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Study the Effectiveness of Health Education Intervention in Improving Male Involvement in Maternal Health Care

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ABSTRACT: Dissemination of the knowledge about maternal health care among husbands and a positive gender attitude can lead to the optimization of healthcare service utilization and help in reducing the delay in deciding to seek care from skilled healthcare professionals. To Study the effectiveness of health education intervention in improving male involvement in maternal health care. A Prospective Longitudinal Case-Control Study was conducted in the Gynaecology OPD of a tertiary care hospital in a rural setting of district Ahmednagar, Maharashtra. The sample size was determined using Epi Info software, resulting in 199 participants for both the intervention and control groups. Probability sampling method - simple random sampling was used to select the participants for the study. The study subjects included were the husbands of the primigravida and multigravida pregnant females in the third trimester. Data collection was done using predesigned, validated, and standardized questionnaire. The mean difference between the knowledge level of pre-test and post-test intervention of antenatal care is 10 for multigravida and 8.93 for primigravida. There is a significant improvement in the knowledge of maternal health care. The effect size of the intervention was calculated by Cohen's d which is 0.5. Husbands who have some knowledge of maternal health were more likely to use maternal health care services. It is crucial to have a policy for Male Involvement in Maternal Health Care and make the husband's presence obligatory during maternal and child health care. Health education intervention contributed in the improvement of pre-existing knowledge of men about maternal health care and created interest among them to further participate in MNCH. The major challenge faced during the study was that many female patients were being accompanied by female relative and not husbands which created a great difficulty in finding the study samples. Many husbands of multigravida were busy taking care of their infants and hence could not participate in the study.

Keywords: Maternal Health Care, Male Involvement, Educational intervention Package, Primigravida, Multigravida.

INTRODUCTION

Maternal mortality remains a global public health challenge. In India, gender-based power inequalities have been a fundamental constraint to women's access to and utilisation of health care services. The knowledge and attitude of men act as barriers to improving the health outcomes of women. Male engagement in MCH would improve delivery, access, and uptake of maternal, newborn, and child health services in the context of prevailing gender norms and gendered roles in rural India (Fotso *et al.,* 2015). A research study conducted in rural Tanzania concluded that community-based interventions employing community health workers to educate the community are both feasible and effective in improving male involvement in maternal healthcare (August *et al.,* 2016). Lack of husband involvement can lead to delayed decisions to take to the health facility and is a main contributing factor in increasing maternal mortality and the child death ratio (Varkey *et al.,* 2004). A study conducted in the rural area of Gadchiroli district in Maharashtra concluded that educating and empowering men about pregnancy complications will contribute to a reduction in maternal and neonatal deaths (Jungari & Paswan 2019). Social support by the husband plays a vital role for a female during the transition from womanhood to motherhood (Saraswati Raju and Ann Leonard 2000). A quasi-experimental study conducted in Rukwa, Tanzania, concluded that the proposed intervention has the potential to reduce the three delays, which are delay in decision-making to seek health care, delay in reaching a health facility, and delay in obtaining appropriate care upon reaching a health facility (Moshi *et al.,* 2018). Although engaging men in health care for women and children is not a universal strategy, several maternal health interventions have advocated for male involvement as a means to improve outcomes for women's reproductive health and for new-born and child health (Assaf & Davis 2018).

MATERIALS AND METHODS

A hospital-based prospective longitudinal case-control study was undertaken at a tertiary care hospital in a rural setting in the district of Ahmednagar, Maharashtra. The sample size was 199 males in the

control group and 199 in the interventional group, calculated using Epi Info. Sampling was done using the probability sampling method (SRS technique). A predesigned, pretested, and validated questionnaire was used, which consisted of 5 sections: socio-demographic characteristics of the respondent, socio-demographic characteristics of the spouse, respondent's knowledge, respondent's attitude, and his involvement in, maternal health care. The informed consent of every participant was obtained before the start of the study. Before starting the data collection, a pilot study was conducted on 10% of the sample size.

Inclusive Criteria

Males who were married and their wives in third-trimester pregnancy.

Males who could understand Marathi and Hindi Language.

Exclusive Criteria

Males who are not willing to participate.

Males who were not able to participate due to any illness.

