

Assessment of Women's Reproductive Empowerment in Rural and Urban Areas: A Comparative Study

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Abstract

Background: Empowering women is a key factor for better social and economic development of different countries because women empowerment enables much more working force and improves performance of organizations. **Aim:** This study aimed to assess women's reproductive empowerment in rural and urban areas. **Design:** A cross sectional descriptive research design was used. **Setting:** This study was carried out at Maternal and Child Health Care Center at Talkha and Salamoon health facility, Delta, Egypt. **Study subjects:** A non-probability purposive sample of 334 women who were fulfilling the inclusion criteria. **Tools** A structured interview schedule to cover the data related to general characteristics and women's reproductive empowerment questionnaire to assess women's reproductive empowerment. **Results:** There were highly statistical significant differences regarding cultural, individual family, social and family planning domain scores among rural and urban women with more empowerment in urban women ($p < 0.001$). Also, the highest of women's reproductive empowerment among urban and rural residents were found in cultural domain with Mean \pm SD 20.3 \pm 4.5 and 18.1 \pm 5.8 respectively and the lowest scores among rural and urban women were found in family planning domain with Mean \pm SD 17.7 \pm 3.1 and 14.9 \pm 4.7 respectively. Else, women's reproductive empowerment among the studied group was significantly associated with their occupation, educational level and their husband's educational level ($p < 0.05$). **Conclusion:** The current study question was answered where urban women were more empowered regarding cultural, individual family, social and family planning domains than rural women. Women occupation, educational level and husband's educational level had an effective role in reproductive empowerment. **Recommendations:** The current study recommended more involvement of woman in membership in rural institutions and access to social networks, also increase awareness of rural woman about their right, legal empowerment and decision-making.

Keywords: Reproductive health, Rural areas, Urban areas, Women's empowerment.

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Introduction:

In social development, women play a crucial role as they form half of the society's population. In many national development plans, the inclusion of women in the development process and their participation in economic activities along with men have now gained prominence (Shabana, Khan, Vashistha, Siddique., 2017). The capability and the right to freely make decisions about reproductive practices such as determining the time of childbearing, the number of children and the spacing between one child and another is described as "the reproductive empowerment of women" (Alishah, Ganji, Mohammadpour, Kiani & Shahhosseini., 2019).

Empowering women is the pillar of the country's population and growth program. During the reproductive age, females face many difficulties including pregnancy and childbirth related deaths, unplanned pregnancy, abortion, and HIV. This reflects women's inability to make decisions and regulate fertility (Kiani, Simbar, Dolatian & Zayeri., 2018).

In multiple domains, empowering women contributes to major positive changes. In several literatures, a correlation has been found between increased empowerment and decreased mortality and morbidity (Alemayehu, Theall, Lemma, Hajito & Tushune., 2015). With regard to reproductive health, empowerment is associated with lower rates of unintended pregnancy and sexually transmitted diseases such as chlamydia

and gonorrhea in high-risk women. The effects of empowerment for health-related practices such as taking dietary supplements and finding health care facilities have been established by several studies. The benefits of empowerment are not limited to women themselves, but also to their families and children (**Waiswa, O'Connell, Bagenda, Mullachery, Mpanga, Henriksson et al., 2016**).

A large body of research suggests that women are granted a lower status because men have the authority to rule households and society as a whole while women in their homes are largely segregated. They have a limited role in household decision-making, limited access and control over household (physical and financial) resources, low asset levels, heavy domestic workloads, limited autonomy, limited capacity to make sexual decisions and insufficient knowledge and skills (**Yaya, Uthman, I Ekholuentalé & Bishwajit G., 2018**).

Although empowerment is multi-dimensional, the woman can be empowered in one area or domain such as financial but not in another such as reproductive decision-making. This nowadays leads several nations to understand the value of empowering girls and women both as an aim and to create a more gender-equitable society (**Pandey & Singh., 2008**).

The residence has also a significant impact on the reproductive empowerment of women as in rural areas, only men are considered to be responsible for meeting all the basic needs of their families and women are required to remain in homes as primary caregivers for health and nutrition of the family, bear and raise children, manage households, fetch water and fodder and not has a role in making decisions. In contrast, urban women have more power to make decision related to health issues (**Jabeen, Haq, Jameel, Hussain, Asif, Hwang & Jabeen., 2020**). The reproductive empowerment of women is still uncertain since previous studies have concentrated largely on the relationship between the empowerment of women and their access to health care services. There is scarce literature on women's reproductive empowerment in Egypt especially in rural and urban areas so this study was conducted.

Significance of the study

The role of women within the family is a prominent factor in accessing maternal health services. Evidence shows that, empowering women and closing the gap of gender inequality can predispose to reduced mortality, better health of mothers and children and better management of natural resources (**Fisher & Naidoo., 2016**).

