





Women's Reproductive Empowerment: A Comparative Study of Urban and Rural Females in Iran

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Abstract

Objectives: Women's reproductive empowerment is an essential issue for good reproductive health which is affected by various socioeconomic and cultural factors. This study was designed to compare women's reproductive empowerment in urban and rural areas.

Materials and Methods: In this descriptive-analytical and correlational-type study, 810 women referring to health care centers in Sari were recruited through proportional cluster sampling method. Data were collected using a questionnaire on women's reproductive empowerment including cultural, individual-family, social, and family planning domains. Finally, the obtained data were analyzed using descriptive and analytical tests.

Results: The mean (standard deviation) of women's reproductive empowerment score was 91.46 ± 13.14 (a 95% CI of 90.55-92.36) and no statistical difference was observed between the urban and rural women in this respect ($P = 0.59$). In addition, cultural and family planning domains obtained the highest 29.12 (5.80) and the lowest 17.55 (4.25) scores concerning reproductive empowerment, respectively. Therefore, women's reproductive empowerment score was significantly correlated with the females' employment status ($P = 0.006$) and their husbands' levels of education ($P < 0.001$).

Conclusions: Overall, the finding contributes to the discourse on women's reproductive empowerment based on their residential area and thus adds to the limited literature on this issue in developing countries and Iran, in particular. Therefore, appropriate planning is required for women with various employment statuses and their spouses with different educational levels in order to improve their empowerment in terms of reproductive issues.

Keywords: Women's empowerment, Reproductive health, Reproductive-aged women

Introduction

Women play a vital role in societal development given that they form half of the workforce of the society. Thus, their quality of life can be improved through empowerment, which entails financial and social independence (1,2). Women's empowerment is a millennium development goal that is regarded as a dynamic, multi-dimensional, and critical process in the modern world (3-5). In line with this orientation, the International Conference on Population and Development in Cairo tackled the empowerment of women in terms of reproductive health and the design of the corresponding extensive program (6). Reproductive health indicates that all individuals should be able to have a healthy and satisfactory sexual life and to decide about their childbearing and time freely and responsibly (7). Accordingly, it is believed that women should enjoy the freedom to delve into reproductive health issues and master the required skills to make relevant decisions. Women's reproductive empowerment is defined as the ability and the right to decide freely on reproductive activities such as the number of children, childbearing time, and the age gap between the children. Adequate women's reproductive empowerment benefits the entire families and improves

the productivity of future generations (8-10). Further, it improves women's self-confidence in childbearing and managing birth intervals (11).

Throughout life, various bio-psycho-social factors such as age, employment status, and marital status influence women's reproductive empowerment in terms of using contraceptive methods, the determination of family size, and child spacing (12,13). Similarly, women's reproductive empowerment within the family, as well as their everyday life and relationships with their husbands can play an important role in family planning, along with delivery in a health center and under the supervision of a skilled person. Furthermore, women who discuss their important fertility issues with their husbands are valued and credible to the family and have a more powerful role in the family (14,15). Many parts of the world deny women's reproductive empowerment because most of the women's choices are dominated or influenced by their spouses or other surrounding individuals (16,17). Women's reproductive empowerment is still uncertain since previous studies have mainly focused on the relationship between women's empowerment and their access to health care services. According to some studies, the place of residence has

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an impact on women's reproductive empowerment so that rural women are less likely to participate in family decisions while urban women have more decision-making power in many areas, including health issues (18, 19). Moreover, no study is available about the potential for village women's fertility. Although several investigations are conducted to assess women's reproductive health and family planning behaviors, to the best of our knowledge, there is scarce literature on women's reproductive empowerment in developing countries, especially Iran. Therefore, the present research aimed to examine Iranian women's reproductive empowerment living in urban and rural areas.

Materials and Methods

Participants and Study Setting

In this descriptive-analytical study, 810 married women were enrolled referring to health care centers in Sari, the capital of Mazandaran province, Iran. Although the centers are located in a metropolis, they provided services to both urban and rural residents. The inclusion criteria were having an Iranian nationality, being literate, living currently with spouses, being married once, having at least one child, not being pregnant, having no history of secondary infertility and relevant treatments, and having indicated consent for participation in the study. No exclusion criteria were taken into account in the present study.

