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Original Research Article

ASSESSMENT OF KNOWLEDGE, ATTITUDE, AND PRACTICES RELATED TO CONTRACEPTIVE USE AMONG MARRIED WOMEN OF REPRODUCTIVE AGE GROUP IN FIELD PRACTICE AREA, ALONG WITH AN EVALUATION OF THEIR UNMET FAMILY PLANNING NEEDS

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ABSTRACT

Background: Provision of voluntary family planning is one of the core components of reproductive and maternal health. To achieve optimal pregnancy outcome and stabilization of population, knowledge of contraceptives, as well as, positive attitude towards their use and their practice and unmet needs among women of reproductive age group is of utmost importance.

Materials and Methods: A cross-sectional, hospital-based study to assess the knowledge, attitude, and practice (KAP) of contraceptive methods among married women of reproductive age group, to identify the prevalence of unmet needs for family planning and to analyse socio-demographic factors associated with contraceptive use and unmet needs. The statistical analysis used data was entered in Microsoft Excel and analysed using Jamovi 2.7.1. Descriptive statistics such as Frequency, percentage and mean were used to summarize socio-demographic characteristics and knowledge & practices related to contraceptive use. Chi-square test and other appropriate statistical test were applied to assess associations between variables.

Results: A total of 602 married women (18-49 years) has participated in the study. In the present study, 50.7% of participants had good knowledge regarding contraceptive methods, while 49.3% had poor knowledge. Regarding attitudes towards contraceptive use, 58.8% of participants exhibited a positive attitude, whereas 41.2% demonstrated a poor attitude. Current contraceptive use was reported by 52.0% of women in the present study.

Conclusion: This study revealed moderate levels of knowledge and positive attitudes toward contraception among married women of reproductive age; however, a substantial gap persists between knowledge and actual contraceptive practice.

Keywords: Contraceptives, Unmet Need, Family Planning.

INTRODUCTION

India is the most populous country with estimated population of around 1.46 billion.[1] Population control is one of the key strategies for any nation's development by ensuring equitable distribution of resources thus promoting maternal and child health. Worldwide in 2017, 63% of women of reproductive age group were using some form of contraception.[2] Provision of voluntary family planning is one of the core components of reproductive and maternal health. In India, decades of programmatic activity

and periodic national surveys have driven improvements in contraceptive prevalence, yet substantial gaps remain between fertility intentions and effective contraceptive use. The concept of unmet need remains central to monitoring whether services meet women's needs. More than 40% of pregnancies worldwide are unintended leading to either an unplanned birth or unsafe abortions and maternal morbidity.[3] The contraceptive prevalence rate in India is 54%.[4] To achieve optimal pregnancy outcome and stabilization of population, knowledge of contraceptives along with a positive attitude towards their practices and unmet needs among the women is of utmost importance. According to National Family Health Survey (NFHS-5) unmet need for FP was 9.4% for India and 6.8% for Madhya Pradesh.[5]

More married women with unmet need live in India than in any other country – approximately 31 million.[6]

Aim and Objectives:

1. To assess the knowledge, attitude, and practice (KAP) of contraceptive methods among married women of reproductive age group.
2. To identify the prevalence of unmet needs for family planning.
3. To analyse socio-demographic factors associated with contraceptive use and unmet needs.

MATERIALS AND METHODS

Study Design: A cross-sectional, hospital-based study.

Study Population: Married women attending the Outpatient Department (OPD) of RHTC, Kothi for any reason during the study period.

Inclusion Criteria–

1. Married women in the reproductive age group of 18-49 years.
2. Married women, attending the OPD of RHTC during the study period.
3. Married women who are willing to participate in the study.

Exclusion Criteria

1. Married women in the reproductive age group of 18-49 years who are either divorced, separated, or widowed at the time of study
2. Married women who had undergone hysterectomy for any predisposing obstetrics and gynaecological condition.
3. Married women who have attained menopause.
4. Severely ill patients coming to RHTC

Sample size: 602

For the purpose of calculation of sample size,

The approximate sample size estimated using Cochran's formula

N = [Z2*p*q]/L2

= [3.84*p*(100-p)]/L2

= [3.84*71.9*28.1]/ (3.59)2

= 7758.29 / 12.9

= 601.4 (Rounding off to 602)

Here,

N = required sample size,

Z = confidence level at 95% (standard value of 1.96),

P is the prevalence of married women aged 15-49 years in Madhya Pradesh

(71.9%) utilizing any contraceptive method for family planning (according to NFHS-5 reports).[6]

L is allowable error. (5% of P)

Study setting: The study was conducted at the Rural Health Training Centre (RHTC), Kothi, which functions as a field practice area attached to Government Medical College, Satna, M.P.