Maternal autonomy is related to female empowerment in healthcare seeking activities and helps to achieve the desired health outcomes. In many countries worldwide, reproductive empowerment of women is denied, particularly in developing countries because the majority of women's decisions are influenced by their husbands or other people around them. Empowering women is therefore widely recognized as a critical tool for improving mothers and children health to allow access to reproductive and sexual health services (**Jabeen, Haq, Jameel, Hussain, Asif, Hwang & Jabeen., 2020**).

The empowerment of women and their involvement have a significant positive impact on the community and family wellbeing and the quality of life in addition to being regarded as crucial elements and indicators of maternal health. Women particularly those in developing countries are more exposed to malnutrition, illiteracy, gender inequality, lack of access to health care as well as neglected rights to reproductive health (**Mandal, Muralidharan & Pappa., 2017**).

The educational gender gap in Middle Eastern and North African countries is attributed to stratified gender roles that are still affect women empowerment. In Egypt, women continue to have lower literacy than men (65% literacy for women vs. 82% for men) (**USAID., 2017**). Also, women's participation in the labor force remains low, with only 25% of all women ever holding a job which affect their empowerment (**Assaad, HENDY, Lassassi, & Yassin., 2018**).

Improving women's empowerment and agency is an ongoing effort in Egypt. In the 2017 Global Gender Gap report issued by the World Economic Forum, Egypt ranks 134th out of 144 countries. While recent efforts have validated measures of agency in the Egyptian context, few studies point to the measurement of

empowerment as a latent variable (Crandall , VanderEnde , Cheong , Dodell , Yount KM.,2016). With regard to residential area, rural women are less likely to engage in family decisions while urban women have greater decision-making capacity in many areas including health issues (Jabeen, Haq, Jameel, Hussain, Asif, Hwang &Jabeen., 2020). Although several studies were carried out to examine women reproductive health and family planning practices, there is limited literature in Egypt addressing women's reproductive empowerment based on residential area, so this study was conducted to assess women's reproductive empowerment in rural and urban areas.

Aim of the study:

This study aimed to assess women's reproductive empowerment in rural and urban areas.

Research question: Does reproductive empowerment differs among women from rural than urban areas?

Materials and Method

Study design: A cross sectional descriptive study design was followed to achieve the aim of this study.

Study setting: This study was performed at Maternal and Child Health Care Center at Talkha which provides services for urban women and Salamoon Health Facility which provides services for rural women, Delta, Egypt.

Sampling:

A non-probability purposive sample of 334 women was recruited from the previously mentioned setting during the period from the beginning of May to the end of July 2020 according to the following inclusion criteria: (1) age 15-49 years, (2) being literate and (3) had at least one child and not being pregnant while excluded from this study, women with history of secondary infertility and relevant treatments.

Sample size calculation:

Based on data from previous study of Alishah et al., (2019) compared women's reproductive empowerment in urban and rural areas, considering level of significance of 5%, and power of study of 80%, the sample size was estimated according to the following formula:

Sample size = $[(Z_{1-\alpha/2})^2 \cdot SD^2] / d^2$. Where, $Z_{1-\alpha/2}$ = is the standard normal variate, at 5% type 1 error ($p < 0.05$) it is 1.96. SD = standard deviation of variable. d = absolute error or precision. So, Sample size = $[(1.96)^2 \cdot (13.14)^2] / (1.41)^2 = 333.6$. Based on the above formula, the sample size required for the study was 334 women.

Recruitment of the sample:

This study comprised a total sample of 334 women divided into two groups. The first group consisted of 167 women from rural areas and the second group consisted of 167 women from urban areas.

Tools of data collection:

To attain the aim of this study, two tools were utilized for collection of data; a structured interview schedule and women's reproductive empowerment questionnaire

Tool I: A Structured Interview Schedule:

It was designed by the researchers after reviewing the related literatures; to be filled from each woman. It covers data related to general characteristics of women as age, residence, woman educational level, occupation, husbands' education and occupation.

Tool II: Women's Reproductive Empowerment Questionnaire:

It was adopted from Kohan et al., (2012) to assess women's reproductive empowerment. It included 37 items divided into four domains. The cultural domain (items 1-10), the individual-family domain (items 11-20), the social domain (items 21-29) and the family planning domain (items 30-37).

Scoring system:

The 37 items were rated on a five-point Likert scale ranging from 0 = strongly disagree, 1 = disagree, 2 = neutral, 3 = agree, 4 = strongly agree. The total score ranges from 0 to 148, with high scores indicating more reproductive empowerment of women.

Validity of the tools:

In this study, the questionnaire was translated into Arabic language before introducing it to the women. Tools were revised by a jury of five professors in the maternity nursing specialty field to test the validity of the

contents to ensure that the tools were conveying the anticipated meaning and the recommended adjustments and modifications were considered according to their remarks as simplify meaning of some statement to be understood .