Males who had attended any education programme regarding MCH care services

IEC approval: The proposal no. (PIMS/SPHSM/RC/2022/06) was approved by the Institutional Ethical Committee of the Pravara Institute of Medical Sciences.

Analysis: The collected data was entered in MS Excel, and the data sheet was then imported into data analysis software -RStudio Version 2023.03.0- 386 (Posit PBC, Vienna, Austria).

RESULTS AND DISCUSSION

Table 1 shows the distribution of the socio-demographic characteristics of the husbands of multigravida in both the intervention group and the control group. The majority of the husbands of primigravida in the control group were in the age group of 21–30 years, with 92% of them belonging to the Hindu religion. The family structure of the respondents shows that the majority (86.3%) belonged to joint families, and 96.03% of couples were married within 5 years. Concerning hours of work per day, the majority (64.35%) were working only 8 hours, and 21.78% had family income between Rs. 4557 and 6835 per month. 29.70% of them had high school certificates, and a majority of them belong to the occupational category of clerical, shop owner, or farmer. The majority of the husbands of primigravida in the intervention group were in the age group of 21–30 years, with 92% of them belonging to the Hindu religion. The family structure of the respondents shows that the majority (81.25%) belonged to joint families, and 93.75% of couples were married within 5 years. Concerning hours of work per day, the majority (60.41%) were working only 8 hours, and 20.83% had family income between Rs. 4557 and 6835 per month. 32.29% of them had high school certificates, and a majority of them belonged to the occupational category of clerical, shop owner, or farmer.

Table 2 shows the frequency and percentage distribution of demographic variables concerning age, educational status, occupational status, antenatal registration, general illness, and specific maternal illness. Concerning age, in the multigravida of the control group, the majority (58.58%) were in the age group of 25–29 years, 25% of them had middle school certificates, and 83% were homemakers. Concerning antenatal registration, the majority 91% were registered, 82.82% of them were registered in the government setup, 98% of their spouses were normal without any specific maternal illness, and 93% of the spouses had no general illness.

Baseline data in the intervention arm shows that about 36.45% and 22% of the husbands of primigravida and multigravida knew when to register the pregnancy at a healthcare facility for antenatal care, respectively. The commonest obstetric danger sign identified by the respondents was vaginal bleeding, 58% in primigravida and 66% in husbands of multigravida. A majority of husbands knew about the TT vaccine in both groups, but only 11.45% and 10% knew about TT with DPT. The National Technical Advisory Group on Immunization(NTAGI), Ministry of Health and Family Welfare has also recommended the replacement of the TT vaccine with the Td vaccine in India's immunization programme for all age groups, including pregnant women (Guidelines, 2017). Only 10.41% and 11% of the husbands knew the average weight gain during the pregnancy in the intervention arm at baseline. People living around this area have a myth that less weight gain during the pregnancy will reduce the size of the baby which will lead to a normal and easy delivery. Of the husbands of primigravida only 30% knew about the intrauterine contraceptive devices.

Table 3 shows the knowledge levels of the respondents on the maternal health care of the intervention and the control group. It was seen that, during pregnancy, almost two-fifths of husbands ensured that their wives were taking IFA tablets during the antenatal period. The majority encouraged and provided for their wives to consume green vegetables and fruits, took their wives to health facilities in case of illness, and only encouraged them to rest.

This study aimed to evaluate the effectiveness of the health education intervention on male involvement in maternal health care. The effectiveness of the educational intervention (comparison within the group) to increase the knowledge levels of husbands was calculated by Cohen's d = 0.5, Glass's *delta* = 3.789237, and Hedges' g = 5.064308. The table 4 presents the effectiveness of a health education intervention in improving knowledge within groups. At baseline, the mean knowledge score for ante-natal care was 11.42 (SD = 5.93). After the intervention, the post-test mean score significantly increased to 27.82 (SD = 1.7). This indicates that the health education intervention had a significant positive effect on improving knowledge of ante-natal care. The mean difference between the baseline and post-test scores was 16.40, which was statistically significant ($t = 36.29$, $p<0.001$, 95% CI: 15.51 to 17.29). The intervention led to significant increases in knowledge scores, with the largest improvement observed in post-

natal care. These findings suggest that health education interventions can have a positive impact on improving knowledge and potentially enhancing the quality of care in maternal and child health settings. This is similar to a study conducted in a Nigerian community in which, after an educational session, men were more likely to recognise a danger sign of pregnancy and delivery, but there was no increase in their willingness to participate in MCH (*Changes in Men's Knowledge & Attitudes Following Health Education on Their Role in Preventing Maternal Deaths: An Exploratory Survey in a Nigerian Community*, n.d.).

