

Effectiveness of Structured Teaching Programme on knowledge regarding prevention of miscarriage during first trimester among married women in selected urban area, Bangalore

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Abstract

Background: A miscarriage is a failed intrauterine pregnancy that ends before 20 weeks from the last menstrual period. Educating the married women who are unaware regarding prevention of miscarriage during first trimester will help improving their concern about health. Considering the scenario, the present study, “A study to assess the effectiveness of structured teaching programme on knowledge regarding prevention of miscarriage during first trimester among married women in selected urban area, Bangalore,” was selected to impart knowledge and develop adequate knowledge regarding prevention of miscarriage during first trimester.

Objectives: To assess the level of knowledge regarding prevention of miscarriage during first trimester among married women.

Methods: A quantitative research approach was used to assess the effectiveness of structured teaching programme on knowledge regarding prevention of

miscarriage during first trimester among married women and Quasi-Experimental one group pre and post test design was adopted for the study. The conceptual model selected for the study was “Modified Kristen Swanson’s Caring Model (1991)”.The study was conducted in Upanagar urban area, Bangalore . A Probability method of simple random sampling technique was used to select the sample of 60 married women in urban area by using structured questionnaire. The collected data was analyzed and interpreted as per objectives by using descriptive and inferential statistics.

Results: The study finding revealed that majority 70.0% (42) married women had moderately adequate knowledge, minority of 30.0% (18) of them had adequate knowledge and none of them had inadequate knowledge .

Conclusion: The study attempt to assess the effectiveness of structured teaching programme on knowledge regarding prevention of miscarriage during first trimester among married women and found that

developed structured teaching programme was effective in improving the knowledge regarding prevention of miscarriage during first trimester among married women.

Keywords: Effectiveness, Structured teaching programme, Miscarriage, First trimester, Married women, Knowledge.

Introduction

A miscarriage is the loss of a pregnancy during the first 12 weeks of pregnancy, which is often referred to as the first trimester. The main symptom of a miscarriage is vaginal bleeding, which may be followed by cramping and pain in the abdomen. However, the light vaginal bleeding is relatively common during the first trimester of pregnancy (the first 12 weeks).

Miscarriage is the most frequent complication of pregnancy. Clinically recognized pregnancy loss occurs in about 15% of pregnancies in women under the age of 35 years. Most of the losses are 'spontaneous' miscarriages in the first trimester, which appear to occur at random. This is in contrast to recurrent miscarriage, or recurrent pregnancy loss (RPL), which can be defined as three consecutive pregnancy losses before 20 weeks of gestation. Epidemiological studies have revealed that 1–2% of women experience RPL, representing approximately 1 in 300 pregnancies.

Miscarriages are sporadic and are thought to result from genetic causes that are greatly influenced by parental chromosomal abnormalities. The prevalence of chromosomal abnormalities in couples with history of recurrent miscarriages. Karyotyping analysis was done by peripheral blood culture and GTG banding. Chromosomal aberrations were found in 8.57% patients, Numerical abnormalities - 0.95%, Structural abnormalities – 2.87% and polymorphic variants -4.76. Couples whose carrier status was ascertained after two

or more miscarriages have a low risk of viable offspring with unbalanced chromosomal abnormalities. Statistic shows that miscarriage occurs in about 15% to 20% of all recognized pregnancies, and usually occurs before the 13th week of pregnancy. In addition, researchers have been able to show that around 60% to 70% of all pregnancies (recognized and unrecognized) are lost. Because the loss occurs so early, many miscarriages occur without the woman ever having known she was pregnant. Prior to the eighth week of pregnancy, 30% have no fetus associated with no embryo inside the sac. This condition is called blighted ovum.

Recurrent miscarriage (RM) remains unexplained in >50% of patients and causes both physical and psychological burdens in women without specific risk factors for miscarriage. Unexplained RM is defined as a failure to achieve delivery owing to chance or undetectable causes of pregnancy loss, including unbalanced maternal immune tolerance, impaired intrauterine circumstances, and perturbation of decidualized endometrium.