Reliability of the tool II:

The women's reproductive empowerment questionnaire was tested for its reliability in previous study by **Kohan et al., (2012)**. Cronbach alpha coefficients were 0.876, 0.889, 0.73, 0.891 and 0.882 for cultural, individual family, social and family planning domains, hence the questionnaires were found to be highly reliable.

Pilot study:

A pilot study was carried out on 10% (34 rural and urban women) of the total study sample to test the objectivity and applicability of the study tools and the feasibility of the research process as well as to estimate the time needed to answer them. Women in the pilot study were excluded from the study.

Ethical considerations:

An ethical approval letter was obtained from Research Ethics Committee, Faculty of Nursing, Mansoura University, from the director of Maternal and Child Health Care Center at Talkha and director of Salamoon Health Facility to conduct the study. A written consent was obtained from every woman involved in the study after clarification of the aim and approach of the study. All women were reassured about the confidentiality of the collected data. In addition, the right to withdraw from the study was permitted.

Research process:

This study was carried out in the above-mentioned setting from the beginning of May to the end of July 2020. This study was conducted through three phases:

- **Preparatory phase:** The researchers reviewed the relevant literature related to the study, then prepared and designed data collection tools. Official permissions were obtained from the the director of Maternal and Child Health Care at Talkha, the director of Salamoon Health Facility and

from the Faculty of Nursing Ethical Committee to conduct the study then a pilot study was conducted among 34 rural and urban women.

- **Implementation phase:** The researchers visited the previously mentioned study setting 3 days/week from 9:00 am to 2:00 pm. The researchers started by introducing themselves to each woman in the study, greet the women, making them feel comfortable and then explained the aim of the study and obtained written consent from them. Women from the two groups completed the socio-demographic and reproductive empowerment questionnaire which took about 25 to 30 minutes.
- **Outcome evaluation phase:** Women's reproductive empowerment was assessed immediately after interview by using five point Likert scale.

Data analysis

All statistical analyses were performed using SPSS for windows version 20.0 (SPSS, Chicago, IL). All continuous data were normally distributed and were expressed in mean \pm standard deviation (SD). Categorical data were expressed in number and percentage. Chi-square test was used for comparison of variables with categorical data. Statistical significance was set at $p < 0.05$.

Results

Table (1): Distribution of the studied groups according to their socio demographic characteristics

Items	Urban (n=167)		Rural (n=167)		Significance test	
	n	%	N	%	X2	P
Age (year)						
< 30	93	55.7	97	58.1		
31-40	61	36.5	56	33.5		
>41	13	7.8	14	8.4	0.335	0.846
Mean \pm SD	30.9 \pm 6.2		30.6 \pm 6.7		0.425	0.671
Woman education						
Primary	5	3.0	53	31.7		
Secondary	60	35.9	69	41.3	62.454	<0.001**
Higher education	102	61.1	45	26.9		
Husband education						
Primary	1	0.6	37	22.2		
Secondary	51	30.5	65	38.9	49.684	<0.001**
Higher education	115	68.9	65	38.9		
Woman Occupation						
Housewife	55	32.9	83	49.7	9.681	0.002*
Employed	112	67.1	84	50.3		
Husband's occupation						
Farmer-worker	40	24.0	51	30.5		
Employed	76	45.5	77	46.1		
Self-employed	51	30.5	39	23.4	2.936	0.230

* *Statistical Significant at P<0.05*

***Highly Statistical Significant at P<0.001*

Table (1) shows distribution of the studied groups according to their socio demographic characteristics. It was found that most of urban and rural women aged less than 30 years with mean \pm SD (30.9 \pm 6.2 & 30.6 \pm 6.7 respectively). There were statistical significant differences between urban and rural women regarding women educational level, their occupation and their husband's education (P <0.05).

Table (2): Comparison of women's reproductive empowerment regarding cultural domain among the studied groups