Study tool: Data were collected using a pre-tested, semi-structured questionnaire. The questionnaire included sections on the socio-demographic characteristics of the participants, knowledge of contraceptive methods, attitudes towards contraception, contraceptive practices, and reasons for the use or non-use of contraceptive methods.

The questionnaire was developed in English and translated into the local language.

Data Collection: Eligible participants were approached after their OPD consultation. The objectives of the study were explained to each participant, and written informed consent was obtained prior to enrolment. Confidentiality and anonymity of the participants were ensured throughout the study. Data were collected through face-to-face interviews using a pre-tested semi-structured questionnaire administered by the investigator.

Statistical Analysis: Data were entered into Microsoft Excel and analyzed using Jamovi version 2.7.1. Descriptive statistics, including frequencies, percentages, means with standard deviations, were used to summarize the socio-demographic characteristics of the study participants and their knowledge and practices related to contraceptive use. Associations between categorical variables were assessed using the Chi-square test or Fisher's exact test, as appropriate. A p-value of <0.05 was considered statistically significant.

RESULTS

Table 1. Socio-demographic profile of study participants (N = 602)

Variable	Category	n	%
Age group (years)	18–24	167	27.7
	25–29	166	27.6
	30–34	120	19.9
	35–39	85	14.1
	40–44	40	6.6

	45–49	24	4.0
	Total	602	100
Religion	Hindu	566	94.0
	Muslim	36	6.0
	Total	602	100
Educational status	Illiterate	98	16.3
	Primary	139	23.1
	Middle	247	41.0
	Higher secondary	104	17.3
	Graduate/Post-Graduate	14	2.3
	Total	602	100
Occupational status	Employed	84	14.0
	Unemployed/Housewife	518	86.0
	Total	602	100
Socioeconomic status (BG Prasad)	Class I	6	1.0
	Class II	220	36.5
	Class III	288	47.8
	Class IV	80	13.3
	Class V	8	1.3
	Total	602	100
Duration of marriage (years)	<5	162	26.9
	5–10	216	35.9
	>10	224	37.2
	Total	602	100
Age at first pregnancy (years)	<20	183	30.4
	20–24	359	59.6
	≥25	45	7.5
	Others/Not applicable	15	2.5
	Total	602	100
Number of living children	≤2	405	67.3
	>2	197	32.7
	Total	602	100
History of accidental pregnancy	Yes	157	26.1
	No	445	73.9
	Total	**602**	**100**

Table 1 shows the socio-demographic profile of study participants. A total of 602 married women (18-49 years) participated in the study. Majority proportion belonged to the age groups of 18–24 years (27.7%) and 25–29 years (27.6%), while only 4.0% were aged 45–49 years. The majority of participants were Hindu (94.0%), unemployed/housewives (86.0%), and belonged to socioeconomic Class III (47.8%) according to the modified B.G. Prasad classification.

Regarding educational status, 41.0% had completed middle school education, 23.1% had primary education, and 16.3% were illiterate, whereas only 2.3% were graduates or postgraduates. More than one-third (37.2%) had been married for over 10 years, while 35.9% had a marital duration of 5–10 years. The majority of women (59.6%) experienced their first pregnancy between 20 and 24 years of age.

Table 2: Distribution of Participants According to Knowledge Level regarding contraceptives (N = 602)

Knowledge Level	Frequency	Percentage
Good	305	50.7 %
Poor	297	49.3 %
Total	602	100.0 %

Table 2 & figure 1 show the distribution of participants according to their level of knowledge (49.3%) had poor knowledge. Overall, nearly half of the participants demonstrated adequate knowledge regarding contraceptives. Of the 602 participants, 305 (50.7%) had good knowledge, while 297 regarding contraceptive methods.

Table 3: Distribution of Participants According to Attitude Level (N = 602)

Attitude Level	Frequency	Percentage
Good	354	58.8 %
Poor	248	41.2 %
Total	**602**	**100.0 %**

Table 3 & figure 2 present the distribution of participants according to their attitude towards contraceptive use. A majority of the participants (354; 58.8%) had a good attitude, whereas 248 (41.2%) exhibited a poor attitude towards contraceptive use.