There is no study in India to compare male involvement at various levels. It was seen that 75% of husbands from the intervention group were able to recall more than 5 danger signs in pregnancy; on the contrary, community-based continuous training on improving birth preparedness, male involvement, and maternal service utilisation in Rukwa, Tanzania, shows that about 67.4% of the males were not able to recall any of the danger signs during pregnancy, childbirth, labour, and the postnatal period (Vincent, 2018). The very low proportion of men who stated condoms as contraceptive methods probably reflects the uncommonness and possible disinclination for the use of condoms in rural areas. Our study reveals that 75.2% and 80.8% of husbands of primigravida and multigravida in the control group and 69.7% and 87% in the intervention group accompanied them to at least one ANC visit, respectively. 58.4% and 47.4% of husbands in the control group and 50% and 76% in the intervention groups of primigravida and multigravida, respectively, informed that they were told about the danger signs of pregnancy by the health care worker. 38.6% and 77.7% of husbands of primigravidas and multigravidas in the control group have discussed family planning with their wives, respectively. Fig. 1 shows total knowledge scores before and after intervention. Fig. 2 depicts total knowledge levels in the control group.

According to the NFHS 5 survey, 86% of men with a child under three years said they were present during at least one antenatal check-up received by the child's mother. Only 49–68% of men were told about the signs of specific pregnancy complications (convulsions, vaginal bleeding, prolonged labour, high blood pressure, and severe abdominal pain). Most fathers with a child less than three years of age were given information about various aspects of maternal care. 81% of men were told about the importance of proper nutrition for the mother during pregnancy and the importance of delivering the baby in a health facility. 69% of men were told by a health provider or health worker about family planning or delaying the next child (Health, 2019). Inadequate knowledge about obstetrics, delivery, and danger signs may limit the support given to women by their male partners during pregnancy, delivery, and afterwards. A randomised control trial provides evidence that traditional avenues for administering maternal and child health education only to women may have limited effectiveness. Women who received education with husbands were more likely to attend a post-partum visit than women who received education alone (Mullany *et al*., 2009). The significantly improved preference for discussion with the wife about family planning is important because it portrays the willingness of the husband to empower women and may portend wider reproductive health choices for them. A large majority of participants expressed good attitudes that indicate inclinations to overcome possible logistical, financial, and decisional barriers to obstetric care.

Table 5 shows two way ANOVA results for Factors Primigravida, Multigravida and Pre-test Knowledge w.r.t. Post-test knowledge. It concludes that being husbands of primigravida and multigravida have a significant influence on post-test PNC knowledge but do not have a significant effect on post-test ANC knowledge or INC knowledge. Additionally, the pre-test knowledge in ANC, INC, and PNC do not exhibit a significant relationship with the respective post-test knowledge in any of the three areas.