Cultural domain	Urban					Rural					Significant test	
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	X ²	P
	n (%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)		
1- In order to preserve my common life, i was forced to give birth to as many children as my husband wanted to have.	40 (24.0)	42 (25.1)	57 (34.1)	13 (7.8)	15 (9.0)	71 (42.5)	66 (39.5)	16 (9.6)	9 (5.4)	5 (3.0)	42.746	<0.001**
2 - I am responsible for planning my delivery and deciding on it.	22 (13.2)	54 (32.3)	47 (28.1)	40 (24.0)	4 (2.4)	29 (17.4)	61 (36.5)	62 (37.1)	12 (7.2)	3 (1.8)	18.671	<0.001**
3- The child-friendly culture caused compulsion to my childbearing.	17 (10.2)	21 (12.6)	65 (38.9)	42 (25.1)	22 (13.2)	30 (18.0)	52 (31.1)	58 (34.7)	24 (14.4)	3 (1.8)	36.508	<0.001**
4 - So far, my desires about childbirth have been fulfilled.	6 (3.6)	18 (10.8)	60 (35.9)	67 (40.1)	16 (9.6)	22 (13.2)	38 (22.8)	46 (27.5)	46 (27.5)	15 (9.0)	22.070	<0.001**
5 - My husband and relatives were pressuring me for the birth of a boy child.	15 (9.0)	42 (25.1)	37 (22.2)	43 (25.7)	30 (18.0)	28 (16.8)	47 (28.1)	41 (24.6)	36 (21.6)	15 (9.0)	10.037	0.040*
6 -I am determined my reproduction and I take action in this regard.	15 (9.0)	26 (15.6)	48 (28.7)	46 (27.5)	32 (19.2)	29 (17.4)	29 (17.4)	53 (31.7)	44 (26.3)	12 (7.2)	14.001	0.007*
7 - My husband has less responsibility for reproduction.	14 (8.4)	37 (22.2)	30 (18.0)	56 (33.5)	30 (18.0)	18 (10.8)	53 (31.7)	42 (25.1)	37 (22.2)	17 (10.2)	12.822	0.012*
8 - I have enough tubal ligation independence and authority.	20 (12.0)	31 (18.6)	48 (28.7)	35 (21.0)	33 (19.8)	27 (16.2)	42 (25.1)	53 (31.7)	31 (18.6)	14 (8.4)	10.871	0.028*
9 - The key decision maker on the number of children is my spouse.	17 (10.2)	47 (28.1)	47 (28.1)	40 (24.0)	16 (9.6)	51 (30.5)	48 (28.7)	28 (16.8)	26 (15.6)	14 (8.4)	24.927	<0.001**
10- I comply with my husband reproductive decisions due to financial dependence.	19 (11.4)	44 (26.3)	41 (24.6)	38 (22.8)	25 (15.0)	23 (13.8)	59 (35.3)	44 (26.3)	32 (19.2)	9 (5.4)	10.715	0.030*

* Statistical Significant at $P < 0.05$ **Highly Statistical Significant at $P < 0.001$

Table (2) shows a comparison of women's reproductive empowerment regarding cultural domain among the studied groups. It was found that urban residents were more empowered regarding cultural domain items than rural group. There was statistical significant difference among both groups ($P < 0.05$).

Table (3): Comparison of women's reproductive empowerment regarding individual-family domain among the studied groups

Individual-family domain	Urban					Rural					Significant test	
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree		
	n (%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	X ²	P
11 - Childbearing strengthened my family and social status.	18 (10.8)	43 (25.7)	34 (20.4)	55 (32.9)	17 (10.2)	33 (19.8)	49 (29.3)	27 (16.2)	56 (33.5)	2 (1.2)	17.457	0.002*
12- The financial condition of my family affected the planning for the number of children.	16 (9.6)	42 (25.1)	54 (32.3)	49 (29.3)	6 (3.6)	21 (12.6)	45 (26.9)	71 (42.5)	27 (16.2)	3 (1.8)	10.460	0.033*
13- My employment status led to compulsory childbearing planning.	17 (10.2)	20 (12.0)	53 (31.7)	68 (40.7)	9 (5.4)	25 (15.0)	47 (28.1)	47 (28.1)	39 (23.4)	9 (5.4)	20.624	<0.001**
14 - My education gave me inadequate authority to make decisions about reproduction.	7 (4.2)	48 (28.7)	47 (28.1)	49 (29.3)	16 (9.6)	19 (11.4)	52 (31.1)	49 (29.3)	40 (24.0)	7 (4.2)	10.172	0.038*
15 - I pay for reproductive-related payments from my financial source.	16 (9.6)	40 (24.0)	26 (15.6)	49 (29.3)	36 (21.6)	20 (12.0)	43 (25.7)	55 (32.9)	36 (21.6)	13 (7.8)	23.72	<0.001**
16 -Television programs helped me to become a decision-maker and a confident person.	41 (24.6)	40 (24.0)	35 (21.0)	32 (19.2)	19 (11.4)	55 (32.9)	47 (28.1)	40 (24.0)	20 (12.0)	5 (3.0)	14.726	0.005*
17- I obtained knowledge that ineed about reproduction from TV programs.	27 (16.2)	50 (29.9)	40 (24.0)	38 (22.8)	12 (7.2)	31 (18.6)	56 (33.5)	54 (32.3)	23 (13.8)	3 (1.8)	11.789	0.019*
18- At school , I didn't learn any decision-making skills.	20 (12.0)	24 (14.4)	60 (35.9)	44 (26.3)	19 (11.4)	34 (20.4)	35 (21.0)	49 (29.3)	40 (24.0)	9 (5.4)	10.552	0.032*
19- I learned about reproductive issues at school.	11 (6.6)	45 (26.9)	46 (27.5)	44 (26.3)	21 (12.6)	22 (13.2)	51 (30.5)	48 (28.7)	37 (22.2)	9 (5.4)	9.489	0.049*
20- My husband gave me all reproductive responsibilities.	12 (7.2)	30 (18.0)	46 (27.5)	55 (32.9)	24 (14.4)	23 (13.8)	46 (27.5)	42 (25.1)	41 (24.6)	15 (9.0)	11.126	0.025*

