DOI: 10.7860/JCDR/2025/80036.21881

Original Article

Public Health Section

Behaviour and Role of Community in Family Planning Practices: A Mixed Methodology Study from a Rural Area in Central Kerala, Southern India

VM MIDHUKRISHNA[1], N DIVYAMOL[2], SHILU MARIAM ZACHARIAH[3], TK ABDU SALEEM[4], KS DEEPAK[5]

ABSTRACT

Introduction: All differentials for varying acceptance of family planning methods need to be addressed for healthy population growth. The current study explores the family planning behaviour and role of the community in family planning practices in rural Kerala.

Aim: To identify the family planning behaviour, by analysing the contraceptive practices by eligible couples in a selected panchayath and to assess the barriers faced by eligible couples in accepting modern contraceptives. Also to explore the perspectives of service providers about factors affecting family planning behaviour of the rural community.

Materials and Methods: The present mixed method study was conducted among eligible couples and family planning service providers in Puthussery, in the Palakkad District of Kerala, India during two months period between August- September 2021. The study comprised two phases: In Phase 1, investigators collected data on sociodemography and family planning practices from the eligible couple survey reports of Family Health Centre (FHC) Puthussery; Phase 2 involved free listing and pile sorting exercise done among family planning service beneficiaries and Key Informant Interviews (KII) with service providers after getting their consents. After phase 1, data was analysed using Epi Info software 7.2.5.0. Phase 2 utilised thematic analysis based on a deductive approach. A hierarchical cluster analysis was completed to get a collective picture of perceived rationales behind a grouping of the barriers. The analysis of free list and pile sort data was undertaken using Anthropac 4.0 software.

Results: There were a total of 8035 eligible couples registered to FHC. Majorty belonged to above poverty line families 4821 (60%). In most couples 1857 (23%) female partners's age ranged between 25-29 years and had attained secondary education 4210 (52%). The modern contraceptive prevalence rate was 5817 (72.4%). Female sterilisation 4598 (57.2%) was mostly preferred followed by condoms 677 (8.4%), intrauterine devices 518 (6.4%), oral contraceptive pills 19 (0.2%) and no scalpel vasectomy 5 (0.06%). All acceptors used conventional modern contraceptives. Barriers to accepting modern contraceptives were lack of awareness, side-effects and complications, Fear and myths, privacy concerns, and non-availability. Social factors centered around gender, other sociocultural factors, social factors affecting health system performance, and factors within the health system influenced contraceptive behaviour according to providers.

Conclusion: Several social, cultural, and systemic determinants shaped the female-oriented and modern contraceptive-specific family planning behaviour of the rural population. Addressing sociocultural determinants and strengthening the healthcare system are needed for broader acceptance of an expanded basket of choices in family planning. All beneficiary barriers could be addressed by proper one-to-one, couple-based, and group approaches to communication.

Keywords: Contraceptive agents, Eligible couples, Family welfare program, No scalpel vasectomy, Social factors

INTRODUCTION

Family planning becomes critical to a country's family setup. It helps to minimise fertility and aids in the optimal distribution of available socioeconomic resources. Unregulated fertility leads to a population explosion. Recognising the problems caused by the explosion, the government established the National Program for Family Planning (1952), later renamed the Family Welfare Program in 1977 [1]. Policy decisions have changed from target to target free approach through community need assessment. The contraceptive usage has tripled and fertility rate halved in the last 40 years [2]. There is a wide variation in the acceptance of family planning methods among different communities. Now-a-days reproductive health practices has tended to focus on women contributing to gender inequalities [3]. The traditional norm of not using modern contraception is sometimes deeply embedded and can take a long time to change, despite targeted interventions [4]. All the differentials contributing to the varying acceptance of family planning methods need to be explored and addressed effectively. Both users and providers can shed light on this regard. Studies exploring all factors are meagre from rural areas in Kerala, India.

The current study was carried out in a rural area of Palakkad district in Kerala to identify family planning behaviour and explore the role of the community in family planning choices, both from the user and administrator perspectives. This provides an arena for a longitudinal change analysis and by integrating perspectives from both users and providers, the research seeks to provide a comprehensive understanding of the factors affecting family planning behaviour, addressing a gap in existing literature. The objectives of the study were to identify the family planning behaviour, by analysing the contraceptive practices by eligible couples in a selected panchayath, to assess the barriers faced by eligible couples in accepting modern contraceptives and to explore the perspectives of service providers about factors affecting family planning behaviour of the rural community.