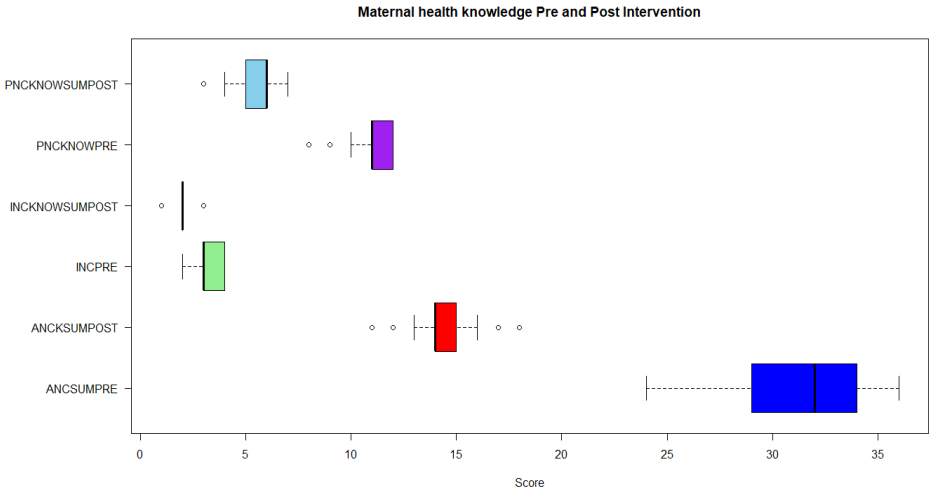

Fig. 1. PNCKNOWSUMPOST: Post-test PNC knowledge, PNCKNOWPRE: Pre-test PNC knowledge, INCKNOWSUMPOST: Post-test INC knowledge, INCPRE: Pre-test INC knowledge, ANCKSUMPOST: Post-test ANC knowledge, ANCSUMPRE: Pre-test ANC knowledge.

Table 1: Socio-demographic characteristics of study participants.

Variables	Control				Intervention Group			
	Primi Gravida (n=101)		Multi Gravida (99)		Primi Gravida (N=96)		Multi Gravida (N=100)	
	N	%	n	%	n	%	N	%
Age								
21-30	90	89.1	60	60.60	84	87.5	65	65
31-40	11	10.89	38	38.38	12	12.5	32	32
40+	0	0	2	2.02	0	0	3	3
Family Type								
Nuclear Family	11	10.89	14	14.14	17	17.7	19	19
Joint Family	87	86.13	85	85.85	78	81.25	79	79
Extended Family	3	2.9	0	0	1	1.04	2	2
Religion								
Hindu	92	91.08	85	85.85	85	88.5	84	84
Muslim	8	7.9	13	13.13	10	10.41	15	15
Christian	1	0.9	1	1.01	1	1.04	1	1
Years of Married Life								
Within 5 Years	97	96.03	50	50.50	90	93.75	69	69
6-10 Years	4	3.96	41	41.41	4	4.16	19	19
10-20 Years	0	0	6	6.06	1	1.04	12	12
20+	0	0	2	2.02	1	1.04	19	19
Educational Status								
Professional Degree	17	16.83	21	21.2	6	6.25	5	5
Graduate/Postgraduate	30	29.70	16	16.1	19	19.79	13	13
Intermediate/Post High School Diploma	5	4.95	4	4.04	18	18.75	12	12
High School Certificate	20	19.80	23	23.2	31	32.29	30	30
Middle School Certificate	24	23.76	21	21.2	10	10.41	31	31
Primary School Certificate	3	2.97	11	11.1	10	10.41	3	3
Illiterate	2	1.98	3	3.03	2	2.08	3	3
Occupation								
Professional	24	23.76	12	12.12	6	6.25	6	6
Semi Professional	6	5.94	4	4.04	7	7.29	8	8
Clerical, Shop owner, Farmer	35	34.65	44	44.44	18	18.75	21	21
Skilled worker	24	23.76	25	25.2	40	41.66	45	45
Semi-Skilled worker	7	6.93	5	5.05	6	6.25	5	5
Unskilled worker	4	3.96	6	6.06	17	17.70	13	13
Unemployed	1	0.99	3	3.03	2	2.08	3	3
Hours of Working								
8 hours	65	64.35	52	52.5	58	60.41	57	57
More than 8 hours	47	46.53	34	34.3	38	39.58	43	43
Monthly Income								
=>18229	19	18.81	12	12.12	18	18.75	9	9
9115-18229	17	16.83	15	15.15	17	17.70	11	11
6836-9114	15	14.85	21	21.1	26	27.08	25	25
4557-6835	22	21.78	14	14.1	11	11.45	16	16
2734-4556	21	20.79	10	10.1	16	16.66	29	29
921-2733	2	1.98	18	18.1	6	6.25	7	7
<920	5	4.95	9	9.09	2	2.08	3	3

Table 2: Socio-demographic characteristics of spouse.