Materials and Methods

Type of study: The research design selected for the present study is Quasi-experimental – one group pre-test and posttest design.

Time and place of the study: Study was conducted in Kengeri Upanagar , Bangalore in December 2019.

Population and sample of the study: In this study population comprise of married women in Kengeri Upanagar , Bangalore

Data collection tools: In this study, structured knowledge questionnaire to collect the baseline information was prepared by the researcher.

Data collection process: After obtaining the written permission from the concerning authorities of PHC, Upanagar and informed consent from each sample, the Investigator collected the data in the following phases.

The data was collected in following three phases:

Phase I: Pretest was conducted by using structured knowledge questionnaire among married women.

Phase II: Structured teaching programme was provided regarding prevention of miscarriage during first trimester among married women on the same day of data collection.

Phase III: After 7 days of administration of structured teaching programme, post-test was conducted to the same subjects by using same structured knowledge questionnaire.

Ethical consideration

1. The study was approved by the research committee and a formal permission was obtained from concerned authority of PHC Kengeri Upanagar ,Bangalore.
2. Informed consent was obtained from the study sample.
3. The subject were informed that the confidentially of the data will be maintained.
4. The subjected were informed that their participation was on voluntary basis and can withdraw from the study at any time.
5. No ethical issues arouse during the study.

Data analysis and assessment

The data collected was analyzed through descriptive and inferential statistics.

Descriptive statistics

1. Frequency and percentage distribution were used to describe the demographical profile of married women.

2. Range, mean and standard deviation was used to assess the pre and posttest level of knowledge among married women.

Inferential statistics

1. The paired 't' test was used to test the significance of pre-test and post-test mean score level of knowledge regarding prevention of miscarriage during first trimester among married women.
2. The Chi-square test was used to test the association between pretest levels of knowledge among married women with their selected demographic variables.

Limitations of the study

The sample size was limited to 60 married women.

1. Sample of the study is small. It can be conducted with larger sample.
2. The study was limited to selected urban area, hence possibility for wider generalization is limited

Results

- With regards to age in years, 40.0% (24) of them were in the age group between 26-30years, 36.7% (22) belongs to age group between 21-25 years, 23.3%(14) belong s to age group between 31-35 years.
- With regards to religion of the subjects, 58.3% (35) were Hindu, 23.3% (14) of them belongs to Muslim religion, 15.0% (09) were Christian religion and least of 3.3%(2) belong to other religion(Sikh).
- With regards to educational status, 33.3% (20) of the subject had a higher secondary education, 28.3%(17) of the subjects were graduate and above, 25%(15) of the subject were secondary education, 13.3%(8) of them are primary educated .
- With regards to the occupation, 45%(27) of the subjects were home maker, 26.7%(16) of the subjects are working as the private employee,

21.7%(13) of them were self employee, 8.3%(4) of the subjects were government employee .

- With regards to the family income, equal distribution of 56.7%(34) of the family earned between 10001-15000 per month , 31.7%(19) of the family earned between Rs 15001-20000, 8.3% (5) of the family earned more than 15000 per month and least of 3.3%(2) family earned less than 10000 per month.
- With regards to the type of family, 81.7%(49) of the subject belongs to nuclear family and 18.3%(11) of the subject belongs to joint family.
- With regards to the age at marriage, 63.3%(38) of them were in the age group between 21-25 years, 28.3%(17) of them were in the age group between 26-30 years, 5.0%(3) of them were in the age group of less than 21 years and 3.3%(2) of them were in the age group above 30 years.
- With regards to previous information, 96.7%(58) of the married women have heard about miscarriage and 3.3%(2) had not heard about miscarriage.
- With reference to source of information , 34.5%(20) of them got the information from their friends ,31.1%(18) of them got the information from health care personnel, 18.9%(11) of them got the information from mass media and 15.5%(9) of them got the information from others source
- With regards to the history of miscarriage, 83.3% (50) of the married women have no history of miscarriage and 16.7% (10) of the married women have history of miscarriage.
- With reference to the times of miscarriage, 100% (10) of the married women have miscarriage only once.