Sampling

The sample size was estimated based on a study conducted by Kiani et al on 400 women and explained that the mean and standard deviation of women's reproductive empowerment score was 82.54 ± 7.26 (5). Thus, the sample size was estimated to be 810 considering a type 1 error of 0.05 and a precision of 0.5. Sampling was conducted in two stages. First, using a random number table, 13 urban and 11 rural health care centers (from among 48 regional health care centers in Sari) were selected as the main clusters. Subsequently, the number of the sample to be taken from each center was determined according to the proportional cluster sampling method and based on the number of 15-45 aged women in each cluster. Finally, 500 urban women and 310 rural women who referred to health services from June 2017 to November 2017 completed the self-administrated anonymous questionnaires.

Data Collection

A checklist on socio-demographic-reproductive characteristics of participants and a questionnaire on women's reproductive empowerment were used as data collection tools. The questionnaire, designed by Kohan et al (9) based on Iranian women's experiences, included 38 items distributing the cultural, individual-family, social, and family planning domains. The cultural domain (items 1-11) encompassed items on positive attitudes toward

childbearing, belief in women's responsibility toward fertility, the value of having a son, attitudes of society toward women's fertility-related responsibilities, and the feminization of family planning services. Additionally, the individual-family domain (items 12-21) comprised items on financial issues and compulsory reproductive health programs, male domination in fertility-related decision making, the use of childbearing as a means of maintaining marital life, and weaknesses in decision-making skills. Likewise, the social domain (items 22-30) contained items related to the influence of media on women's fertility-related decision-making position, the role of schools in creating empowerment foundations, and the dual role of employment. Finally, the family planning domain (items 32-38) covered items on neglecting men's contributions in family planning and child spacing, the lack of sexual health and counseling services for spouses, deficiencies in free health care services, inappropriate education, and the traditional structure of service provision.

The reliability of the questionnaire was obtained 0.76, 0.71, 0.73, 0.69, and 0.72 for cultural, social, individual-family, and family planning dimensions, along with the entire questionnaire using Cronbach alpha coefficients (20). The respondents were asked to rate the items on a five-point Likert-type scale (ranging from 0 = "strongly disagree," 1 = "disagree," 2 = "neutral," 3 = "agree," to 4 = "strongly agree"). In addition, the minimum and maximum scores that can be obtained by the questionnaire are 0 and 152, with high scores indicating more empowerment in reproductive health.

Statistical Analysis

The data were entered the SPSS software, version 18 (SPSS Inc., Chicago, IL, USA). The mean and standard deviation (SD) values, a frequency distribution table, and the relative frequency distribution were used to describe the individual characteristics of participants. Further, Pearson correlation coefficient was employed to determine the correlation between women's reproductive empowerment scores and quantitative variables. The distribution of the scores of dichotomous variables such as the place of residence was also assessed by an independent *t* test. Furthermore, ANOVA was performed for multivariate variables such as the level of education and employment status. Then, a multivariate linear regression model was administrated applying the variables related to women's reproductive empowerment scores (in bivariate regression) based on a $P < 0.2$. The $P < 0.05$ was considered statistically significant.

Results

The mean ages (SDs) of women residing in urban and rural areas were 31.90 (4.40) and 31.01 (4.45) years, respectively. Other characteristics of the participants are presented in (Table 1). The means (SDs) of women's reproductive empowerment score of the urban and rural areas were

Table 1. Socio-demographic-reproductive Characteristics of Participants

Variable	Number (%)	
	Urban (n=500)	Rural (n=310)
Residential area	500 (61.73)	310 (38.27)
Age	31.90 (4.30)*	31.01 (4.45)*
Duration of marriage	9.77 (4.78)*	10.42 (4.83)*
Occupation status		
Housewife	382 (76.40)	273 (88.10)
Employed	118 (23.60)	37 (11.90)
Education		
Primary	64 (12.80)	72 (24.20)
Secondary	197 (39.40)	177 (57.10)
Higher education	239 (47.80)	58 (18.70)
Husband's education		
Primary	84 (16.80)	109 (35.20)
Secondary	197 (39.40)	151 (48.70)
Higher education	239 (47.80)	50 (16.10)
Husband's occupation		
Farmer-worker	79 (15.80)	121 (39.00)
Employed	161 (32.20)	45 (14.50)
Self-employed	260 (52.00)	144 (45.50)
Number of children		
One	274 (54.80)	139 (44.80)
Two	210 (42.00)	147 (47.40)
Three and more	16 (3.20)	24 (7.80)
Number of desired children	2.24 (0.78)*	2.25 (0.71)*
Desired distance between children (y)	1.64 (1.56)*	1.37 (1.23)*

*Mean (standard deviation).