Table 4: Association between socio-demographic factors and knowledge level of participants (N = 602)

Variable	Category	Good n (%)	Poor n (%)	Total	χ^2	p value
Religion	Hindu	300 (53.0)	266 (47.0)	566	20.7	<0.001*
	Muslim	5 (13.9)	31 (86.1)	36		
Educational Status	Higher secondary	75 (72.1)	29 (27.9)	104	62.28	<0.001*
	Illiterate	22 (22.4)	76 (77.6)	98		
	Middle	136 (55.1)	111 (44.9)	247		
	Primary	60 (43.2)	79 (56.8)	139		
	UG/PG	12 (85.7)	2 (14.3)	14		
Occupational Status	Employed	56 (66.7)	28 (33.3)	84	10.00	0.002*
	Unemployed/Housewife	249 (48.1)	269 (51.9)	518		
Socioeconomic Status	Class I	4 (66.7)	2 (33.3)	6	12.42	0.014*
	Class II	127 (57.7)	93 (42.3)	220		
	Class III	142 (49.3)	146 (50.7)	288		
	Class IV	29 (36.3)	51 (63.7)	80		
	Class V	3 (37.5)	5 (62.5)	8		
Duration of Marriage (Years)	<5	67 (41.4)	95 (58.6)	162	11.44	0.003*
	5–10	127 (58.8)	89 (41.2)	216		
	>10	111 (49.6)	113 (50.4)	224		
Age At First Pregnancy (Years)	<20	87 (47.5)	96 (52.5)	183	1.43	0.698
	20–24	189 (52.6)	170 (47.4)	359		
	≥25	22 (48.9)	23 (51.1)	45		
	Others	7 (46.7)	8 (53.3)	15		
Number of Living Children	≤2	216 (53.3)	189 (46.7)	405	3.53	0.060
	>2	89 (45.2)	108 (54.8)	197		
Accidental Pregnancy	No	221 (49.7)	224 (50.3)	445	0.69	0.408
	Yes	84 (53.5)	73 (46.5)	157		

*Statistically significant ($p < 0.05$)

Table 4 shows analysis of socio-demographic determinants revealed statistically significant associations between knowledge level and religion (χ^2=20.7, p<0.001), educational status (χ^2=62.28, p<0.001), occupational status (χ^2=10.00, p=0.002), socioeconomic status (χ^2=12.42, p=0.014), and duration of marriage (χ^2=11.44, p=0.003). Higher educational attainment and better socioeconomic status were associated with greater contraceptive knowledge. No significant association was observed between knowledge level and age at first pregnancy (p=0.698), number of living children (p=0.060), or history of accidental pregnancy (p=0.408).

Table 5: Association between socio-demographic factors and attitude level towards contraceptive use (N = 602)

Variable	Category	Good n (%)	Poor n (%)	Total	χ^2	p value
Age group (Years)	18–24	108 (64.7)	59 (35.3)	167	8.25	0.143
	25–29	104 (62.7)	62 (37.3)	166		
	30–34	64 (53.3)	56 (46.7)	120		
	35–39	47 (55.3)	38 (44.7)	85		
	40–44	20 (50.0)	20 (50.0)	40		
	45–49	11 (45.8)	13 (54.2)	24		
Religion	Hindu	321 (56.7)	245 (43.3)	566	17.07	<0.001*
	Muslim	33 (91.7)	3 (8.3)	36		
Educational status	Higher secondary	58 (55.8)	46 (44.2)	104	8.81	0.066
	Illiterate	68 (69.4)	30 (30.6)	98		
	Middle	139 (56.3)	108 (43.7)	247		
	Primary	84 (60.4)	55 (39.6)	139		
	UG/PG	5 (35.7)	9 (64.3)	14		
Occupational status	Employed	40 (47.6)	44 (52.4)	84	5.04	0.025*
	Unemployed/Housewife	314 (60.6)	204 (39.4)	518		
Socioeconomic status	Class I	3 (50.0)	3 (50.0)	6	15.00	0.005*
	Class II	151 (68.6)	69 (31.4)	220		
	Class III	152 (52.8)	136 (47.2)	288		
	Class IV	45 (56.3)	35 (43.7)	80		
	Class V	3 (37.5)	5 (62.5)	8		
Duration of marriage (years)	<5	112 (69.1)	50 (30.9)	162	11.71	0.003*
	5–10	126 (58.3)	90 (41.7)	216		
	>10	116 (51.8)	108 (48.2)	224		
Age at first pregnancy (years)	<20	123 (67.2)	60 (32.8)	183	7.84	0.049*
	20–24	197 (54.9)	162 (45.1)	359		
	≥25	25 (55.6)	20 (44.4)	45		
	Others	9 (60.0)	6 (40.0)	15		
Number of living children	≤2	247 (61.0)	158 (39.0)	405	2.44	0.119
	>2	107 (54.3)	90 (45.7)	197		
Accidental pregnancy	No	261 (58.7)	184 (41.3)	445	0.02	0.898
	Yes	93 (59.2)	64 (40.8)	157		

