

Access this article online
Quick Response Code:

Website: www.jehp.net
DOI: 10.4103/jehp.jehp_433_21

Quality of life and empowerment among women

Purnima Kundu, Linu Sara George¹, Renjulal Yesodharan²

Abstract:

BACKGROUND: Few women in history were respected by society because of their contributions to the field of science, arts, politics, and so on, but in general, women are deprived of their rights and being refrained from decision-making in major areas of individual and family life. This research tried to investigate the degree of empowerment and quality of life (QOL) of the women to find out the relationship between empowerment and QOL of women.

MATERIALS AND METHODS: An exploratory survey was carried out among 210 purposively selected married women aged between 20 and 49 years in a selected municipality area of West Bengal. Data were obtained by one-to-one interviews using Women Empowerment Interview Schedule and WHOQOL Scale BREF.

RESULTS: The mean total QOL score of the women was found as 98.59 ± 13.61 . The transformed scores in the physical, psychological, social relation, and environmental domains were 74.92 ± 14.97 , 66.58 ± 15.78 , 81.00 ± 18.07 , and 65.28 ± 17.99 , respectively. The degree of empowerment was calculated as 64.71 ± 6.79 . Among the women, 5% had poor, 62% had medium, and 33% had a high degree of empowerment. A weak positive correlation ($r = 0.325$, $P = 0.001$) was found between QOL and empowerment. Significant associations were established between empowerment and education (Fisher's exact = 13.975 [0.007]) and education gap with husband (Fisher's Exact = 8.68, $P = 0.069$). Multiple regression analysis between empowerment dimensions and QOL shows that personal or family dimensions, including health, are a significant predictor for the QOL ($P < 0.01$).

CONCLUSION: Most of the women had medium degree of empowerment. Increased degree of empowerment improves their QOL of women. Women should be aware of their rights that can enhance the empowerment in different dimensions of life.

Keywords:

Decision-making, empowerment, quality of life, social discrimination, societies, women

Department of
Medical-Surgical
Nursing, Government
College of Nursing,
Medical College and
Hospital, Kolkata,
West Bengal, India,

¹Department of
Fundamentals of Nursing,
Manipal College of
Nursing, MAHE, Manipal,
Karnataka, India,
²Department of Mental
Health Nursing, Manipal
College of Nursing, MAHE,
Manipal, Karnataka, India

Address for correspondence:

Dr. Linu Sara George,
Department of
Fundamentals of Nursing,
Manipal College of
Nursing, MAHE, Manipal,
Karnataka, India.
E-mail: linu.j@manipal.edu

Received: 25-08-2021
Accepted: 26-11-2021
Published: 30-06-2022

Introduction

Women's empowerment is imperative and crucial for society and the nation as a whole. In almost every community and sphere of life, women assume unequal positions and status; thus, it is necessary to empower them by providing equal opportunities.^[1,2]

In 2001, India passed the National Policy for Women's Empowerment, which facilitated the advancement, development, and empowerment of women.^[3]

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: WKHLRPMedknow_reprints@wolterskluwer.com

We can identify women who have gained authority over the patriarchal society and have contributed to science, literature, politics, and many other areas even though they have always been the minority in such fields. They had to face discrimination always. Violation of the human rights of women is a familiar story. Decision-making for the women themselves or the family is considered as the so-called right of the men. When decision-making is denied for the women, it affects their health, quality of life (QOL), and family.^[4] There is a close interaction between women's decision-making and their overall QOL. The World Health Organization (WHO) focused on good

How to cite this article: Kundu P, George LS, Yesodharan R. Quality of life and empowerment among women. J Edu Health Promot 2022;11:185.

health as a prerequisite to achieving sustainable development.

The WHOQOL Group (1998)^[5] defines the QOL as an individuals' perception of their position in life in the context of the culture and value systems in which they live and their goals, expectations, standards, and concerns. It is a broad-ranging concept affected in a complex way by the person's well-being,^[6] physical health,^[7] psychological state, level of independence, and social relationship to their environment's salient features.^[8]

According to the World Bank Group (2018), empowerment is the process of increasing individuals' or groups' capacity to make choices and transform those choices into desired actions and outcomes.^[9] The indicators of women empowerment are the decision-making power of women in the household, freedom of movement, acceptance of equal gender role, access to education, access to employment, exposure to media, the experience of domestic violence, and participation in politics.^[10,11]

To take any measure for improving women's QOL and to empower them, this area needs to be studied further, which triggered the investigator to undertake an exploratory study on the QOL and empowerment among women.