* Statistical Significant at $P < 0.05$ **Highly Statistical Significant at $P < 0.001$

Table (3) describes a comparison of the individual-family domain of women's reproductive empowerment among the studied groups. It illustrates that urban residents were more empowered regarding individual-family domain items than rural group but they are equal in item 13. There was statistical significant difference among both groups ($P < 0.05$).

Table (4): Comparison of the social domain of women's reproductive empowerment among the studied groups

Social domain	Urban					Rural					Significant test	
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree		
	n (%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	X ²	P
21- I agreed with my husband for the planned childbearing program.	21 (12.6)	34 (20.4)	40 (24.0)	39 (23.4)	33 (19.8)	23 (13.8)	62 (37.1)	43 (25.7)	28 (16.8)	11 (6.6)	21.172	<0.001**
22- My husband doesn't have enough information to make decisions on reproductive issues.	13 (7.8)	50 (29.9)	57 (34.1)	36 (21.6)	11 (6.6)	18 (10.8)	51 (30.5)	71 (42.5)	25 (15.0)	2 (1.2)	10.562	0.032*
23 - My husband alone makes the main reproductive decisions.	40 (24.0)	37 (22.2)	33 (19.8)	41 (24.6)	16 (9.6)	43 (25.7)	43 (25.7)	49 (29.3)	23 (13.8)	9 (5.4)	10.703	0.030*
24 - At the beginning of our marriage, I didn't have any minimal knowledge on reproductive issues.	16 (9.6)	22 (13.2)	46 (27.5)	59 (35.3)	24 (14.4)	25 (15.0)	37 (22.2)	50 (29.9)	44 (26.3)	11 (6.6)	12.969	0.011*
25 - It is not easy for me to speak with my husband about reproductive issues.	15 (9.0)	55 (32.9)	38 (22.8)	41 (24.6)	18 (10.8)	30 (18.0)	59 (35.3)	38 (22.8)	32 (19.2)	8 (4.8)	10.096	0.039**
26- My information about reproductive issues is not adequate to make the right decision.	18 (10.8)	44 (26.3)	32 (19.2)	48 (28.7)	25 (15.0)	24 (14.4)	60 (35.9)	38 (22.8)	34 (20.4)	11 (6.6)	11.668	0.020*
27- I do not have the confidence and the ability to make independent decisions on reproduction.	21 (12.8)	42 (25.1)	32 (19.2)	50 (29.9)	22 (13.2)	26 (15.6)	55 (32.9)	43 (25.7)	34 (20.4)	9 (5.4)	12.387	0.015*
28 - I have the family conditions to make free reproductive decisions.	17 (10.2)	26 (15.6)	39 (23.4)	56 (33.5)	29 (17.4)	22 (13.2)	50 (29.9)	29 (17.4)	47 (28.1)	19 (11.4)	12.560	0.014*
29 - Circumstances and family affect my reproduction decisions.	21 (12.6)	33 (19.8)	35 (21.0)	52 (31.1)	26 (15.6)	35 (21.0)	40 (24.0)	39 (23.4)	41 (24.6)	12 (7.2)	10.846	0.028*

* *Statistical Significant at P<0.05****Highly Statistical Significant at P<0.001*

Table (4) negotiates a comparison of the social domain of women's reproductive empowerment among the studied groups. It shows that urban residents were more empowered regarding social domain items than rural group. There was statistical significant difference among both groups ($P < 0.05$).

Table (5): Comparison of the family planning domain of Women's Reproductive Empowerment among the studied groups