*Statistically significant ($p < 0.05$)

Table 5 depicts the association between socio-demographic and obstetric characteristics and attitude towards contraceptive use. A statistically significant association was observed between attitude level and religion ($\chi^2 = 17.07$, $p < 0.001$), occupational status ($\chi^2 = 5.04$, $p = 0.025$), socioeconomic status ($\chi^2 = 15.00$, $p = 0.005$), duration of marriage ($\chi^2 = 11.71$, $p = 0.003$), and age at first pregnancy ($\chi^2 = 7.84$, $p = 0.049$). Participants belonging to Class II socioeconomic status, those with a shorter duration of marriage (<5 years), and those whose first pregnancy occurred before 20 years of age were more likely to have a good attitude towards contraceptive use. No statistically significant association was found between attitude level and age group ($p = 0.143$), educational status ($p = 0.066$), number of living children ($p = 0.119$), or history of accidental pregnancy ($p = 0.898$).

Table 6: Association between socio demographic/obstetric factors and current contraceptive use (N=602)

Variable	Category	Yes n (%)	No n (%)	Total (n)	χ^2	p-value
Age group (Years)	18–24	49 (29.3%)	118 (70.7%)	167	62.41	<0.001*
	25–29	84 (50.6%)	82 (49.4%)	166		
	30–34	82 (68.3%)	38 (31.7%)	120		
	35–39	61 (71.8%)	24 (28.2%)	85		
	40–44	25 (62.5%)	15 (37.5%)	40		
	45–49	12 (50.0%)	12 (50.0%)	24		
Religion	Hindu	300 (53.0%)	266 (47.0%)	566	3.87	0.049*
	Muslim	13 (36.1%)	23 (63.9%)	36		
Occupational status	Employed	51 (60.7%)	33 (39.3%)	84	2.97	0.085
	Unemployed/Housewife	262 (50.6%)	256 (49.4%)	518		
Socioeconomic status (SES)	Class I	4 (66.7%)	2 (33.3%)	6	4.30	0.367
	Class II	115 (52.3%)	105 (47.7%)	220		
	Class III	155 (53.8%)	133 (46.2%)	288		
	Class IV	37 (46.2%)	43 (53.8%)	80		
	Class V	2 (25.0%)	6 (75.0%)	8		
Marriage duration (years)	<5	49 (30.2%)	113 (69.8%)	162	48.73	<0.001*
	5–10	116 (53.7%)	100 (46.3%)	216		
	>10	148 (66.1%)	76 (33.9%)	224		
Living children	≤2	179 (44.2%)	226 (55.8%)	405	30.13	<0.001*
	>2	134 (68.0%)	63 (32.0%)	197		
Accidental pregnancy	No	202 (45.4%)	243 (54.6%)	445	29.77	<0.001*
	Yes	111 (70.7%)	46 (29.3%)	157		
Education	Illiterate	57 (58.2%)	41 (41.8%)	98	7.62	0.107
	Primary	60 (43.2%)	79 (56.8%)	139		
	Middle	128 (51.8%)	119 (48.2%)	247		
	Higher	59 (56.7%)	45 (43.3%)	104		
	Graduate/Post-Graduate	9 (64.3%)	5 (35.7%)	14		

*Statistically significant ($p < 0.05$)

Table 6 shows the association between socio-demographic/obstetric factors and current contraceptive use. Current contraceptive use was significantly associated with age group ($\chi^2 = 62.42$, $p < 0.001$), religion ($\chi^2 = 3.87$, $p = 0.049$), duration of marriage ($\chi^2 = 48.73$, $p < 0.001$), number of living children ($\chi^2 = 30.13$, $p < 0.001$), and history of accidental pregnancy ($\chi^2 = 29.78$, $p < 0.001$). Contraceptive use increased with advancing age and longer duration of marriage and was more common among participants with more than two living children and those with a history of accidental pregnancy. No significant association was observed between contraceptive use and occupational status ($p = 0.085$), socioeconomic status ($p = 0.367$), or educational status ($p = 0.107$).