Variables	Control				Intervention Group			
	Primi Gravida (N=101)		Multi Gravida (N=99)		Primi Gravida (N=96)		Multi Gravida (N=100)	
	n	%	n	%	n	%	N	%
Age								
18-24	73	72.27	24	24.2	74	77.08	43	43
25-29	27	26.73	58	58.58	17	17.7	45	45
30-34	0	0	14	14.14	4	4.16	11	11
34+	1	0.99	3	3.03	0	0	1	1
Educational Status								
Professional Degree	4	3.96	9	9.09	2	2.08	2	2
Graduate/Postgraduate	21	20.79	9	9.09	15	15.62	12	12
Intermediate/Post High School Diploma	11	10.89	8	8.08	13	13.54	13	13
High School Certificate	25	24.75	23	23.2	31	32.29	30	30
Middle School Certificate	28	27.72	25	25.2	28	29.16	31	31
Primary School Certificate	9	8.91	16	16.1	6	6.25	11	11
Illiterate	3	2.97	8	8.08	1	1.04	1	1
Occupation								
Professional	2	1.98	0	0	4	4.16	3	3
Technical	0	0	3	3.03	1	1.04	1	1
Skilled worker	13	12.87	6	6.06	6	6.25	7	7
Unskilled worker	1	0.99	7	7.07	6	6.25	6	6
Home Maker	85	84.15	83	83.8	79	82.29	83	83
Antenatal Registration								
Yes	95	94.05	91	91.9	94	97.91	89	89
No	6	5.94	8	8.08	2	2.08	11	11
Setup of Registration								
Government	77	76.23	82	82.8	86	89.58	81	81
Private	24	23.76	17	17.1	10	10.41	8	8
General Medical Problem/Illness								
Hypertension	0	0	3	3.03	1	1.04	0	0
Diabetes	0	0	0	0	1	1.04	0	0
Obesity	0	0	2	2.02	1	1.04	0	0
Anaemia	0	0	1	1.01	4	4.16	4	4
No medical condition	101	100	93	93.9	89	92.70	96	96
Specific Maternal Illness								
Gestational Diabetes Mellitus	4	3.9	1	1.01	2	2.08	2	2
Pre-eclampsia	0	0	0	0	0	0	0	0
Knowing On-going Month of Pregnancy								
Yes	90	89.10	88	88.8	87	90.62	94	94
No	11	10.89	11	11.1	9	9.37	6	6

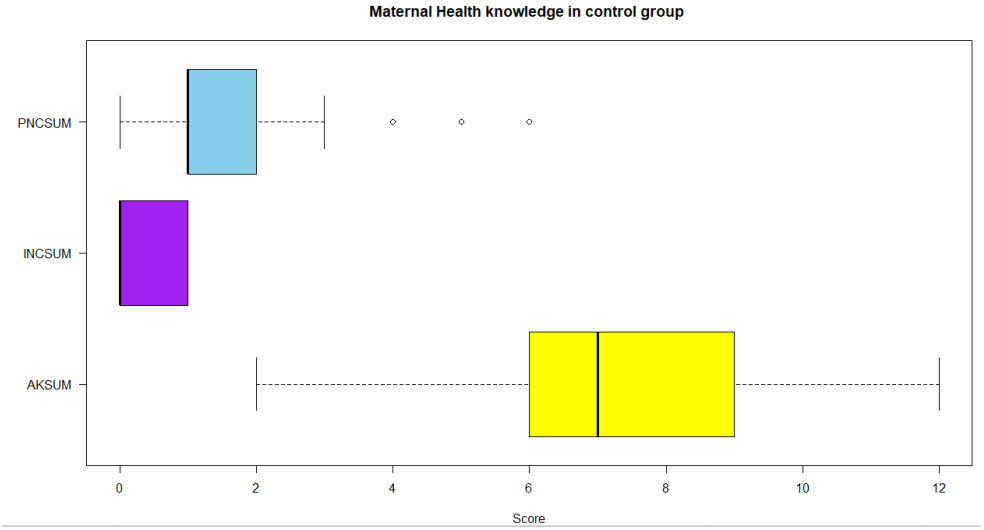

Fig. 2. PNCSUM: PNC knowledge, INCSUM: INC knowledge, AKSUM: ANC knowledge.

Table 3: Knowledge levels of husbands on maternal health care.