91.56 (12.86) and 91.41 (13.66), respectively, indicating a non-significant difference ($P = 0.59$). Furthermore, the highest 29.12 (5.80) and the lowest 17.55 (4.25) scores of women's reproductive empowerment were found in cultural and family planning domain, respectively (Table 2). Therefore, the means (SDs) of the family planning dimension were higher among the rural women compared to their urban counterparts ($P < 0.001$), but the means (SDs) of individual-family dimension were higher among the urban women compared to rural women ($P < 0.001$). Table 3 summarizes the means (SDs) of the urban and rural women's reproductive empowerment scores based on each item.

The findings of the multivariate regression (Table 4) showed that women's reproductive empowerment was significantly correlated with their employment status (P

= 0.006) and their spouses' educational levels ($P < 0.001$).

Discussion

This study assessed women's reproductive empowerment in rural and urban communities of Iran. Nowadays, reproductive empowerment is considered as a fundamental issue given its potential for improving the women's quality of life (16,21). The results indicated that the difference between urban and rural participants with respect to reproductive empowerment was statistically non-significant. Both groups of women scored approximately 70% out of the total reproductive empowerment score (91 out of 131), demonstrating a near-optimal state. However, contradictory results were obtained by Kiani et al (20) and Froozanfar et al (22) who found a moderate state of reproductive empowerment among Iranian female participants. Moreover, Chaudhry and Nusheen (23) reported a score of 41% out of the total reproductive empowerment score among their Pakistani female participants. These differences in the findings may be attributed to variances in the cultural and social contexts surrounding female populations (23,24).

Conversely, based on the findings of regression analysis, a relationship was observed between women's reproductive empowerment and their employment status. In a similar vein, the results of several other studies revealed that employed women feel more empowered and are healthier than housewives (20,24,25). Additionally, employment can increase the value felt by women, enhance their social interactions, and strengthen their communicative proficiency and decision-making skills with regard to health-related issues (24,26).

The results also showed a correlation between women's reproductive empowerment and their husbands' levels of education. Some other investigations confirmed a positive association between the aforementioned variables, and the researchers explained that educated husbands were more likely to consult with their wives on family-related matters (20,27). Another study in Bangladesh, aimed at identifying the patterns of women's empowerment in relation to health, also represented that the husbands' levels of education are correlated with women's empowerment and that women with educated husbands are more empowered in making health-related decisions (28). The study additionally suggested that educated men

Table 2. Mean and Standard Deviation of Women's Reproductive Empowerment Score Based on Their Residential Area

Domains of Women's Reproductive Empowerment	Mean (\pm SD)			P
	Urban	Rural	Total	
Cultural	29.42 (5.81)	28.64 (5.75)	29.12 (5.80)	0.06
Social	18.78 (4.08)	19.32 (4.46)	18.99 (4.24)	0.07
Individual-family	26.36 (5.80)	24.84 (5.88)	25.78 (5.87)	<0.001
Family planning	17.08 (4.20)	18.32 (4.22)	17.55 (4.25)	<0.001
Total score	91.65 (12.86)	91.14 (13.60)	91.46 (13.14)	0.59

Table 3. The Mean and Standard deviation of Women's Reproductive Empowerment Score (by items) in Urban and Rural Women