Table 7. Distribution of unmet need for family planning with 95% confidence intervals (N = 602)

Unmet need category	Frequency (n)	Percentage (%)	95% CI (%)
No unmet need	346	57.5	53.5 – 61.5
Spacing	191	31.7	28.0 – 35.4
Limiting	65	10.8	8.3 – 13.3
Total unmet need (Spacing + Limiting)	256	42.5	38.5 – 46.5
Total	**602**	**100.0**	—

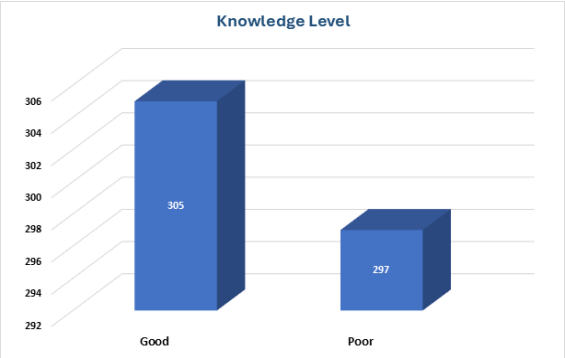

Figure 1: Distribution of Participants According to Knowledge Level (N= 602)

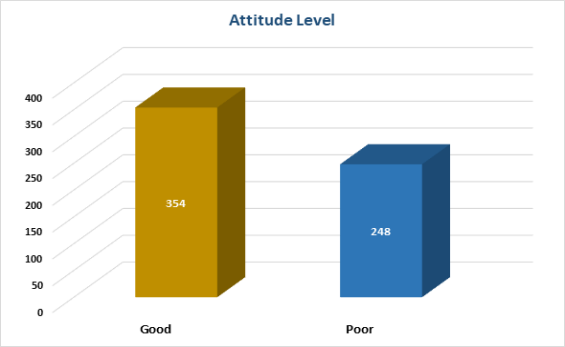

Figure 2: Distribution of Participants According to Attitude Level (N = 602)

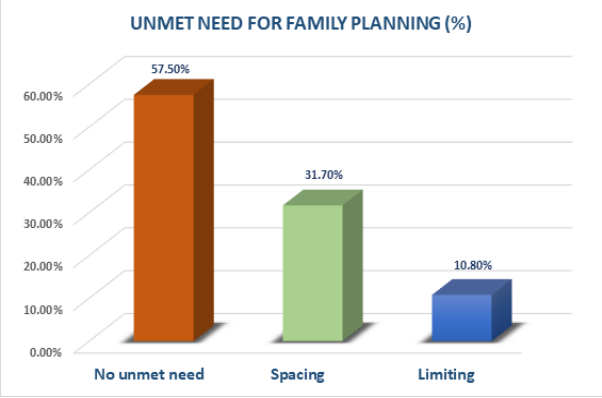

Figure 3: Distribution Of Unmet Need For Family Planning

Table 7 & figure 3 present the distribution of unmet need for family planning among the study participants. Overall, 256 (42.5%) participants had an unmet need for family planning (95% CI: 38.5%–46.5%), while 346 (57.5%) had no unmet need (95% CI: 53.5%–61.5%). Among the participants with an unmet need, the majority had an unmet need for spacing (191; 31.7%; 95% CI: 28.0%–35.4%), whereas 65 (10.8%; 95% CI: 8.3%–13.3%) had an unmet need for limiting. Thus, unmet need for spacing was nearly three times more common than unmet need for limiting in the study population.

DISCUSSION

The present study assessed the knowledge, attitude, and practices (KAP) related to contraceptive use among married women of reproductive age attending the Rural Health Training Centre (RHTC), Kothi, Satna, and evaluated their unmet need for family planning. The latest report of National Family Health Survey (NFHS-5) revealed that only 56.5% of married women aged 15–49 in India utilized any modern contraceptive method, with variations observed between urban (58.5%) and rural (55.5%) areas.[5] Understanding these factors is crucial for strengthening family planning services and improving maternal and child health outcomes.