The study aimed to examine women's QOL and the degree of empowerment in various dimensions of life and describe the factors associated with women empowerment and its relationship with the QOL and demographic variables. The findings may also help formulate a plan with the local administrator at the municipality level to enhance the status of empowerment among women and their QOL.

Materials and Methods

Study design and participants

A cross-sectional exploratory survey design was used to investigate the QOL and empowerment among women in a selected municipality area of West Bengal, India. The investigators calculated the sample size based on the standard deviation (SD) of empowerment obtained from the pilot study.

Study participants and sampling

The participants were 210 in number, who were purposively selected married women aged between 20 and 49 years, who had at least one child, were willing to participate, understand English or Bengali, and were present during the data collection period. The women who had acute illnesses, diagnosed with mental disorders, and widows/divorcees were excluded.

The investigator located the houses with the help of female health workers of the municipality health unit. The investigator visited each home to collect the information from the women who met the eligibility criteria.

Data collection instruments

The women were interviewed one to one using a demographic pro forma, WHOQOL BREF scale, and Women Empowerment Interview Schedule (WEIS) to collect information regarding demographic variables, QOL, and empowerment. The demographic tool consisted of 19 items. WHOQOL BREF Scale^[12] is a standardized 5-point rating tool. It includes 26 questions in four domains: physical health, social relation, and environmental domain comprising 24 questions, and it also has an area of overall QOL comprising of two questions. The instrument was translated to Bengali and retranslated to English to determine the language validity. The score range is one to five for each item. After calculating the raw score in each domain, it was transformed to a 0–100 scale. The higher the score, the women enjoyed a high QOL.

The WEIS^[13] was developed based on the dimensions of women empowerment proposed by Malhotra, Schuler, and Boender, 2002, and the indicators were based on the WHO Tool Kit on women empowerment (2005).^[14] This tool contains 56 items with Yes and No dichotomous responses and open space against each item to note the reasons for not making decisions. The questions were divided into five dimensions of empowerment: Individual/family/health, sociocultural, economic, legal, and political dimensions. The tool was translated to Bengali and retranslated to English. Score one was assigned as Yes, and 0 was assigned as No, and four items had reverse scoring. A higher score indicates higher empowerment among women.

The tools' content validity was established by seven experts in nursing, medicine, and statistics. The validity index of the demographic pro forma and WEIS scale was 0.94 and 0.92, respectively. The reliability of the Bengali version of the WHOQOL-BREF and WEIS Scale was established among 25 participants by Cronbach's alpha method and was found to be 0.8 for both tools.

Data analysis

The Statistical Package for Social Science for windows, version 16.0, Chicago, SPSS Inc. was used to compute frequency and percentage distribution of demographic characteristics, level of QOL, and degree of empowerment. Pearson's correlation co-efficient was used to find the relationship between QOL and empowerment. Multiple

regression analysis was used to analyze the relationship between dimensions of women empowerment and QOL. Chi-square and Fisher's exact test were used to determine the association between empowerment and personal characteristics.

Ethical considerations

The study was approved by the Institutional Ethics Committee (680/2018). CTRI registration was also executed (CTRI/2019/01/017064). The investigator provided information sheet to the participants and obtained informed consent before interviewing. Investigator ascertained confidentiality and anonymity of information.

Results

Data were obtained from 210 eligible women who met the study criteria. The sample characteristics of the participants are described in Table 1.

Personal characteristics of participant's spouse

The majority of the women's husband, 90 (42.9%), were aged between 40 and 49 years, most of them 58 (27.06%) had education up to middle school, 64 (30.5%) of the husbands had monthly income between 12,001 and 17,000, and most of the husbands, 180 (85.7%), did not consume alcohol.

Quality of life among women

The majority (42.86%) of the women had a good overall QOL, 42 (20%) had very good, 75 (35.72%) were in the category of neither good nor poor, and only 3 (1.42%) were in the poor category, and nobody had a very poor overall QOL.

A total of 86 (40.47%) of the women expressed that they were satisfied with health, 48 (22.86%) were very satisfied, 86 (27.14%) were neither satisfied nor dissatisfied, 17 (8.1%) were dissatisfied, and only 3 (1.43%) were very dissatisfied with their overall satisfaction regarding health. The women had a mean QOL score of 98.59 ± 13.61 . The domain-wise score is shown in Table 2.