Variables	Control				Intervention Group							
	Primi Gravida		Multi Gravida		Primi Gravida (N=96)				Multi Gravida (N=100)			
	n=101		n=99		Pre-test		Post test		Pre-test		Post test	
	n	Mean (S.D)	n	Mean (S.D)	n	Mean (S.D)	n	Mean (S.D)	n	Mean (S.D)	n	Mean
Registration for Antenatal Care	58	0.5 (0.4)	53	0.5 (0.5)	35	0.3 (0.4)	78	0.8(0.3)	22	0.2 (0.4)	90	0.9(0.3)
Immediate and following investigations to confirm pregnancy												
Blood Investigation	40	0.3 (0.4)	43	0.4(0.4)	34	0.3 (0.4)	79	0.8(0.3)	30	0.3 (0.4)	85	0.9(0.3)
Urine Pregnancy test	62	0.6 (0.4)	60	0.6(0.4)	52	0.5 (0.5)	84	0.8(0.3)	59	0.5 (0.4)	88	0.8(0.3)
Ultrasonography	43	0.4 (0.4)	40	0.4(0.4)	24	0.2 (0.4)	77	0.8(0.4)	44	0.4 (0.4)	89	0.8(0.3)
Total no. of ANC visits	14	0.1 (0.3)	18	0.1(0.3)	15	0.1 (0.3)	83	0.8(0.3)	23	0.2 (0.4)	90	0.9(0.3)
Danger sings during antenatal period												
Per vaginal bleeding	46	0.4 (0.5)	59	0.5(0.4)	56	0.5 (0.4)	85	0.8(0.3)	66	0.6 (0.4)	90	0.9(0.3)
Convulsions	37	0.3 (0.4)	50	0.5(0.5)	30	0.3 (0.4)	84	0.8(0.3)	39	0.3 (0.4)	88	0.8(0.3)
Oedema over feet	44	0.4 (0.4)	48	0.4(0.5)	37	0.3 (0.4)	83	0.8(0.3)	46	0.4 (0.5)	93	0.9(0.2)
Excessive vomiting	47	0.4 (0.5)	50	0.5(0.5)	32	0.3 (0.4)	84	0.8(0.3)	26	0.2 (04)	94	0.9(0.2)
Hardening of uterus	40	0.3 (0.4)	46	0.4(0.5)	28	0.2 (0.4)	83	0.8(0.3)	16	0.1 (0.3)	84	0.8(0.3)
Urine leakage	33	0.3 (0.4)	41	0.4(0.4)	27	0.2 (0.4)	84	0.8(0.3)	22	0.2 (0.4)	83	0.8(0.3)
Fever	38	0.3 (0.4)	42	0.4(0.4)	29	0.3 (0.4)	82	0.8(0.3)	25	0.2 (0.4)	86	0.8(0.3)
Passage and fluid per vaginum	39	0.3 (0.4)	43	0.4(0.4)	24	0.2 (0.4)	74	0.7(0.4)	25	0.2 (0.4)	80	0.8(0.4)
Vaccine given during antenatal period												
Tetanus toxoid with Diphtheria	12	0.1 (0.3)	18	0.1(0.3)	11	0.1 (0.3)	94	1.0(0.1)	10	0.1 (0.3)	99	1.0(0.1)
Important ingredients in diet	42	0.5 (0.6)	42	0.4 (0.4)	41	0.4 (0.4)	86	1.0 (0.3)	30	0.3 (0.4)	89	1.0(0.3)
Average weight gain at the end of pregnancy	21	0.2 (0.4)	17	0.1(0.3)	10	0.1 (0.3)	83	1.0 (0.3)	13	0.1 (0.3)	88	1.0(0.3)
Sleeping Hours	72	0.7 (0.4)	52	0.5(0.5)	52	0.5 (0.5)	88	1.0(0.2)	29	0.2 (0.4)	90	1.0(0.3)
Period of unsafe sexual contact during pregnancy	14	0.1 (0.3)	15	0.1(0.3)	15	0.1 (0.3)	83	0.8(0.3)	17	0.1 (0.3)	91	0.9(0.2)
Normal Hb levels	29	0.2 (0.4)	25	0.2(0.4)	22	0.2(0.4)	91	1.0(0.2)	19	0.4(0.3)	92	1.0(0.2)
Care to be taken during pregnancy												
Avoid constipation	4	0.0 (0.1)	15	0.1(0.3)	52	0.4(0.5)	85	0.8(0.3)	46	0.3 (0.4)	93	0.9(0.2)
Avoid medication and radiation	13	0.1 (0.3)	24	0.2(0.4)	54	0.5 (0.4)	83	0.8(0.3)	68	0.6 (0.4)	84	0.8(0.3)
Precautions to be taken before delivery												
Maintenance of Hygiene	77	0.7 (0.4)	68	0.6 (0.4)	35	0.7 (0.4)	86	0.8 (0.3)	43	0.8 (0.3)	88	0.8 (0.3)
Mode of transport	53	0.5 (0.5)	25	0.2 (0.4)	61	0.6 (0.4)	84	0.8 (0.3)	57	0.4 (0.4)	87	0.8 (0.3)
Booking of the delivery centre	52	0.5 (0.5)	26	0.2 (0.4)	57	0.5 (0.4)	83	0.8 (0.3)	42	0.4 (0.4)	89	0.8 (0.3)
Time to start breast feeding in a normal delivery	13	0.1 (0.3)	15	0.1 (0.3)	6	0.0 (0.2)	82	0.8 (0.3)	17	0.1 (0.3)	90	0.9 (0.3)
PNC visits	18	0.1 (0.3)	18	0.1 (0.3)	8	0.0 (0.2)	88	0.9 (0.2)	11	0.1 (0.3)	100	1 (0.0)
Period of safe sexual contact after delivery	3	0.0 (0.1)	11	0.1 (0.3)	8	0.0 (0.2)	88	0.9 (0.2)	1	0.0 (0.1)	97	0.9(0.1)
Temporary family planning methods for females												
Contraceptive pills	18	0.1 (0.3)	17	0.1(0.3)	19	0.0 (0.1)	80	0.8 (0.3)	41	0.1 (0.3)	88	0.8 (0.3)
IUCD	22	0.2 (0.4)	32	0.3(0.4)	29	0.1 (0.3)	83	0.8 (0.3)	58	0.4 (0.4)	88	0.8 (0.3)
Temporary family planning methods for males	59	0.5 (0.4)	43	0.4(0.4)	58	0.5 (0.4)	88	0.9 (0.2)	73	0.7 (0.4)	89	0.8 (0.3)