Figure.1 Shows in the pre-test 71.1% (43) of married women had inadequate knowledge, minority of 28.3%(17) of them had moderately adequate knowledge and none of them had adequate knowledge. In context to posttest 70.0% (42) married women had moderately adequate knowledge, minority of 30.0%(18) of them had adequate knowledge and none of them had inadequate knowledge regarding prevention of miscarriage during first trimester.

The overall knowledge regarding prevention of miscarriage during first trimester consisted of maximum score of 30 where the pretest range was 9-18, mean was 13.10 with Standard deviation of 2.22 and Mean percentage score of 33.7%. Whereas in posttest, range was 18-26, mean was 21.63 with Standard deviation of 1.70 and Mean percentage score was 72.1%.(Table-1)

Regarding Effectiveness of structured teaching programme on knowledge regarding prevention of miscarriage during first trimester among married women elderly.

The overall knowledge regarding prevention of miscarriage during first trimester, out of maximum score of 30, the mean score was found to be 8.53 , with Standard Deviation of 1.38, mean score percentage was 33.3% and paired 't'-value was 47.776 at the level of $p < 0.001$.(Table.2)

Table 3. Depicts the Association between knowledge regarding prevention of miscarriage during first trimester among married women with their selected demographic variables. In reference to the Association between knowledge regarding prevention of miscarriage during first trimester among married women, out of which educational status, occupation , family monthly income, age in year and history of were found to be statistically significant with $P < 0.05$

and rest of demographic variables such as religion, type of family, age at marriage and heard about miscarriage had no significant association of knowledge score with any of the demographic variables.

Discussions

1. The first objective of the study was to assess the existing level of knowledge regarding prevention of miscarriage during first trimester among married women.

With regards to the level of the pre-test level of knowledge regarding prevention of miscarriage during first trimester among married women from the table 2.1, it revealed that majority 71.1% (43) of married women had inadequate knowledge, minority of 28.2%(17) of them had moderately adequate knowledge and none of them had adequate knowledge regarding prevention of miscarriage during first trimester.

2. The second objective of the study was to assess the post-test level of knowledge regarding prevention of miscarriage during first trimester among married women.

With regards to the level of the pre-test level of knowledge regarding prevention of miscarriage during first trimester among married women from the table 3.1, It revealed that majority 70.0% (42) married women had moderately adequate knowledge, minority of 30.0%(18) of them had adequate knowledge and none of them had inadequate knowledge regarding prevention of miscarriage during first trimester.

3. The third objective of the study was to assess the effectiveness of structured teaching programme on level of knowledge regarding prevention of miscarriage during first trimester among married women.

With regards to the effectiveness of structured teaching programme on level of knowledge regarding prevention of miscarriage during first trimester among married women, from table 5.1, it evident that the mean difference between pre-test and post-test level of knowledge was 8.53 with mean percentage difference of 33.3 and the obtained paired t-test value was 47.776 and which found to be significant at $p < 0.001$.

4. The fourth objective of the study was to associate the pretest level of knowledge regarding prevention of miscarriage during first trimester among married women with their selected demographic variables.

The association was done between pre-test levels of knowledge with the demographic variables of antenatal women using Chi-square test. In this study, the findings revealed that the result of chi-square analysis presented in table 6.1 indicated that there was a significant association between knowledge score with educational status, occupation, family monthly income, age in years and heard about miscarriage. These findings were statistically significant at the level of $p > 0.05$.

Conclusion

In conclusion, The present study effectiveness of structured teaching programme on knowledge regarding prevention of miscarriage during first trimester among married women in Kengeri , Upanagar, Urban community, Bangalore . It shows in the pre-test 71.1% (43) of married women had inadequate knowledge, minority of 28.3%(17) of them had moderately adequate knowledge and none of them had adequate knowledge. In context to posttest 70.0% (42) married women had moderately adequate knowledge, minority of 30.0%(18) of them had adequate knowledge and none of them had inadequate knowledge regarding prevention of miscarriage during first trimester. . The paired 't'-test was carried out and

it was found to be significant at $p < 0.001$. Hence, null hypothesis is rejected and research hypothesis is accepted.