Degree of empowerment among women

The number of selected items calculates the degree of empowerment; the number of items the woman responded in the interview schedule divided by the total number of items multiplied by 100. The degree of empowerment is 64.71 with a mean \pm SD (36.9 ± 6.79). The majority, 130 (62%) of the women, had a moderate degree of empowerment, 69 (33%) had high, and only 11 (5%) had a poor degree of empowerment. The dimension-wise degree of empowerment is depicted in Table 3.

Table 1: Frequency and percentage distribution of sample characteristics (n=210)

Sample characteristics	Frequency, n (%)
Age (years)	
20-29	45 (21.4)
30-39	102 (48.6)
40-49	63 (30)
Age difference (years) (husbands vs. wives)	
No difference	5 (2.4)
1-3	32 (15.1)
4-6	56 (26.7)
7-10	83 (39.5)
>10	34 (16.3)
Educational status	
Professional degree	8 (3.8)
Graduate/postgraduate	46 (21.9)
Higher secondary/diploma	35 (16.7)
Secondary	35 (16.7)
Middle school (VI-X)	48 (22.9)
Primary	27 (12.9)
Illiterate	11 (5.2)
Comparison of educational status (husbands vs. wives)	
Equal	46 (21.9)
Women are more educated	75 (35.72)
Husbands are more educated	89 (42.38)
Occupation	
Doctor/engineer	2 (0.95)
Professional teacher	6 (2.85)
Teacher/school inspector	9 (4.28)
Small business/private clerk/insurance agent	14 (6.66)
Beautician/tailor/tuition	24 (11.5)
Cook/housemaid	31 (14.71)
Homemaker	124 (59.05)
Religion	
Hindu	197 (93.8)
Muslim	10 (4.8)
Christian/Buddhist	3 (1.4)
Caste	
General	142 (67.6)
Other backward class*	17 (8.1)
Scheduled caste**	51 (24.3)
Monthly income of women (Rs.)	
>50,000	8 (3.8)
23,001-50,000	2 (0.95)
17,001-23,000	2 (0.95)
12,001-17,000	1 (0.5)
7001-12,000	6 (2.85)
2001-7000	35 (16.66)
<2000	32 (15.24)
No income	124 (59.05)
Comparison of monthly income between husbands and wives (Rs.)	
Women earn more	13 (6.2)
Husbands earn more (including the homemaker)	197 (93.8)
Sharing of family expenditure	
No sharing	144 (68.6)

Contd...

Table 1: Contd...

Sample characteristics	Frequency, n (%)
50%	10 (4.7)
<50%	56 (26.7)
Type of family	
Nuclear	92 (43.8)
Joint	118 (56.2)
Age at marriage (years)	
<18	82 (39.3)
18-25	97 (46)
>25	31 (14.7)
Duration of marriage (years)	
1-5	17 (8.1)
6-10	49 (23.3)
11-15	55 (26.2)
16-20	36 (17.1)
>20	53 (25.3)
Number of children	
1	131 (62.38)
2	74 (35.24)
3	5 (2.38)

*Other backward class is a collective term used by the Government of India to classify castes which are educationally or socially disadvantaged.

**Scheduled castes and scheduled tribes are among the most disadvantaged socioeconomic groups in India

Relationship between quality of life and empowerment

Pearson's correlation coefficient showed a positive relationship ($r = 0.325$, $P = 0.001$), which indicates that an increased degree of empowerment improves women's QOL. Computed Fisher's exact test showed that empowerment of women was dependent on their education (9.976 at $df = 4$, $P = 0.032$), education gap with husband (8.687 at $df = 4$, $P = 0.069$) and religion (9.588 at $df = 4$, $P = 0.03$) but independent on their age (4.76 at $df = 4$, $P = 0.312$), age difference with husband (4.568 at $df = 2$, $P = 0.101$), working status (2.936 at $df = 2$, $P = 0.217$), and duration of marriage (0.212 at $df = 2$, $P = 0.909$).