MATERIALS AND METHODS

The present mixed method study was conducted in two phases in Puthussery Panchayath of Palakkad district, Kerala, India,

during a period of two months between 01/08/21 to 30/09/21. A written informed consent was obtained from each participant before the discussions and interviews. The study was approved by Institutional Ethics Committee as well vide study ID- IEC/GMCPKD/4/20/58. For the qualitative phase, females who were of reproductive age and were in a relationship; as well as key informants, such as health supervisor, lady health inspector, junior health inspector, and one Accredited Social Health Activist (ASHA) worker were included. Non willingness to participate was kept as exclusion criteria.

Phase 1: (Quantitative phase) During this phase, secondary data was collected from the eligible couple survey report of FHC Puthussery.

Phase 2: (Qualitative phase) In order to assess the beneficiaries' views on barriers for contraceptive acceptance, a free listing and pile sorting exercise was carried out among a group of 12 females. All 12 women were questioned together in a group. The purpose of discussion was to perform an exercise of free listing of all the barriers and to do a pile sorting with the free listed items. The participants gave responses individually on a white paper, which collectively attained data saturation.

Study Procedure

A hierarchical cluster analysis was done with the data to get a collective picture of perceived rationales behind grouping of the barriers. The analysis of free list and pile sort data was undertaken using Anthropac software. KIIs were carried out among four service providers in the community (a health supervisor, a lady health inspector, a junior health inspector, and an ASHA worker from the Family Health Center (FHC) to understand the factors affecting family planning behaviour, which was analysed thematically using deductive approach.

For quantitative phase all available data were analysed (8035 in number).Purposive sampling was adopted for qualitative research. Investigators used a structured data collection format and KII guide (Phase 2) for data collection.

After getting consent from the District Medical Officer and Medical Officer of the FHC, data collection was started in Phase 1. Information regarding women's age, education, religion, socioeconomic status, age at marriage, number of living children, contraceptive practise, type of contraceptives used among eligible couples, etc., were collected from the eligible couple survey report of the FHC. After analysing the patterns across different age groups and number of living children, investigators proceeded with free listing and pile sorting of the barriers perceived by beneficiaries and KII in phase 2. Investigators used audio recording and took field notes. The field notes and recordings were revisited and were transcribed into codes. Thematic analysis based on the deductive approach followed [5].

A pile sorting exercise was carried out among a group of 12 females. The group consisted of women from eligible couples. Age ranged between 20-30 years. All were homemakers. Educational status varied between 10th standard and degree. Among them, five had inserted IUDs, three were sterilised, and four were not using any contraceptives. The same group participated in pile-sorting exercises. The primary stimulus question for free list exercise was to enumerate the barriers or the key concerns perceived by the couples in their community while adopting contraceptives. During the exercise, they were asked to list freely all the reasons they knew, even if they didn't have a direct experience of it to explore the cultural domain. Each of the single reasons was listed on separate cards. The number was written on the back side of a card. Cards were spread on the table with the number side down. Participants were asked to classify all items in piles in groups that they felt, went together according to whatever criteria made sensible to. The piles thus formed and the reasons for grouping were collected. During the entire process, the facilitator encouraged group discussion and a note-taker recorded the points of discussion. A cluster analysis was done with salient items found using Smith's S score to get a collective picture of the perceived rationale behind groups of barriers in Visual Anthropac software [5].

STATISTICAL ANALYSIS

Descriptive statistics were used for analysis. Data was presented in the form of frequency and percentages.

RESULTS

Crude Birth Rate in Puthussery Panchayath was 11.1/1000 population. There were a total of 8035 eligible couples registered to FHC as per the eligible couple report. Phase 1 of the study comprised analysing the pattern of their contraceptive practices. The results are described below.

Sociodemographic characteristics of eligible couples in the Panchayath: The majority (23%) of eligible couples' wives' age ranged between 25-29 years. There were 219 couples (3%) with wives' age ranging from 15 to 19 years. Among the women 19.6% were married at an age below 20 years. [Table/Fig-1] gives the distribution of eligible couples according to sociodemographic characteristics.