The study concluded that the STP is significantly effective on improving the level of knowledge regarding prevention of miscarriage during first trimester among married women. The results of the study have implications on nursing practice, nursing administration, nursing education and nursing research.

References

1. Jessica Evert. Introduction to pregnancy : <http://www.centersite.net/poc/view>.
2. Plum X Metrics. Evaluation and treatment of recurrent pregnancy loss: a committee opinion, The Practice Committee of the American Society for Reproductive Medicine, American Society for Reproductive Medicine, Birmingham, Alabama: <https://doi.org/10.1016/j.fertnstert.2012.06.048>.
3. Statistics of Miscarriages | Miscarriages in Different Countries: <https://miscarriagesindifferentcountries.wordpress.com/miscarriages/statistics-of-miscarriages/>.
4. R. William Stones , Saseendran Pallikadavath. Miscarriage in India: a population-based study : <https://doi.org/10.1016/j.fertnstert.2005.02.023>.
5. Dhaded SM, Jacob JP, Kavi A, McClure EM, Somannavar MS, Vernekar SS, Yogesh Kumar S, followed by et al. A prospective population-based observational study in a low-resource setting, Reproductive Health. 2018 Jun 22;15(Suppl 1):95. (doi: 10.1186/s12978-018-0525-4).
6. K. Sreelakshmi & K. Satyamoorthy, M. Rajasekhar, P.M. Gopinath. A Cytogenetic Study of Couples with Miscarriages. An Experience from Manipal Referral Centre, Published online: 04 Sep 2017, Pages 93-97 | <https://doi.org/10.1080/09723757.2013.11886202>.
7. Togas Tulandi. Patient education: Miscarriage (Beyond the Basics - Up To Date . <https://www.uptodate.com/contents/miscarriage-beyond-the-basics>.
8. Astrid Marie Kolte , Elisabeth Clare Larsen, Nick Macklon , Ole Bjarne Christiansen. New insights into mechanisms behind miscarriage. 2013 June 26; 154 (2013) .
9. Keiji Kuroda. Treatment Strategy for Unexplained Infertility and Recurrent Miscarriage. 2018 June 16 ; 79-84
10. Shalini , Sunita Singha . Association of Serum HCG Level with Miscarriage in Early Pregnancy. 2019 October; 2395-2822:23.
11. Norman Brier .Anxiety After Miscarriage: A Review of the Empirical Literature and Implications for Clinical Practice. 2004 May 21.
12. A.M. Hughes, F. Dawood, J. Topping, R.G. Farquharson, S. Quenby. Recurrent miscarriage and long-term thrombosis risk: a case-control study. 2005 March 17; 20: 1729-1732.
13. Harriet Bradley , Jo Garcia, Lindsay Smith , Ruth Levitas .The loss of possibility: scientisation of death and the special case of early miscarriage. 2007 June 06. <https://doi.org/10.1111/j.1467-9566.2007.01019.x>
14. Obos pregnancy and Birth Contributors, Miscarriage in the First Trimester. <http://www.ourbodiesourselves.org/book-excerpts/health>.