Areas of empowerment and the reason for not implementing the decisions are collected from the participants through a semi-structured interview schedule. The findings showed that most of the women, 112 (53.3%), were married by their own choice, the majority, 182 (86.70%), were free to visit their parents, and 164 (78.10%) of the women were free to make friends, most of the women 168 (80%) could refuse sex with husbands and decided for family planning. One hundred and fifty-five (73.80%) of the women did not experience any domestic violence. The majority, 152 (72.4%), did not face any dowry demand, 195 (92.90%) of the women had the autonomy to go to the hospital alone, and 193 (91.9%) of them were free to decide to go outside home.

Regression analysis [Table 4] between empowerment dimensions and QOL shows that individual or family

Table 2: Domain-wise mean and standard deviation of quality of life transformed score (n=210)

Domains of QOL	Transformed score	
	Minimum	Mean±SD
Physical domain	38	74.92±15.4
Psychological domain	13	66.58±15.93
Social relation domain	19	81±18.07
Environmental domain	13	65.28±17.99

Transformed score=(Actual raw scores - lowest possible raw scores) divided by possible raw score range) ×100, Maximum possible score for each domain is 100, QOL=Quality of life, SD=Standard deviation

dimensions including health are a significant predictor for the QOL ($P < 0.01$) and it is independent of other dimensions.

Discussion

This study revealed that the mean QOL of women between 20 and 49 years of age was revealed as 98.59 with a SD of 13.61. This finding contradicts the study conducted in Iran among middle-aged women between 30 and 59 years. The results revealed that the mean QOL score was 56.47, with an SD of 14.28.^[15]

This study's findings showed that the highest transformed score was found in the social relation domain, the second highest being in the physical domain, followed by the psychological domain. The lowest transformed score was found in the environmental domain. A study conducted in Southern Iran ($n = 210$) revealed that the highest transformed score was in the physical domain, followed by the social relation domain. The scores in psychological and environmental domains are the 3rd and 4th order, respectively.^[16] Here, it was seen that neither the rank order nor the scores were similar to the present study. Women gave equal importance to social relations, physical health maintenance, and emotional well-being but had limited environmental awareness.

Regarding the degree of empowerment among women, the current study result revealed that a maximum of the women had a moderate degree of empowerment, followed by a less number of women were having a poor degree of empowerment. A study in Bankura, West Bengal, India, among 580 women reported a similar result where it was revealed that a maximum of the women had a medium degree of empowerment. However, the percentage of women is not the same.^[17] This study also revealed that a maximum of the women had moderate degree of empowerment, followed by a good number of them having a high and very low number of women with a poor degree of empowerment.

The present study revealed that half of the women had married by their own choice and one-third of them had to give dowry. The study reported that very few of the

women had married by their own choice and maximum of the women had to give during their marriage. The number of working women reported a little higher number of women than that of the present study.

The present study had the findings that one-third of the study subjects experienced any domestic violence; in contrary to that, two-third of women faced domestic violence, as reported by Dutta.^[17]

The present study's findings showed that most women had the freedom to spend money, and almost all of them were free to go outside their homes. Near similar results were found by the studies in Bankura and Bangladesh.^[17,18]

The study findings revealed that the majority of the women had the freedom to choose the family planning methods, which is near similar to the findings of a study;^[17] on the contrary, it is nonsupportive to the findings of the study conducted who reported a significantly less number of the women had this freedom in Bangladesh.^[18]

While comparing the autonomy of the women to take children's and her own health-care decision, we see contradictory findings with the study carried out by two other studies conducted in Nepal and Ghana.^[19,20] Maximum of the present study women had the freedom to make health-care decisions. In contrast, only half of the women in the study in Nepal^[19] and one-fourth of the study participants enjoyed this freedom in Ghana.^[20] Women face a number of external and internal obstacles in the process of achieving autonomy in health-care decision-making and interventions such

as educational programs using the theory of planned behavior can significantly improve the autonomy of decision-making.^[21]

We have compared the findings of women's autonomy of decision-making for household purchase. The present study result revealed that a maximum of women had autonomy in this area. This finding has a disparity with all other studies carried out in various regions of India and world. Few of the women had autonomy in deciding for household purchase in other studies.^[18-20,22]

The present study reported that the women had the autonomy to visit their family and friends. A study conducted in Nepal reported that only half of the women had this freedom.^[19] Another study has shown that less than one-third of the women had the autonomy to visit their family and friends.^[20]

Married women of the present study had more or less similar QOL with the women of another study area, while they had a higher degree of empowerment than the married women of other areas. The reasons may be due to variations in sociocultural, regional, residential perspectives. This variation in findings might also be due to the women's national variation, understanding, and perception level regarding the concept of women's QOL and empowerment or might be caused by the variations in the sample size and sampling technique or because of the variation in the setting. Regression analysis between empowerment dimensions and QOL shows that individual or family dimensions, including health, are a significant predictor of the QOL.