Family planning domain	Urban					Rural					Significant test	
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree		
	n (%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	X ²	P
30- The apprehension and experience of the side effects of contraceptive methods led me to take uncertain contraceptive methods.	13 (7.8)	79 (47.3)	48 (28.7)	16 (9.6)	11 (6.6)	29 (17.4)	81 (48.5)	41 (24.6)	13 (7.8)	3 (1.8)	11.553	0.021*
31- My husband's concurrent consultation at health centers on reproductive issues allowed me more freedom to make reproductive decisions.	14 (8.4)	22 (13.2)	65 (38.9)	51 (30.5)	15 (9.0)	19 (11.4)	36 (21.6)	71 (42.5)	37 (22.2)	4 (2.4)	12.997	0.011**
32- Marriage counseling classes helped me to learn about my right to make reproductive decisions.	10 (6.0)	33 (19.8)	47 (28.1)	62 (37.1)	15 (9.0)	24 (14.4)	35 (21.0)	49 (29.3)	53 (31.7)	6 (3.6)	10.427	0.034*
33- Presentation of films, CDs, and books at health centers made my reproductive decisions more successful.	18 (10.8)	29 (17.4)	40 (24.0)	55 (32.9)	25 (15.0)	25 (15.0)	45 (26.9)	39 (23.4)	46 (27.5)	12 (7.2)	9.981	0.041*
34- Treating the contraceptive methods complications by health centers helped me in making successful decisions.	11 (6.6)	21 (12.6)	52 (31.1)	59 (35.3)	24 (14.4)	19 (11.4)	36 (21.6)	50 (29.9)	49 (29.3)	13 (7.8)	10.316	0.035*
35- Providing reproductive services by female staff and even morning shifts decreased the role of my husband in reproductive issues.	10 (6.0)	40 (24.0)	44 (26.3)	46 (27.5)	27 (16.2)	22 (13.2)	45 (26.9)	46 (27.5)	41 (24.6)	13 (7.8)	10.026	0.040*
36- The limitation of the number of contraceptive methods available in health centers restricted my power of choice.	12 (7.2)	32 (19.2)	43 (25.7)	51 (30.5)	29 (17.4)	17 (10.2)	40 (24.0)	55 (32.9)	46 (27.5)	9 (5.4)	14.004	0.007**
37- The free services given by health centers for provision of contraceptive methods and its treatment led me to make effective reproductive decisions.	9 (5.4)	17 (10.2)	42 (25.1)	63 (37.7)	36 (21.6)	15 (9.0)	30 (18.0)	51 (30.5)	48 (28.7)	23 (13.8)	10.858	0.028*

* Statistical Significant at $P < 0.05$ **Highly Statistical Significant at $P < 0.001$

Table (5) shows a comparison of family planning domain of women's reproductive among the studied groups. It illustrates that urban residents were more empowered regarding family planning domain items than rural group. There was statistical significant difference among both groups ($P < 0.05$).

Table (6): Comparison of the Mean score of women's reproductive empowerment domains among the studied groups

Items	Urban	Rural	t test	
	Mean \pm SD	Mean \pm SD	t	P
Cultural domain score	20.3 \pm 4.5	18.1 \pm 5.8	3.873	<0.001**
Individual family domain score	19.5 \pm 3.8	16.7 \pm 5.7	5.282	<0.001**
Social domain score	18.7 \pm 3.8	15.2 \pm 5.8	6.523	<0.001**
Family planning domain score	17.7 \pm 3.1	14.9 \pm 4.7	6.427	<0.001**
Total score	76.3 \pm15.0	64.9 \pm21.9	5.550	<0.001**

****Highly Statistical Significant at $P < 0.001$**

Table (6) clarifies that the highest of women's reproductive empowerment among urban and rural residents were found in cultural domain with Mean \pm SD 20.3 \pm 4.5 and 18.1 \pm 5.8 respectively and the lowest scores among urban and rural residents were found in family planning domain with Mean \pm SD 17.7 \pm 3.1 and 14.9 \pm 4.7 respectively. There were highly statistical significant differences regarding cultural, individual family, social and family planning domain scores among rural and urban women with more empowerment in urban women ($p < 0.001$).

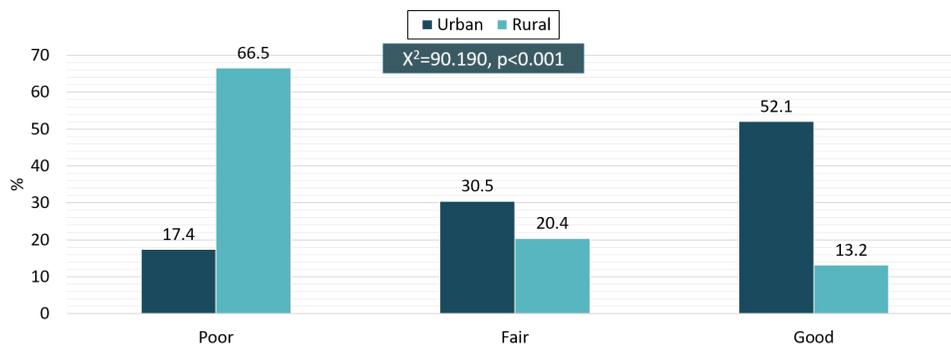
**Figure (1):** Distribution of the women's reproductive empowerment total score among the studied groups.