In the present study, 50.7% of participants had good knowledge regarding contraceptive methods, while 49.3% had poor knowledge. This finding is lower than that reported by Barman et al., who observed that approximately 92% of women were aware of at least one contraceptive method, indicating relatively higher awareness levels in their study population.[7] In another study, Salodia L, et al demonstrated that 62% of participants had knowledge about family planning.[8] The relatively lower knowledge levels observed in the current study may be attributed to differences in educational attainment, socioeconomic background, and access to family planning counselling services. The significant association observed between knowledge level and educational status ($p<0.001$), occupation ($p=0.002$), socioeconomic status ($p=0.014$), duration of marriage ($p=0.003$), and religion ($p<0.001$) further highlight the importance of social determinants in shaping contraceptive awareness.

Regarding attitudes towards contraceptive use, 58.8% of participants exhibited a positive attitude, whereas 41.2% demonstrated a poor attitude. Positive attitudes were significantly associated with religion ($p<0.001$), occupation ($p=0.025$), socioeconomic status ($p=0.005$), duration of marriage ($p=0.003$), and age at first pregnancy ($p=0.049$). In a study conducted by Kain V, et al substantial proportion of women (70.5%) demonstrated a positive attitude toward contraceptive use based on future intention, reflecting overall acceptance of family planning.[9] This difference in attitudes of respondents may be attributed to regional and socio-cultural differences. Fear of adverse effects, concerns about future fertility, and social pressures continue to be important barriers to contraceptive acceptance in many Indian communities.

Current contraceptive use was reported by 52.0% of women in the present study. This figure is comparable to the national contraceptive prevalence reported in NFHS-5 (56.5%) but remains below the prevalence reported for Madhya Pradesh (71.7%)6. Significant associations were observed between contraceptive use and age ($p<0.001$), religion ($p<0.049$), duration of marriage ($p<0.001$), number of living children ($p<0.001$), and history of

accidental pregnancy (p<0.001). Women aged 30–39 years, those with longer marital duration, and those with more than two living children were more likely to use contraceptives.

Educational status was significantly associated with knowledge (p<0.001) but not with actual contraceptive use (p=0.107) in the present study. This finding suggests that awareness alone may not necessarily translate into practice. Similar observations have been reported by Yadav and Dhillon, where highest proportion (37.6%) of currently married women with education above 10 years used maternal health services thereby emphasising that quality of counselling, accessibility of services, and sociocultural factors play important roles in determining contraceptive uptake.[10] Therefore, family planning programs should focus not only on information dissemination but also on addressing barriers to utilization.

In this study the prevalence of unmet need for family planning was estimated at 42.5% (95% CI: 38.5–46.5). This figure is substantially higher than the NFHS-5 estimates for India (9.4%) and Madhya Pradesh (6.8%).5,6 The higher unmet need observed in this study may reflect the hospital-based nature of the sample, local sociocultural influences, differences in measurement approaches, or limited access to family planning services in the study area. Among women with unmet need, spacing methods constituted the majority (31.7%), while limiting methods accounted for 10.8%. This predominance of spacing need suggests that many women wish to delay future pregnancies but are unable to access or consistently use effective contraceptive methods.

The significant relationship between accidental pregnancy and contraceptive use (p=<0.001) observed in the present study suggests that previous unintended pregnancies may motivate women to adopt family planning measures. However, the continued existence of a substantial unmet need indicates gaps in counselling, method availability, and follow-up support. Previous studies have similarly identified inadequate counselling and concerns regarding side effects as major contributors to discontinuation and non-use of contraceptives.

The findings of this study underscore the need for targeted educational interventions, strengthened counselling services, and increased community engagement to improve contraceptive knowledge and utilization. Particular attention should be directed toward women with lower educational attainment, lower socioeconomic status, and newly married couples. Involvement of husbands and family members in family planning education may also help overcome sociocultural barriers and improve acceptance of contraceptive methods.

CONCLUSION

The present study revealed moderate levels of knowledge and positive attitudes toward contraception among married women of reproductive age; however, a substantial gap persists between knowledge and actual contraceptive practice. The high unmet need for family planning observed in the study highlights the necessity for strengthened family planning services, improved counselling, and community-based educational interventions. Addressing socioeconomic and cultural barriers may significantly enhance contraceptive uptake and contribute to improved reproductive health outcomes

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