The findings would encourage the local administrator and leader to formulate policy and implement it to increase women's empowerment status to improve women's QOL and the family. The women who have participated in the study have been exposed to women empowerment in the various dimensions of life and various domains of QOL, which would help them understand and become aware of empowerment and QOL. Increased understanding, in the long run, would help to take some measures to improve their empowerment status and QOL as well.

Table 3: Dimension-wise degree of empowerment (n=210)

Dimensions	Maximum possible score	Mean±SD	Degree
Individual/family/health	23	17.31±14.97	75.27
Social dimension	13	8.6±15.78	63.55
Economical	8	5.69±21.89	71.13
Legal	4	2.2±22.29	55.11
Political	8	2.76±19	43.58

SD=Standard deviation

Table 4: ANOVA of regression quality of life against the predictors of women empowerment

Model	QOL	Sum of squares	Df	Mean square	F/significant	Predictors	B	Standardized coefficientsβ	SE	T	P
Regression		5469.672	5	1093.934	5.544/0.001	PFD	1.154	0.280	0.317	3.634	0.001*
Residual		40251.095	204	197.309		SCD	0.595	0.089	0.515	1.156	0.249
Total		45,720.767	209	1093.934		ED	0.400	0.047	0.638	0.627	0.532
						LD	-1.029	-0.062	1.174	-0.877	0.381
						PD	0.129	0.013	0.669	0.193	0.847
						Constant	73.778		5.323	13.861	0.001

*Significant at 0.05 level, predictors. PFD=Personal/family dimension including health, SCD=Sociocultural dimension, ED=Economic dimension, LD=Legal dimension, PD=Political dimension, SE=Standard error, QOL=Quality of life

Limitations

The purposive sampling technique and self-reported questionnaire can limit the generalizability of the study findings. Awareness of the women regarding their QOL and empowerment was not addressed in this study.

Conclusion

The majority of the women had a medium degree of empowerment in various dimensions of their life and a higher degree of QOL. The QOL and empowerment were found interrelated, which indicates an increased degree of empowerment improves the QOL. Empowerment of women was found dependent on certain personal factors such as educational status, education gap with husband, and religion.

An increased degree of empowerment of women improves their QOL. Autonomy in decision-making among women is associated with educational status. Nurses can enhance awareness among women concerning empowerment and QOL. The comparison of QOL and empowerment between urban and rural women, perception of women regarding empowerment and QOL, and qualitative study on the same variables were recommended for future research.

Acknowledgment

The authors express their gratitude to all the women for their participation in the study.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