Figure (1) shows that more than half (52.1%) of urban women had good reproductive empowerment score compared to 13.2% of rural women. About two thirds (66.5%) of rural women had poor reproductive empowerment score compared to 17.4% of urban women. There were highly statistical significant differences ($p < 0.001$).

Table (7): Association between women's reproductive empowerment total score and sociodemographic characteristics among the studied groups

Items	Urban							Rural								
	Poor (n=29)		Fair (n=51)		Good (n=87)		Chi square test		Poor (n=111)		Fair (n=34)		Good (n=22)		Chi square test	
	n	%	N	%	N	%	χ^2	P	n	%	n	%	N	%	χ^2	P
Age (years)																
≤30	21	72.4	26	51.0	46	52.9			61	55.0	23	67.6	13	59.1		
31 – 40	7	24.1	19	37.3	35	40.2			41	36.9	10	29.4	5	22.7		
≥41	1	3.4	6	11.8	6	6.9	5.163	0.271	9	8.1	1	2.9	4	18.2	5.779	0.216
Woman Occupation																
Housewife	16	55.2	18	35.3	21	24.1			62	55.9	16	47.1	5	22.7		
Employed	13	44.8	33	64.7	66	75.9	9.669	0.008*	49	44.1	18	52.9	17	77.3	8.180	0.017*
Husband's occupation																
Farmer-worker	10	34.5	15	29.4	15	17.2			32	28.8	11	32.4	8	36.4		
Employed	9	31.0	24	47.1	43	49.4			50	45.0	19	55.9	8	36.4		
Self-employed	10	34.5	12	23.5	29	33.3	6.459	0.167	29	26.1	4	11.8	6	27.3	4.037	0.401
Woman education																
Primary	3	10.3	2	3.9	0	0.0			43	38.7	8	23.5	2	9.1		
Secondary	10	34.5	23	45.1	27	31.0			41	36.9	21	61.8	7	31.8		
Higher education	16	55.2	26	51.0	60	69.0	11.679	0.020*	27	24.3	5	14.7	13	59.1	21.038	<0.001**
Husband education																
Primary	1	3.4	0	0.0	0	0.0			37	33.3	0	0.0	0	0.0		
Secondary	17	58.6	23	45.1	11	12.6			47	42.3	16	47.1	2	9.1		
Higher education	11	37.9	28	54.9	76	87.4	34.704	<0.001**	27	42.3	18	52.9	20	90.9	47.679	<0.001*

Table 7 illustrates that women's reproductive empowerment among the studied groups was significantly associated with their occupation, educational level and their husband's educational level (p <0.05).

Discussion:

The present study aimed to assess women's reproductive empowerment in rural and urban areas. This aim was achieved through the present study findings which revealed statistical significant differences in all domains of reproductive empowerment among rural and urban women in which urban women had more reproductive empowerment. Therefore, the study question " Does reproductive empowerment differs in women from rural than urban areas?" was answered.

The empowerment and engagement of women have a direct positive influence on the health and quality of life of the family and the community. The present study findings showed that, there were highly statistically significant differences regarding cultural, individual family, social and family planning domain scores between rural and urban women ($p < 0.001$). The highest of reproductive empowerment score among urban and rural women was found in cultural domain and the lowest score was found in family planning domain. It is obvious that, relative to urban women, rural women received lower scores in the four domains. This can be explained as rural women are less frequently to be involved in making decisions within the family and they lack the ability to make decisions about family planning than urban women. Additionally, urban women visit health care facilities more frequently than rural women where family planning programs and fertility services give them the potential for more reproductive empowerment.

The current study findings were in line with a descriptive-correlation study carried out by **Kiani et al. (2015)** to examine the correlation between systemic social determinants of health and reproductive empowerment of women in Tehran city and also, with **Froozanfar et al. (2012)** to assess the relation between empowerment of women and reproductive behaviors in western Tehran health centers. They concluded that, their studied urban sample had a moderate state of reproductive empowerment. Also, **Kiani et al. (2015)** found a poor score in family planning domain.

In addition, a study by **Chaudhry & Nusheen. (2009)** explored the possible determinants of females empowerment using regression analysis based on primary data from Southern Punjab district reported a score of forty one percentage out of the total reproductive empowerment score among their studied sample. Moreover, In agreement with the present study finding, a qualitative study conducted by **Kohan et al. (2012)** to investigate women experiences from the role of health centers in encouraging them for family planning. They reported that women's empowerment can be influenced by the manner by which family planning methods are used and the available types of these methods.

Alishah et al. (2019) study compared the reproductive empowerment between urban and rural women in Sari disagreed with the present study findings. They reported that there was no significant difference among both urban and rural participants in terms of their total reproductive empowerment scores as both groups scored about seventy percentage out of the total reproductive empowerment score demonstrating a near-optimal state. These differences may be due to cultural and social disparities affecting women's communities. But this study was in agreement with the current study results in other domain as individual-family, and family planning domain.