Row	Items	Mean \pm SD		P
		Rural	Urban	
1	I was forced to give birth to as many children as my spouse wanted in order to maintain my common life.	3.04 \pm 1.20	2.81 \pm 1.33	0.01
2	I am responsible for planning and deciding regarding my delivery.	2.55 \pm 1.23	2.49 \pm 1.43	0.5
3	The child-friendly culture caused compulsion to my childbearing.	2.33 \pm 1.33	2.34 \pm 1.32	0.9
4	So far, I have achieved my desires about childbirth.	3.08 \pm 0.95	2.91 \pm 1.12	0.02
5	I was pressured by my spouse and relatives for the birth of a boy child.	3.24 \pm 1.15	3.27 \pm 1.14	0.7
6	I am responsible for family reproduction and I take action in this respect.	2.07 \pm 1.40	1.81 \pm 1.39	0.01
7	My spouse has less responsibility for reproduction.	2.83 \pm 1.29	2.50 \pm 1.31	0.1
8	I have enough independence and authority for tubal ligation.	2.20 \pm 1.38	2.02 \pm 1.43	0.07
9	My spouse is the main decision maker about the number of children.	2.57 \pm 1.32	2.57 \pm 1.14	0.9
10	My spouse is the main decision maker about the gender of the child.	3.10 \pm 1.09	3.07 \pm 1.19	0.7
11	Financial dependence on my spouse forced me to comply with his reproduction decisions.	2.85 \pm 1.25	2.82 \pm 1.25	0.7
12	Childbearing strengthened my family and social status.	2.68 \pm 1.19	2.69 \pm 1.26	0.9
13	My family's financial status affected planning regarding the number of children.	1.67 \pm 1.38	1.54 \pm 1.31	0.1
14	My employment status led to compulsory planning for childbearing.	2.53 \pm 1.22	2.68 \pm 1.28	0.09
15	My education provided me with insufficient authority regarding reproduction decision making.	2.80 \pm 1.17	2.92 \pm 1.17	0.1
16	I have financial independence to pay for reproduction-related costs.	1.93 \pm 1.39	1.81 \pm 1.35	0.2
17	Television programs made me a decision-maker and a powerful person.	1.90 \pm 1.09	1.99 \pm 1.24	0.2
18	I obtained the required information about reproduction from TV programs.	2.08 \pm 1.17	2.27 \pm 1.28	0.03
19	I learned no decision-making skills at school.	1.78 \pm 1.28	1.98 \pm 1.36	0.03
20	I learned about reproductive issues at school.	1.40 \pm 1.26	1.44 \pm 1.32	0.6
21	My spouse gave me all the responsibility for reproduction.	1.95 \pm 1.32	1.88 \pm 1.33	0.4
22	I agreed with my spouse for the planned childbearing program.	3.15 \pm 0.93	3.06 \pm 1.11	0.2
23	My spouse's information is not enough to decide on reproductive issues.	2.33 \pm 1.26	2.25 \pm 1.27	0.3
24	The key reproduction decisions are taken by my spouse alone.	3.19 \pm 0.93	3.08 \pm 1.10	0.1
25	At the beginning of our marriage, I had no limited information on reproductive issues.	1.71 \pm 1.35	1.40 \pm 1.29	0.001
26	It is difficult for me to talk about reproductive issues with my spouse.	3.19 \pm 1.05	3.06 \pm 1.14	0.09
27	My awareness of reproductive issues is not enough to make the right decision.	2.75 \pm 1.18	2.61 \pm 1.21	0.1
28	I do not have the confidence and skill to make independent decisions about reproduction.	2.81 \pm 1.22	2.63 \pm 1.25	0.04
29	I have the family conditions for making free decisions about reproduction.	2.86 \pm 1.17	2.65 \pm 1.20	0.01
30	Circumstances and family affect my reproduction decisions.	2.39 \pm 1.38	2.19 \pm 1.37	0.04
31	The fear and experience of the complications of contraceptive methods led me to consume uncertain contraceptive methods.	2.68 \pm 1.26	2.71 \pm 1.18	0.7
32	My spouse's concurrent consultation at health centers on reproduction issues provided me with greater ability to make decisions on reproduction.	1.57 \pm 1.22	1.79 \pm 1.30	0.01
33	Marriage counseling classes helped me to learn about reproduction decision-making skills.	1.80 \pm 1.30	1.99 \pm 1.29	0.03
34	Presenting films, CDs, and books at health centers made my decision on reproduction more successful.	1.88 \pm 1.24	2.02 \pm 1.36	0.1
35	Health centers helped me to make successful decisions by treating the complications of contraceptive methods.	2.05 \pm 1.18	2.36 \pm 1.28	<0.001
36	Providing reproductive services by female staff and also morning shifts reduced my spouse's contribution in reproductive issues.	2.41 \pm 1.15	2.44 \pm 1.15	0.6
37	The limitation of the number of contraceptive methods in health centers decreased my power of choice.	2.52 \pm 1.12	2.51 \pm 1.16	0.9
38	The free services by the health center for providing contraceptive methods and its treatment led me make greater successful decisions on reproduction.	2.17 \pm 1.22	2.47 \pm 1.29	0.001

Table 4. Correlates of Urban and Rural Women's Reproductive Empowerment Score by Multivariate Linear Regression