15. Krissi Danielsson. Abortion and the Increased Risk of a Future Miscarriage: <http://www.verywellfamily.com/abortion-future>.
16. Li DK, Liu L. Exposure to non-steroidal anti-inflammatory drugs during pregnancy and risk of miscarriage: Population based cohort study, *BMJ*. 2003 Aug 16;327(7411):368.
17. A Bloigu, M Gissler, M Mentula, N Helle, O Heikinheimo, R Linnakaari. Trends in the incidence, rate and treatment of miscarriage—nationwide register-study in Finland. 2019 November 20(11): 2120–2128.
18. Michelle Starr. New Research Shows Most Human Pregnancies End in Miscarriage. <https://www.sciencealert.com/meta-analysis-finds-majority-of-human-pregnancies-end>.
19. Ann M Moore, Chander Shekhar, Manas R Pradhan, Melissa Stillman, Rajib Acharya, et al. The incidence of abortion and unintended pregnancy in India, 2015. [https://doi.org/10.1016/S2214-109X\(17\)30453-9](https://doi.org/10.1016/S2214-109X(17)30453-9).
20. Ameet Patki, Naveen Chauhan. An Epidemiology Study to Determine the Prevalence and Risk Factors Associated with Recurrent Spontaneous Miscarriage in India. 2015 Mar 17; 66(5): 310–315.
21. Asha Swarup, Davis Sabu Pathadan, Mamatha B. Shetty, Mounica Malyala, Suneha Pocha, et al. Recurrent pregnancy loss: challenge to obstetricians. 2017 Aug; 6(8):3376-3380.
22. Bhattacharya BM, Kamble G. Miscarriage and associated risk factors in India: a brief review. *MOJ Womens Health*. 2017;4(4):84-86.
23. Gözde Işık, Hanife Güler Dönmez, Mehmet Sinan Bektaş, Şayeste Demirezen, . Bacterial vaginosis in association with spontaneous abortion and recurrent pregnancy losses. 2016 Jul-Sep; 33(3): 135–140.
24. Dhaded SM, Jacob JP, Kavi A, McClure EM, Somannavar MS, Vernekar SS, Yogesh Kumar S, et al. A prospective population-based observational study in a low-resource setting, *Reproductive Health*. 2018 Jun 22;15(Suppl 1):95.(doi: 10.1186/s12978-018-0525-4).
25. Bellad MB1, Edlavitch SA, Goudar SS, Hemingway-Foday JJ, J Perinatol, Mahantshetti NS, Naik V, et al. Consanguinity, prematurity, birth weight and pregnancy loss: a prospective cohort study at four primary health center areas of Karnataka, India, 2012 Jun;32(6):431-7. doi: 10.1038/jp.2011.115. Epub 2011 Aug 18.
26. H. Lashen K, Fear D.W. Sturdee. Obesity is associated with increased risk of first trimester and recurrent miscarriage: matched case-control study. *Human Reproduction*; Published:01 July 2004; Volume 19, Issue 7, July 2004, Pages 1644–1646; <https://doi.org/10.1093/humrep/deh277>.
27. Choudhry R, Kalra S1, Med Sci Monit, Raheja S, Tuli A. Prevalence of anticardiolipin antibody IgG in recurrent first trimester abortions and the role of aspirin in its prevention, 2003 Jun;9(6):CR213-6.
28. Lakshmi Rao, Murthy Kanakavalli, Venkata Suryanarayana. Association Between Novel HLA-G Genotypes and Risk of Recurrent Miscarriages: A Case-Control Study in a South Indian Population, First Published May 14, 2008; Research Article: <https://doi.org/10.1177/1933719107314061>