Variables	Number	Percentage (%)
Age of wife (5 year age group)		
15-19	219	3
20-24	1402	17
25-29	1857	23
30-34	1671	21
35-39	1440	18
40-44	735	9
45-49	711	9
Religion		
Hindu	5269	65.6
Christian	1522	18.9
Muslim	1244	15.5
Education of wife		
Illiterate	82	1
Primary	1813	22.5
Secondary	4210	52
Degree	1115	13.9
Diploma	532	4
Post-graduation	283	6.6
Socioeconomic status		
Above Poverty line	4821	60
Below Poverty Line	3214	40
Age at marriage of wife (5 year age group)		
15-19	1578	19.6
20-24	4664	58
25-29	1369	17
30-34	402	5
35-39	22	0.2

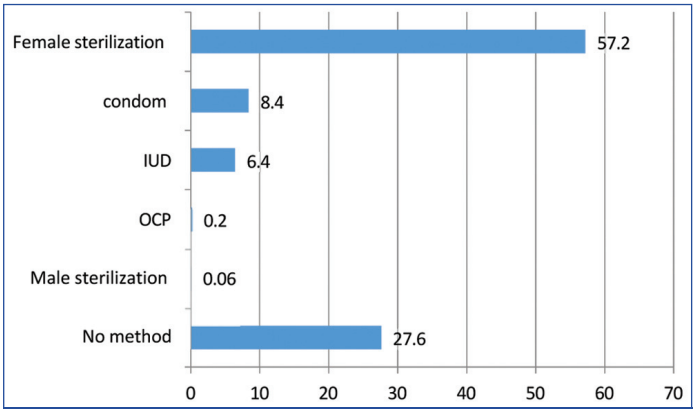
[Table/Fig-1]: Distribution of ECs according to sociodemographic variables (N=8035).

Family planning behaviour: Modern contraceptive prevalence rate: Out of the total of 8035 eligible couples, 5817 were using any one of the modern contraceptive methods. Thus, the modern contraceptive prevalence rate was found to be 72.4%.

Place of contraceptive acceptance: A total of 5303 eligible couples (66%) depended on the Government hospitals and facilities for accepting modern contraceptives. 2491 couples (31%) depended on the private sector and 241 (3%) used the facilities provided outside the state. This indicates there is a high acceptance

of government healthcare facilities in the state for family planning methods among the population.

Type of contraceptives: Out of the total contraceptive usage, 4598 (57.2%) were female sterilisation, followed by contraceptive condoms 677 (8.4%) intrauterine devices 518 (6.4%), oral contraceptive pills 19 (0.2%) and vasectomy 5 (0.2%). [Table/Fig-2] gives the current use of family planning methods among eligible couples of panchayath (n=8035). The preference for techniques follows the trend: female sterilisation> condoms> Intrauterine Devices (IUDs) > Oral Contraceptive (OC) pills > male sterilisation. 27.6% (n=2218) did not use any modern contraceptives.



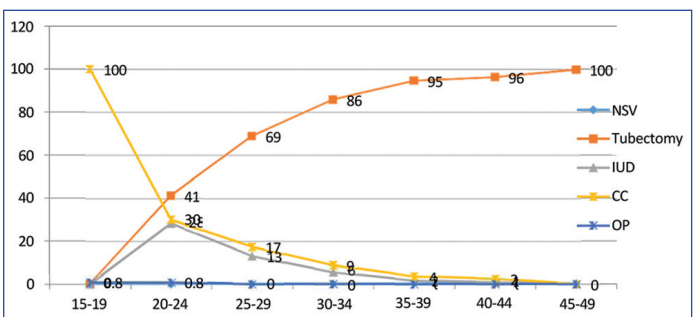
[Table/Fig-2]: Pattern of modern contraceptive use among eligible couples (n=8035).

Contraceptive use and age of wife: The acceptance of modern contraceptive methods is highest among those aged 45-49 (83.4%), followed by 30-34 (82.3%), and 25-29 (80.1%). A worrisome finding from the statistics is that barely 5% of the EC in the 15-19 age range uses any form of modern contraceptives. They are the target group for using Family Planning approaches to avoid early pregnancy difficulties in this age range. The distribution of age group wise acceptance of modern contraceptive methods is given in [Table/Fig-3].