Table 4: Effectiveness of Health education intervention on improving knowledge (comparison within groups).

Variables	Baseline Mean (SD)	Post-test Mean (SD)	Mean Difference	t-test	95% CI Lower	Upper
Knowledge on ante-natal care	11.42 (5.93)	27.82 (1.7)	16.40	36.29***	15.51	17.29
Knowledge on intra-natal care	2.17 (1.03)	3.58 (0.6)	1.40	15.80***	1.22	1.57
Knowledge on post-natal care	1.8 (1.2)	8.07 (0.8)	6.20	55.61***	5.98	6.42
Here *, ** and *** indicate p<0.05, p<0.01 and p<0.001 respectively.						

Table 5: Two way ANOVA results for Factors Primigravida, Multigravida and Pre-test Knowledge w.r.t. Post-test knowledge.

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
Total ANC knowledge (Model 1)					
Primi, Multi	1	0.53	0.5315	0.423	0.516
Pre-test ANC Knowledge	1	2.05	2.0450	1.637	0.204
Residuals	193	242.66	1.2573		
Total INC knowledge (Model 2)					
Primi, Multi	1	0.215	0.214	1.993	0.160
Pre-test INC Knowledge	1	0.031	0.030	0.286	0.594
Residuals	193	20.815	0.107		
Total PNC knowledge (Model 3)					
Primi, Multi	1	2.65	2.647	13.50	0.0003 ***
Pre-test PNC Knowledge	1	0.12	0.121	0.62	0.432
Residuals	193	37.86	0.196		

CONCLUSIONS

Knowledge retention at the post-intervention assessment has shown a remarkable difference. This indicates that the intervention had an impact on improving men's core knowledge on various aspects of maternal health care. Involving men in maternal and child health care will have a huge impact on reducing maternal, infant, and child mortality and morbidity.

FUTURE SCOPE

The high response proportions in the baseline survey, intervention session, and post-intervention survey support this view. These findings suggest that large-scale studies and programmes are feasible. In addition, given the high proportion of men who offered a good attitude and the statistically significant improvement in these proportions following health education, it may be inferred that men in the study population are educated on maternal health. The low percentages of men, who gave correct responses to many of the knowledge questions, even after educational intervention, point to knowledge gaps requiring further education and, perhaps, other interventions. Husbands can be encouraged to be present during check-ups and childbirth, which will provide psychological support to the wife and will also further increase their involvement in maternal health care.

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