29. Chauhan N, J Obstet Gynaecol, Patki A. An Epidemiology Study to Determine the Prevalence and Risk Factors Associated with Recurrent Spontaneous Miscarriage in India, 2016 Oct;66(5):310-5. doi: 10.1007/s13224-015-0682-0. Epub 2015 Mar 17.
30. Anand Srinivasan, Anil Bhansali. T, G R V Prashad, Kusum Lata, Minakshi Rohilla, Pinaki Dutta, Subbiah Sridhar, Viral N Shah. Thyroid autoimmunity and obstetric outcomes in women with recurrent miscarriage: a case-control study, *Endocr Connect*. 2013 Jun 1; 2(2): 118-124, Published online 2013 Jun 22. doi: 10.1530/EC-13-0012.
31. Frenny J Sheth, Harsh J Sheth, Jayesh J Sheth, Pritti Kumari, Ralph Akinde, Thomas Liehr. Chromosomal abnormalities in couples with repeated fetal loss: An Indian retrospective study, *Indian J Hum Genet*. 2013 Oct-Dec; 19(4): 415-422, doi: 10.4103/0971-6866.124369.
32. Denoj Sebastian. Influence of TORCH infections in first trimester miscarriage in the Malabar region of Kerala, *African journal of microbiology research*; April 2008 ; 2(3):56-59.
33. Bhattacharya S, Shetty A, Smith N, Wijesiriwardana A. Obstetric outcome in women with threatened miscarriage in the first trimester, *Obstetric and Gynecology*. 2006 Mar;107(3):557-62.
34. Fatemeh, K Begumb, Khyrunnisa, MansourNazaric, Shobeiria. A study of maternal hemoglobin status of Indian women during pregnancy and pregnancy outcome; <https://doi.org/10.1016/j.nutres.2006.05.008>.
35. Bagheri B, Haghollahi F, Shariat M, Sohrabvand F. Effect of metformin on miscarriage in pregnant patients with polycystic ovary syndrome, *West Indian Med J*. 2009 Nov;58(5):433-6.
36. James R Scott. Immunotherapy for recurrent miscarriage. 2003 January 20. <https://doi.org/10.1002/14651858.CD000112>.
37. C. Rubio, C. Simón, F. Vidal, J. Remohí, L. Rodrigo, T. Pehlivan, et al. Chromosomal abnormalities and embryo development in recurrent miscarriage couples. 2003 January 01; 18 (1):182-188.
38. David Baud, Genevieve Goy, Katia Jatou, Maria-Chiara Osterheld, Serafin Blumer, et al. Role of Chlamydia trachomatis in Miscarriage. 2011 Sep; 17(9): 1630-1635. doi: 10.3201/eid1709.100865.
39. A. Roberts, D. James, J. W. Barrington, P. Lindsay, S. Smith. Selenium deficiency and miscarriage: a possible link?. February 1996. <https://doi.org/10.1111/j.1471-0528.1996.tb09663.x>.
40. H. Lashen, K. Fear, D.W. Sturdee. Obesity is associated with increased risk of first trimester and recurrent miscarriage: matched case-control study. 2004 July 01; 19 (7): 1644-1646, <https://doi.org/10.1093/humrep/deh277>.
41. Fan Qu, Gianluca Baio, John Barry, Tao Ding, Yan Wu, Yu-Hang Zhu, et al. The association between psychological stress and miscarriage: A systematic review and meta-analysis. 2017 May 11; 7; 1731 (2017).
42. Ameet Patki and Naveen Chauhan. An Epidemiology Study to Determine the Prevalence and Risk Factors Associated with

- Recurrent Spontaneous Miscarriage in India. 2015 Mar 17; 66(5): 310–315. doi: 10.1007/s13224-015-0682-0.
43. Abhijeet Dhawalram Faye , Deepika Abhainath Singh , Megha Ashok Maghade , Rahul Tadke , Sudhir H. Bhave , Sushil Gawande , et al. A Study of Depressive Features and Perceived Social Support in patients with Miscarriage. <http://indianmentalhealth.com/pdf/2018/vol5-issue4/OR3%20DEEPIKA%20NAGPUR>.
44. Caroline Jansson, Elisabeth Darj, Helena Volgsten .Women’s experiences of miscarriage related to diagnosis, duration, and type of treatment. 2018July 31: 97(12); 1491-1498.<https://doi.org/10.1111/aogs.13432>
45. Hetvi Patel, Pritti K. Priya, Priyankur Roy, Vineet V. Mishra. A Study on Balanced Chromosomal Translocations in Couples with Recurrent Pregnancy Loss. 2018 Oct-Dec; 11(4): 337–342.
46. Jalpa U. Shah, Jayesh A. Patel , Megha S.Patel , Nayan G. Patel, Shaswat K. Jani , Sushma R. Shah . Study of outcome of pregnancy in patients with first-trimester bleeding per vaginum. 2014 Nov;1(3):230-233. <http://www.ijmedicine.com>.
47. J Neela , L Raman. The Relationship Between Maternal Nutritional Status and Spontaneous Abortion. Jan-Feb 1997;10(1):15-6.
48. Asoke K Pal , Jwalant E Waghmare , Moreshwar R Shende , Prafulla S Ambulkar , Vandana Wankhede , et al . Chromosomal Aberrations in Couples With Pregnancy Loss: A Retrospective Study. Jul-Sep 2018;11(3):247-253. doi: 10.4103/jhrs.JHRS_124_17.