Age of wife (years)	Using contraceptives n (%)	Not using contraceptives n (%)	Total EC
15-19	10 (4.6)	209 (95.4)	219
20-24	805 (57.4)	597 (43)	1402
25-29	1488(80.1)	369 (19.9)	1857
30-34	1375 (82.3)	296 (17.7)	1671
35-39	973 (67.6)	467 (32.4)	1440
40-44	573 (78)	162 (22)	735
45-49	593 (83.4)	118 (16.6)	711
Total	5817	2218	8035

[Table/Fig-3]: Distribution of contraceptive acceptance according to age of wife.

Age and type of modern contraceptive usage: [Table/Fig-4] shows the trend of modern contraceptive use according to age group of the currently married women. All the spacing methods were showing a gradual decline in use as age advanced. Female sterilisation showed gradual increase in acceptance according to age. This implies limiting family size as age advances. Among the spacing methods, condoms are more commonly used compared to other IUD and OCP across all age groups.



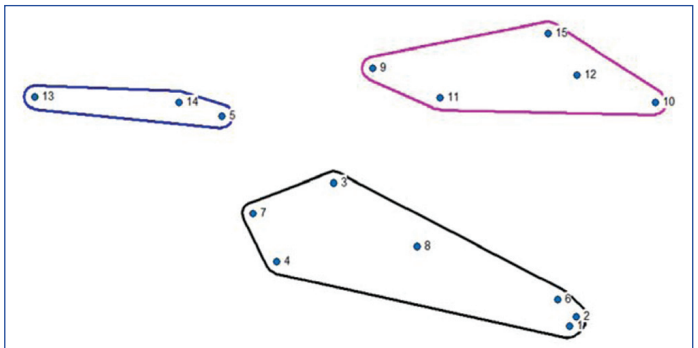
[Table/Fig-4]: Frequency curve showing usage of modern contraceptives according to the age groups.

Analysing the pattern of contraceptive use according to the number of living children suggested that, couples start thinking about contraception after their child only. Delaying of first pregnancy wasn't a usual norm. The fact that 4.3% of women with >3 children are not taking any kind of contraception was also grounds for concern [Table/Fig-5].

No of living children	Using FP n (%)	Not using FP n (%)	Total
0	0	627 (100)	627
1	752 (38.2)	1217 (61.8)	1969
2	4015 (92.5)	327 (7.5)	4342
3	983 (95.7)	44 (4.3)	1027
4	65 (95.6)	3 (4.4)	68
5	2 (100)	0	2
Total	5817	2218	8035

[Table/Fig-5]: Distribution of women according to number of living children and acceptance of modern contraceptive methods.

The result of the cluster analysis obtained after free listing and pile sorting exercise is given in [Table/Fig-6].



[Table/Fig-6]: Cluster analysis of items listed as barriers in accepting the contraceptive methods.
(1. Side-effect; 2. Bleeding; 3 .Fear to use; 4. Allergy; 5. Unaware about contraceptives in general; 6. Infection; 7. Shy to discuss; 8. Not fit for body; 9. Sexual displeasure; 10. Religious reasons; 11. Fear of partner associated with its use; 12. Dissent of partner; 13. Not available; 14. Not aware about all methods so as to seek alternatives; 15. Not needed)

Cluster analysis showed a 3 partition cluster of the common barriers shared by the community in accepting family planning. The emergence of the 3 clusters is viewed in the ways in which interventions to dissolve the concerns should be targeted to reach the population.

Cluster one dealt with barriers like side-effects, bleeding, fear of use, allergy, infection, shyness to discuss, and not fit for the body, all were affecting a single individual and these concerns are to be addressed by individual counseling and one-to-one communication. The second cluster dealt with barriers like sexual displeasure, religious reasons, partners' fear about its use, and dissent of partner, not being needed which were also dependent on partners or a larger section of the community, rather than on a single individual. There is a need for couple counseling and group approaches in communication [Table/Fig-7]. The third cluster dealt with barriers like unawareness, not being available, unaware of all methods, which were also dependent on the health system. Concerned authorities need to rectify it and avoid the occurrence of such problems.