The present study findings revealed that, women's reproductive empowerment among the studied groups was significantly associated with their occupation, educational level and their husband's educational level. A wide body of research endorses that employment is the most important factor of women empowerment. In agreement with the present study finding, **Kiani et al. (2015) & Pandey & Singh. (2008)** investigated the role of empowerment and personal values in reproductive health status of women on employed and unemployed women. They revealed that, employed women felt more empowered and were superior on social, democratic, hedonistic and power values than their unemployed counterparts and reported better reproductive health status. In addition, employment can increase women feeling of value, improve their social relationships and enhance their communication skills and decision-making abilities related to health

problems. Moreover, similar results were also reported by a study conducted by **Banks. (2013)** in Bangladesh who found that, women's employment influence and can change patriarchal expectations and values.

Other researchers, on the other hand, have argued that jobs in many women's lives may become an additional burden. This is especially the case for those who have to work for many hours in informal jobs or positions with low earnings (**Sarioğlu., 2016**). The load of housework, child and elderly care on working women contributes to 'time poverty'. Such various pressures dramatically reduce the quality of life for women and hence their levels of empowerment (**Öneş et al., 2013**).

There were a significant association between reproductive empowerment of women and their educational level among the studied groups. This can be explained by, education increases women awareness about new ideas and alternative gender roles and attitudes thus having a gender-egalitarian view of the world. Women with higher education seem to have stronger sense of value and self-esteem in making decisions than women with primary education. The present study results were supported by **Wyndow, Li & Mattes. (2013)** and **Samarakoon & Parinduri . (2015)**. They showed that educational level had a positive association with empowerment of women. Also, recent study done by **Tekgüç et al. (2017)** on the gender wage gap in Turkey had also shown that, it is important for women to obtain tertiary education to have better pay in the workplace and more control over their lives (such as marriage and fertility), and thus they have greater empowerment than lesser educated women.

Coinciding with the present study finding, **Sella & Minot. (2018)** study used gender-disaggregated survey data from rural Uganda to assess person and household characteristics correlated with empowerment of women. They found that education was associated with higher empowerment. Additionally **Sudha et al. (2011)** study to assess the level of empowerment of women in Jamnagar district revealed that higher level of education and employment of women together led to increased participation of women in household

and financial decisions. This can be interpreted by, educated and employed women had increased awareness on the empowerment of women and the schemes offered by the Government for development of women in the nation. In contrary with the present study finding, **Alishah et al. (2019)**. They reported that woman education wasn't significantly associated with their reproductive empowerment. The difference in results may be due to difference in residence and culture.

Else, the present study reported a significant association between the reproductive empowerment of women and their husband's educational level. The findings of the present study agreed with **Kamiya. (2011)** who investigated whether or not the use of reproductive health care is influenced by autonomy of women within the family using a household survey data in Tajikistan and with **Kiani et al. (2015)** study that confirmed a positive association between women's reproductive empowerment and their husband's educational level. This can be explained by, educated husbands were more likely to communicate on family related matters with their wives.

Furthermore, a cross-sectional study in Cox's Bazar district in Bangladesh conducted by **Mainuddin et al. (2015)** aimed to identify the levels of women empowerment related to health seeking behaviors among rural married women. They revealed that husbands' educational level is strongly associated with empowering women as women whose husbands are educated had more decision making power.

Moreover, **Mainuddin et al. (2015)** reported that educated men had higher self-esteem than uneducated men, their sense of value within the family is increased consequently, empowering their wives as well. Also, they are more knowledgeable and more likely to meet the needs of their wives. Thus better education, awareness, and employment of women in urban setting has aided in better empowerment of women than the rural setting.

Hence there is a strong need to enhance the educational status, employment

opportunities, awareness of the importance of women reproductive empowerment and the schemes offered by the government in order to empower women for development of our society.

Limitation of the study:

There is lack of the necessary national and international references so the researcher had difficulties in discussing the research topic

Conclusion:

Based on the present study results, the study question was answered where urban women were more empowered regarding cultural, individual family, social and family planning domains than rural women. Women occupation, educational level and their husband's educational level had an effective role in reproductive empowerment.

Recommendations:

In the light of the current study findings, the following are recommended:

- Improving empowerment of women through better education, employment opportunities and reservation at different places
- Increasing awareness of rural woman about their rights, legal empowerment and decision-making.
- Proper planning is needed for rural women who have different working conditions and whose husbands have different levels of education to improve their reproductive power.
- More involvement of women in membership in rural institutions and access to social networks.
- Future studies are recommended to explore factors related to reproductive empowerment of women in different residence.

Acknowledgement:

The researchers would like to thank all participants for their cooperation during the study.

Conflict of Interests:

The authors state that there is no conflict of interests regarding this study.

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