Legend Figure and Tables

Figure 1: Percentage distribution of married women according to pre and posttest knowledge regarding prevention of miscarriage during first trimester among married women.

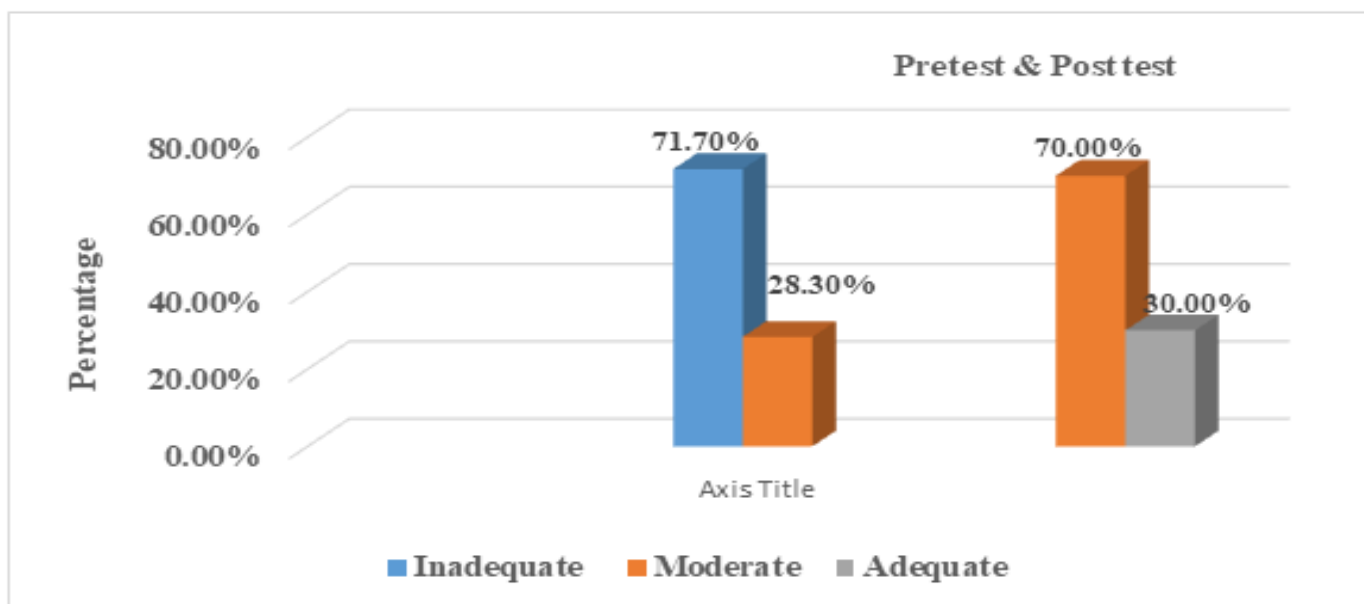


Table 1: Mean Percentage distribution of married women according to pre and posttest knowledge regarding prevention of miscarriage during first trimester among married women.

Sn.	Aspects of knowledge	Max score	Pre-test knowledge				Post- test knowledge			
			Range	Mean	SD	Mean %	Range	Mean	SD	Mean %
1.	General information	7	2-5	3.72	0.82	53.1	4-7	5.50	0.65	78.6
2.	Incidence and risk factors	7	2-5	3.23	0.87	46.1	4-7	5.17	0.82	73.8
3.	Sign, symptoms and diagnosis	3	0-2	0.88	0.71	29.3	1-3	1.97	0.55	65.7
4.	Management and treatment	3	0-2	0.92	0.64	30.7	1-3	2.07	0.66	69.0
5.	Prevention	10	2-6	4.35	0.88	33.3	5-9	6.95	0.79	69.5
	Over all	30	9-18	13.10	2.22	33.7	18-26	21.63	1.70	72.1

Table 2: Outcomes paired t-test analysis for comparison of pre- and post-test scores of knowledge regarding prevention of miscarriage during first trimester among married women.