Perspectives of providers about factors affecting family planning behaviour in the community

Providers identified certain factors affecting the family planning behaviour of eligible couples. It identifies key global themes related to social dynamics, socioeconomic issues, and the structure of the health system, which were organised as: 1) social factors centered

Group of related barriers as perceived by participants	Participants rationale for perception
Side-effects, bleeding, fear to use, allergy, infection, shy to discuss, not fit for body.	All reasons were related to single individual, must be addressed by individual counselling and one to one communication
Sexual displeasure, religious reasons, partners's fear about its use, dissent of partner, not needed.	Determined not just by a single person, but influenced by their partners or a larger section of community. Must give couple councelling and group approaches in communication
Unaware, Not available, Not aware about all methods	Related to health system. Authorities to take measure to rectify.

[Table/Fig-7]: Barriers grouping and perception of participants.

around gender; 2) other sociocultural factors driven by the community; 3) factors within the health system; and 4) factors affecting system performance. All the organising themes that emerged in the thematic analysis are described below, emphasising the basic themes identified under them. [Table/Fig-8] gives the thematic analysis.

1. **Social factors centered around gender:** Social factors heavily influenced by gender norms play a significant role in family planning behaviour. Women are often seen as primarily responsible for family planning methods, with the belief that their earning potential would be disrupted if men underwent a vasectomy. This perception is deeply rooted in the community, where women are conditioned to assume such responsibilities. According to a health supervisor, "99% of the couples opt for laparoscopy when they think about a permanent method of sterilisation," reflecting societal expectations that women should bear this burden. A junior health inspector noted, "Family planning has become the duty of females alone," pointing out that men's contributions are frequently overlooked. Additionally, an ASHA worker mentioned that societal norms also dictate that "women stay at home; they get enough rest after an operation," further emphasising the focus on female-targeted methods for contraception. There are widespread misconceptions about No-Scalpel Vasectomy (NSV), particularly fears that it could impact men's earning capacity and sexual drive. The ASHA worker acknowledged that "males are the main earning members of the family, and females also stand against the NSV procedures." These concerns stem from traditional gender roles, despite the fact that, as a health supervisor shared, "this is a myth, may be due to ignorance." Increased awareness could help address these doubts surrounding the procedure.
2. **Other sociocultural factors:** Education is a critical factor in family planning behaviours, with educated couples more likely to engage in planned pregnancies. The health supervisor stated, "Family planning is highly accepted by educated people," highlighting their greater awareness. In contrast, illiterate individuals are often less informed about family planning and contraceptive options, as noted by the lady health inspector: "Illiterate people were less aware of family planning and different methods." Socioeconomic status significantly influences access to family planning resources. The Junior Health Inspector (JHI) remarked, "Upper-class people go to private hospitals; they buy condoms from medical shops," while middle-class families tend to rely on government facilities, as indicated by their demand for "OP and CC." Migrant populations also seek services from primary healthcare centers. However, providers face challenges in reaching the poor, with the health supervisor noting, "The poor are least motivated to adopt family planning," and highlighting that "it's difficult to reach them too because they will be away from their homes for work during our working hours." Religious beliefs and cultural values play a strong role in family planning decisions. The health inspector noted that some couples believe they act "against God's will by adopting family planning," feeling that a child is "a gift from God." Additionally, the Lady Health Inspector mentioned that "some religions even ban sterilisation done on humans." Cultural attitudes, particularly within tribal communities, further discourage acceptance of family planning practices, as reflected in the health inspector's observation that "tribal communities don't prefer family planning."
3. **Factors within the health system:** The health system presents opportunities to combine family planning with postnatal care, allowing for procedures like post-partum sterilisation and Post-Partum Intrauterine Contraceptive Device (IUCD) (PPIUCD) insertion immediately after birth. While interval sterilisation can occur during follow-up visits, opportunities for males are limited, which favors female-oriented contraceptive methods. According to LHI, "If the procedure is done postpartum, it is 100% done." However, there is a significant failure rate for interval sterilisation, leading to subsequent pregnancies. Provider-client interactions are crucial for awareness generation and dispelling myths, but these typically involve women. ASHA noted, "Women are