Variable	Urban*			Rural**			Total***		
	Standardized Coefficient B	t	P	Standardized Coefficient B	t	P	Standardized Coefficient B	t	P
Age	-0.10	-1.73	0.08	-0.02	0.27	0.79	-0.07	-1.64	0.09
Employment status	0.13	2.76	0.006	0.05	0.91	0.36	0.11	2.91	0.004
Duration of marriage	0.06	1.06	0.28	-0.06	-0.77	0.43	0.01	0.37	0.70
Education									
Primary (Reference)									
Secondary	-0.11	-1.49	0.13	0.06	0.85	0.39	-0.008	-1.45	0.88
Higher education	-0.05	-0.60	0.54	0.04	0.84	0.58	0.02	0.35	0.71
Husband's education									
Primary (Reference)									
Secondary	0.19	2.82	0.005	-0.008	0.12	0.90	0.07	1.57	0.11
Higher education	0.30	3.63	<0.001	0.04	0.60	0.54	0.16	2.75	0.006
Husband's occupation									
Farmer-worker (Reference)									
Employed	-0.04	-0.55	0.58	0.01	0.17	0.38	-0.01	-0.35	0.72
Self-employed	-0.06	-1.06	0.28	-0.03	-0.48	0.22	-0.05	-1.33	0.18

*R²= 0.09; **R²=0.03; ***R²=0.05.

possess greater self-confidence than uneducated ones, therefore, enhancing their value within their families, and consequently, empowering their wives as well. Given that educated men are more knowledgeable than their uneducated counterparts, they are more likely to satisfy their wives' needs (28,29).

In the present study, no significant relationship was found between women's reproductive empowerment score and their levels of education. Although Kamiya et al (27) reported the lack of such an association between the two variables, some other investigations asserted that high education increases women's reproductive empowerment, along with their confidence and awareness of their rights, subsequently, providing the grounds for their participation in social activities. These developments can ultimately mold women into more competent decision makers (19,30-32).

Based on the results, although the urban and rural participants did not significantly differ in terms of their total reproductive empowerment scores, these groups significantly varied with regard to individual-family, and family planning dimensions. Especially, rural women obtained lower scores under the individual-family domain compared to urban women, suggesting that the former were less frequently involved in family decision-making than the urban women (19,24). However, the rural participants scored higher in family planning domain than the urban participants, which indicates that competency in decision-making about family planning is one of the fundamental infrastructures for controlling fertility. Such competence is acquired by women through informative family planning resources. In addition, the increased frequency of visits to health care centers among rural women in the Iranian health care system can affect the rural women's reproductive empowerment through family planning and fertility programs (33). In their

qualitative study, Kohan et al. declared that the manner by which contraception is used and the variety of available contraceptive methods are among the factors that affect women's empowerment (34).

The results of the study showed that among the areas of women's reproductive empowerment, the scores of cultural and individual-family dimensions were higher than those of social and family planning dimensions, which is in line with the findings of Kiani et al (20). It seems that the empowerment of women in any society depends on cultural and social components (5). In the above-mentioned study, a moderate social dimension and poor family planning were shown while in the present study, the scale of social and family planning dimensions was higher. This contradiction may be due to the sample size, cultural and social context, and the contributing women.

Based on the applied results of the study in the clinic, clinicians are trained to design and hold classes on women's reproductive empowerment with the presence of their husbands in health centers and pre-marriage counseling clinics.

Similar to other studies, the present study has a limitation. Given that the data employed in this study were based on self-reports by the participants, cultural factors and the values that were important in their society may have influenced their responses.

Conclusions

In general, appropriate planning is required for women with various employment statuses whose spouses have different educational levels in order to ultimately improve their empowerment in terms of reproductive issues. Further, the findings of the current study have implications for addressing the role of men in promoting women's reproductive empowerment. Since cultural, social, and

family aspects are critical in reproductive empowerment, understanding the women regarding such empowerment can be fortified by considering all the aforementioned factors.

Therefore, future studies should explore the factors related to women's reproductive empowerment in different ethnic and minority groups of Iranian society, as well as in the other developing countries based on culturally-sensitive questionnaires.

Conflict of Interests

Authors declare that they have no conflict of interests.

Ethical Issues

This project was approved by the Deputy of the Research Center of Mazandaran University of Medical Sciences, Sari, Iran (Ethical code: R.MAZUMS.REC.96.3069). The written consent form was completed by all the participants as well.

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