- Mandal KC. Concept and types of women empowerment. *Int Forum Teach Stud* 2013;9:17-30.
- Mehroolhasani MH, Yazdi-Feyzabadi V, Ghasemi S. Community empowerment for health promotion in slums areas: A narrative review with emphasis on challenges and interventions. *J Educ Health Promot*. 2021 Jul 30;10:263. doi: 10.4103/jehp.jehp_1628_20. PMID: 34485560; PMCID: PMC8396054. 2021;10:263. Available from: <https://pubmed.ncbi.nlm.nih.gov/34485560>
- Goel M, Ravishankar N. Impact of public policy and legislation on autonomy and empowerment of women in India. *Gen Issues* 2021. Available from: <https://doi.org/10.1007/s12147-021-09282-7>
- Shooshtari S, Abedi MR, Bahrami M, Samouei R. Empowerment of women and mental health improvement with a Preventive approach. *J Educ Health Promot*. 2018 Feb 9;7:31. doi: 10.4103/jehp.jehp_72_17. PMID: 29629392; PMCID: PMC5852985.
- The WHOQOL Group. Development of the World Health Organization WHOQOL-BREF quality of life assessment. *Psychol Med*. 1998 May; 28 (3):551-8. doi: 10.1017/s0033291798006667. PMID: 9626712.
- Shakibazadeh E, Sabouri M, Mohebbi B, Tol A, Yaseri M. Validity and reliability properties of the Persian version of perceived health competence scale among patients with cardiovascular diseases. *J Educ Health Promot*. 2021 Jan 28;10:19. doi: 10.4103/jehp.jehp_899_20. PMID: 33688528; PMCID: PMC7933654.
- Barati S, Sadeghipour P, Ghaemmaghami Z, Mohebbi B, Baay M, Alemzadeh-Ansari MJ, Hosseini Z, Karimi Y, Malek M, Maleki M, Noohi F, Khalili Y, Alizadehasl A, Naderi N, Arabian M, Pouraliakbar H, Khaleghparast S, Ghadrdoost B, Boudagh S, Bakhshandeh H. Warning signals of elevated prediabetes prevalence in the modern Iranian urban population. *Prim Care Diabetes*. 2021 Jun; 15 (3):472-479. doi: 10.1016/j.pcd.2021.04.002. Epub 2021 Apr 15. PMID: 33863679.
- Taebi M, Simbar M, Abdolhian S. Psychological empowerment strategies in infertile women: A systematic review. *J Educ Health Promot*. 2018 May 3;7:68. doi: 10.4103/jehp.jehp_151_15. PMID: 29922697; PMCID: PMC5963210.
- World Bank Group and Food and Agriculture Organization of the United Nations. *Male Outmigration and Women's Work and Empowerment in Agriculture: The Case of Nepal and Senegal*. Washington, DC: World Bank; 2018.
- Mokta M. Empowerment of women in India: A critical Analysis. *Indian J Public Adm* 2014;60:473-88.
- Roy C, Chatterjee S, Dutta Gupta S. *Women Empowerment Index: Construction of a Tool to Measure Rural Women Empowerment Level in India*; 2018.
- World Health Organization. *WHOQOL-BREF: Introduction, Administration, Scoring and Generic Version of the Assessment: Field Trial Version*, December 1996. Geneva: World Health Organization; 1996.
- Malhotra A, Schuler SR, Boender C. *Measuring Women's Empowerment as a Variable in International Development*. In: *Background Paper Prepared for the World Bank Workshop on Poverty and Gender: New Perspectives*; 2002.
- The WHO Kobe Centre. *A Toolkit for Women's Empowerment and Leadership in Health and Welfare*. Geneva, Switzerland: World Health Organization; 2005.
- Amirabadizadeh Z, Sharifzadeh G, Moodi M. Middle-aged women's quality of life and health-promoting lifestyle. *Mod Care J* 2016;13.e11597. doi: 10.5812/modern.11597.
- Saravi FK, Navidian A, Rigi SN, Montazeri A. Comparing health-related quality of life of employed women and housewives: a cross sectional study from southeast Iran. *BMC Womens Health*. 2012 Nov 23;12:41. doi: 10.1186/1472-6874-12-41. PMID: 23173572; PMCID: PMC3559256.
- Dutta P, Adhikary M. *Study of womens empowerment in the district of Bankura*. The University of Burdwan; 2014. Available from: <https://shodhganga.inflibnet.ac.in/handle/10603/56905> (Accessed on 11, November 2021)
- Kabir SM, Jahan A. Household decision making process of rural women in Bangladesh. *J Humanit Soc Sci* 2013;10:69-78.
- Acharya DR, Bell JS, Simkhada P, van Teijlingen ER, Regmi PR. Women's autonomy in household decision-making: A demographic study in Nepal. *Reprod Health* 2010;7:15. Available from: <https://doi.org/10.1186/1742-4755-7-15>
- Ameyaw EK, Tanle A, Kissah-Korsah K, Amo-Adjei J. Women's Health Decision-Making Autonomy and Skilled Birth Attendance in Ghana. *Int J Reprod Med*. 2016;2016:6569514. doi: 10.1155/2016/6569514. Epub 2016 Dec 26. PMID: 28116348; PMCID: PMC5220507.
- Sabouri M, Shakibazadeh E, Mohebbi B, Tol A, Yaseri M, Babae S. Effectiveness of an educational intervention using theory of planned behavior on health care empowerment among married reproductive-age women: A randomized controlled trial. *J Educ Health Promot*. 2020 Oct 30;9:293. doi: 10.4103/jehp.jehp_751_20. PMID: 33282998; PMCID: PMC7709755.
- Baliyan K. Participation of woman in household decision making: A case study of Muzaffarnagar district, Uttar Pradesh. *Bhartiya Krishi Anusandhan Patrika* 2014;29:159-61.