Codes	Basic theme	Organising theme	Global theme
Duty of females, not men's responsibility, women stay at home, enough rest for women. Affects earning, men are earning members. Interfere with occupation, difficult to get the working class for health education. Affect sexual life of men.	Gender perceptions income occupation ignorance /myths	Social factors centred around gender	Gender based social dynamics
Gifts of God, against God's will, bans sterilisation. Tribal population don't prefer family planning. Acceptance among educated, planned pregnancies, modern contraceptive, effects and side-effects, illiterate are unaware. Poor least motivated, upper class go to private hospitals, OP, CC are demanded by average class couples, and Migrants seek government services. Interval sterilisation, as postpartum100% done.	Religious belief Cultural factors Education. Socioeconomic status affecting facility preference	Other sociocultural factors	Socio- cultural factors
Audience, exposure to awareness sessions, interactions with the system, men are unaware, men should know about back up with NSV. Decrease in the promotion of NSV, weekly pills are not promoted, lack of training about novel methods, reduced skills and training in for performing NSV, skilled health workers in laparoscopy, IUD availability, condoms and pills are available. Other health programs threatens, emerging health problems Low incentive, delayed payment.	Opportunity for service delivery Provider -client interactions Organisational factors Workload of health care staff Motivation of health care staff	Factors acting within the health system	Structure of the health system
No family planning based education for adolescent age groups Female Healthcare Worker (HCW) promotes female methods Health workers belief and attitude affects Back up with NSV.	Stigma and taboos hindering adolescent family education Health workers gender Health workers attitudes" social impact of failed NSV	Socio- cultural factors affecting health system performance	

[Table/Fig-8]: Distribution of codes and themes {(Thematic analysis, Key Informant Interviews (KII)}.

always the audience for classes," as men often miss sessions due to work commitments. A major barrier for promoting NSV is the lack of trained personnel, with NSV services available at only one community health center in the district. In contrast, conventional contraceptives like condoms and IUDs are always available, and healthcare workers are well informed about them. The workload of healthcare workers, particularly during crises like the COVID-19 pandemic, compounds these issues. ASHA expressed, "We have no time for rest now," highlighting the strain of increased responsibilities and delayed payments. Furthermore, while "Incentives are low," this may not affect higher-level staff as significantly, suggesting that the challenges primarily impact field workers and ASHAs

4. **Sociocultural factors influencing healthcare system performance:** The performance of healthcare systems is significantly influenced by sociocultural factors, particularly regarding family planning. Female health workers often communicate more effectively with women, which can enhance the promotion of female-oriented family planning methods. As noted by a public health nurse, "Women may not open up with the male health workers regarding their problems and difficulties they face with contraceptive methods." Adolescents frequently lack awareness about family planning due to stigmas and taboos surrounding the topic, with information mainly provided only when women marry. An ASHA worker commented, "In adolescent clubs, we mainly discuss other health problems, such as nutrition, hygiene, sanitation, etc." Additionally, men who do not adhere to backup spacing methods after undergoing NSV might face negative social repercussions. A health supervisor shared, "Society will react violently; sometimes family disputes occur if NSV fails. I had experience with this with one client."

DISCUSSION

In this study, the prevalence of modern contraception was 72.4%, significantly higher than Kerala's rate of 52.8% [6]. There are other studied which reported comparable contraceptive prevalences in rural areas of central and northern Kerala [7,8]. This high prevalence is supported by a favorable sociodemographic profile, with majority of female spouses having at least a secondary education in the current study. The role of female education in family planning practices is already been well established in researches done in Kerala [7,8]. The most preferred contraceptive methods among couples was female sterilisation, which is comparable to family planning indicators in Kerala and across India [9,10].