Sn.	Aspect of knowledge	Max score	Paired t-difference (Enhancement)			t-test value	P-value
			Mean	SD	Mean%		
1.	General information	7	1.78	0.52	25.4	26.375*	p<0.001
2.	Incidence and risk factors	7	1.93	0.91	27.6	16.311*	p<0.001
3.	Sign, symptoms and diagnosis	3	1.08	0.53	36.0	15.828*	p<0.001
4.	Management and treatment	3	1.15	0.54	38.3	16.286*	p<0.001
5.	Prevention	10	2.57	0.89	25.7	22.123*	p<0.001
	Over all	30	8.53	1.38	33.3	47.776*	p<0.001

Note : *-denotes significant (p<0.05) for df=59.

Table 3: Association between the knowledge regarding prevention of miscarriage during first trimester among married women with their demographic variables.

Sn.	Demographic Variables	Sample (n=60)		Knowledge				Chi-square value	P-value
				≤Median		>Median			
		F	%	F	%	F	%		
1.	Age in years							6.039, df-2, S	P<0.05
	21-25 years	22	36.7	17	60.0	5	19.2		
	26-30 years	24	40.0	11	32.4	13	50.0		
	31-35 years	14	23.3	6	17.6	8	30.0		
2.	Religion								

	Hindu	35	58.3	20	58.8	15	57.7	2.986, df=3, NS	p>0.05
	Christian	9	15.0	6	17.6	3	11.5		
	Muslim	14	23.3	6	17.6	8	30.8		
	Others	2	3.3	2	5.9	0	0		
3.	Educational status								
	Primary education	8	13.3	7	20.6	1	3.8	31.391, df=3, S	P<0.05
	Secondary education	15	25.0	12	35.3	3	11.5		
	PUC	20	33.3	15	41.1	5	19.2		
	Graduate and above	17	28.3	0	0	17	65.4		
4.	Occupation								
	Home maker	27	45.0	21	61.8	6	23.1	21.641, df=3, S	P<0.05
	Self-employee	13	21.7	10	29.4	3	11.5		
	Pvt. employee	16	26.7	3	8.9	13	50.0		
	Govt. Employee	4	6.7	0	0	4	15.4		
5.	Family monthly income(Rs)								
	≤10,000	2	3.3	2	5.9	0	0	18.365, df=3, S	P<0.05
	10,001-15,000	34	56.7	26	76.5	8	30.8		
	15,001-20,000	19	31.7	6	17.6	13	50.0		
	≥15000	5	8.3	0	0	5	19.2		
6.	Type of family								
	Nuclear family	49	81.7	28	82.4	21	80.8	0.025, df=1, NS	P>0.05
	Joint family	11	18.3	6	17.6	5	19.2		
	Extended family	-	-	-	-	-	-		
7.	Age at marriage								
	<21 years	3	5.0	3	8.8	0	0	5.029, df=3, NS	p>0.05
	21-25 years	38	63.3	22	64.7	16	61.5		
	26-30 years	17	28.3	9	26.5	8	30.8		
	Above 30 years	2	3.3	0	0	2	7.7		
8.	Have you heard about miscarriage?								
	Yes	58	96.7	33	97.1	26	100	0.778, df=1, NS	p>0.05
	No	2	3.3	1	2.9	0	0		
	If yes, source of information?								
	Health personnel	18	31.1	12	36.4	7	26.9	0.900, df=3, NS	p>0.05
	Mass media	11	18.9	6	18.2	5	19.2		

	Friends	20	34.5	11	33.3	9	34.9		
	Others	9	15.5	4	12.1	5	34.6		
9.	Any history of miscarriage?								
	Yes	10	16.7	2	6.3	8	28.6	4.026, df=1,S	P<0.025
	No	50	83.3	30	93.7	20	71.4		
	If yes, how many times? (10)								
	Once	10	100	4	100	6	100	Invalid	
	None	-	-			-	-		

Note: S-significant ($p < 0.05$); NS-Not significant ($p > 0.05$).