected their QoL, which was in line with the findings of Hosseini Divkolaye et al. (14). Increasing the number of children when living in a foreign country and being away from relatives might contribute to the reduction in their QoL. In a comparison of rural and urban Afghan pregnant women, Sharifi et al. (21) expressed that insufficient levels of education leads to lack of information about pregnancy, which creates undesirable outcomes. Results indicated that there was no significant difference between the physical health subscale in Iranian and Afghan pregnant women. The mean physical health scores of both groups were lower than standard score values . These findings were consistent with the findings of Hosseini Divkolaye et al. (14), Mansourian et al. (22), Michaëlis et al. (23), and Shishehgar et al. (24).

Iranian pregnant women living in rural areas, because of difficulties in accessing health services, reduced income and consequent malnutrition, and limited rest time due to the many manual activities (such as agriculture, animal husbandry, and carpet weaving) experience many physical problems like anemia, bleeding, preterm delivery and abortion. Pregnant Afghan women are in even worse position due to

lack of literacy, savings, and access to health services (because most enter the country illegally), as well as very poor nutrition face even more physical problems.

There was no significant difference between the psychological subscale of Afghan and Iranian pregnant women and both were less than standard score values. Seeking health care in urban areas is stressful for high risk rural pregnant women, resulting in lower psychological QoL. Due to cultural and social differences, Afghan pregnant women are more exposed to stress-related situations. The results of the present study were not consistent with results from Chou et al. (20) but were consistent with the results of the systematic reviews conducted by Hosseini Divkolaye et al. (14), Michaëlis et al. (24), and Sadeghi et al. (25).

The overall social functioning score of both Iranian and Afghan pregnant women was lower than standard scores and there was no significant difference between the two groups. As mentioned, reduced social interactions during pregnancy for Iranian women and being apart from relatives for Afghan women can be the reasons for low social functioning scores. In addition Mohammadi et al. (26) state that poor professional communication skills of pregnant Afghan women was one reason for experiencing inequitable care in urban areas. Michaëlis et al. (23), in their study, reported that chronic pain during pregnancy had widespread and adverse effects on all aspects of pregnant women's lives, in particular on the change and loss of social relationships.

There was no significant difference in the quality of environmental health of Iranian and Afghan pregnant women. In general, the situation of Iranian pregnant women in rural regions was assessed as very unsatisfactory due to inadequate employment and income, and it seems that - for the group of Afghan pregnant women - lack of access to amenities, convenient transportation, health insurance, the right of ownership and legal purchasing

of a house can be the reasons for reducing the environmental health subscale of QoL. This finding is consistent with the results of studies by Lindsay et al. (27) and Rezaeian et al. (28). In immigrant pregnant women low linguistic comprehension skills, improper food intake, low physical activity, smoking in the workplace and public places are found as variables affecting the quality of environmental health (23).

There was no significant difference between the quality of general health of Iranian and Afghan pregnant women. Poor social relations and sedentary life style may contribute to low general health QoL in Iranian pregnant women. Sedentary lifestyle, which has replaced physical activities, results in muscular and joint problems contributing to the reduction in the general health of this group. These results are in line with the findings of Rezaeian et al. (28), Michaëlis et al. (23) and Lindsay et al. (27) who have all stated that the general health QoL of pregnant women, especially immigrant pregnant women, changes during pregnancy.

In rural Iran, the QoL and its subscales in pregnant Afghan women are as low as in pregnant Iranian women. Zarei et al. (29), who investigated the QoL of pregnant women in urban areas, showed that the pregnant women's QoL was at an average level. Since a better QoL for pregnant women leads to better outcomes in terms of childbirth, interventions are needed to improve QoL in this vulnerable population, especially in refugee Afghan women, because approximately a third of them are in their child-bearing age (30). Providing effective healthcare for Afghan refugees is an increasing concern due to their complex healthcare needs, so empowering them in all aspects of QoL can help them to better adapt to living in a new/foreign country. The results of this study can inform policy-makers and health researchers to develop strategies and interventions to address this issue.

Riassunto

La qualità della vita delle gravide iraniane ed afghane nell'Iran rurale

Premessa. La gravidanza è un'esperienza senza pari nella vita di una donna, ma comporta anche modifiche nella fisiologia, nel metabolismo, nella socialità e nella psicologia. Se questi effetti si sommano all'emigrazione, ne può derivare una riduzione della qualità della vita, sia come donne che come madri. La presente indagine si è posta come obiettivo di valutare la qualità della vita nelle donne gravide in ambito rurale, a volte anche reduci da migrazioni.

Metodi. Si è trattato d'un'indagine trasversale su 300 donne gravide, di etnia iraniana ed afghana, che frequentavano i centri di salute nel contado di Tehran, in Iran, ed erano state selezionate in modo sistematico. Le diverse dimensioni di salute sono state indagate utilizzando interviste basate sul questionario standard SF-26 sulla qualità della vita in relazione alla salute. I dati sono stati elaborati con SPSS, versione 23.

Risultati. La sub-scala per la salute psicologica nelle iraniane gravide (risultato: 38.00), e la sub-scala per la salute fisica nelle afghane gravide (risultato: 38.83) hanno mostrato i valori più alti; quelli più bassi li ha mostrati la sub-scala della funzionalità sociale in entrambi i gruppi (20.59 per le iraniane e 21.22 per le afghane). In generale le madri iraniane hanno punteggi inferiori rispetto alle afghane. C'è una relazione tra la qualità della vita delle gravide iraniane ed il loro reddito mensile ed educazione (P <0.05) e tra la qualità della vita delle gravide afghane ed il numero delle loro gravidanze (P < 0.05).

Conclusioni. Nell'Iran rurale, il punteggio della qualità della vita e delle sue sub-scale è comparabilmente basso sia nelle gravide iraniane che in quelle afghane. Sono necessari interventi per migliorare la qualità della vita di queste popolazioni vulnerabili.

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