Sociocultural barriers contribute to the low acceptability of NSV, often linked to a lack of information [11,12]. In Kerala, the acceptability of male sterilisation had been low and is showing a declining trend from 6.5% to 0.1% according to NFHS rounds 1-5 [13]. Social characteristics related to gender promote female-targeted strategies while hindering male approaches. Factors such as gender, occupation, income, and beliefs about male sexuality play a role. Masculine values often depict men as providers, leading to stigmas against male sterilisation, viewed as invasive and a threat to masculinity [11,14,15]. Char A et al., also noted men's hesitance to discuss sterilisation due to fears over economic productivity [15]. An unequal power dynamic affects couples' knowledge, communication, decision-making, and family planning choices [14]. Sociocultural factors also influence system performance, favoring female-based contraception. Gender and healthcare worker attitudes contribute to this discrepancy, as illustrated by the International Centre for Research for Women [14,16,17]. Most frontline health workers are women, creating barriers for men in accessing knowledge about family planning [18]. The present study mirrored this, with provider-client interactions mainly between female health workers and clients. The knowledge that spouses possess significantly impacts contraceptive use and communication. Women often struggle to advocate for a method without comprehensive information, while men may dismiss it easily [19]. Myths and misunderstandings about side-effects further complicate couples' transition from intention to choice in family planning [20]. These factors contribute to the predominance of female-targeted techniques. Promoters in the present study expressed concerns about the social implications of unsuccessful NSV, viewing family planning discussions as a potential threat to marital fidelity [21]. This societal perspective may explain the severe impact of failing NSV on social perceptions.

In the present study, 19.6% of women were married between ages below 20 years with only 5% of eligible couples using contraceptive methods. Early pregnancy poses significant health risks, including complications such as eclampsia and infections, contributing to maternal mortality for 15-19-year-old married women (WHO) [22]. Research indicates that young marriage increases risks of frequent childbearing, unplanned motherhood, and abortions, negatively affecting women's health [23]. Additionally, the study found 95.6% of mothers under 20 did not use contraception, highlighting a lack of Family Planning (FP) awareness among adolescents. A systematic review from low and middle income countries revealed that family planning, contraception and abortion information, and services were more acceptable among married people compared to single adolescents but very few of the adolescents are married [24]. Family planning education is only provided post-marriage, with social factors disrupting adolescent education on reproductive health, leading to myths and stigma around family planning [14,25]. The present study revealed that 66% of participants utilised government hospitals for family planning services, attributing this to trust in healthcare workers [26]. New contraceptive options, such as injectable MPA and centchroman, were introduced, but the promotion and training for these methods are lacking, contributing to underutilisation [27,28]. Systemic factors, including insufficient training for health workers, hinder modern contraceptive use. Coupled with proper training and promotional activities, it will be easy for the already-recognised government health system to gain popularity for newer modern contraceptive methods in the community [29]. Emerging health issues and multiple health program involvements threaten the National Family Welfare Program. COVID has significantly disrupted sexual and reproductive health services, increasing the unmet need for contraception and leading to unintended pregnancies and unsafe abortions [30]. Barriers to contraceptive acceptance include a lack of awareness, myths, and privacy concerns. Comparative studies echo these findings, identifying obstacles like negative perceptions, disapproval, and limited access to quality services [31]. An unmet need for family planning in urban slums correlates with women's negligence and societal pressures [32]. Addressing these barriers through effective communication strategies can improve acceptance of family planning methods.

The clinical perspectives of the study emphasise the importance of increasing male participation in family planning through inclusive counseling and educational strategies, such as couple counseling and incorporating reproductive health into school curricula. Continuous training for health care workers is crucial to empower them as effective communicators. Future perspectives of the study highlight the need for sustained male engagement, leveraging technology to enhance outreach, and revisiting incentive structures and staffing models to improve service delivery. Additionally, involving community and religious leaders can help address resistance to family planning, ultimately advocating for a comprehensive and integrated approach to reproductive health that adapts to evolving societal needs.

Limitation(s)

The study couldn't assess the unmet need for family planning as the main results were based on eligible couple survey reports.

CONCLUSION(S)

Several social, cultural and systemic determinants shaped the female-oriented and modern contraceptive-specific family planning behaviour of the rural population. Addressing sociocultural determinants and strengthening the health care system are needed for broader acceptance of an expanded basket of choices in family planning. All beneficiary barriers could be addressed by targeted educational initiatives through one-to-one, couple- based, and group approaches of communication. This is essential for promoting equitable family planning practices and encouraging shared responsibility among couples.

Acknowledgement

The present project was approved by ICMR under Short Term Studentship Program 2020 (STS ICMR Ref ID: 2020- 04493). Authors are grateful to all participants of the study. The authors also acknowledge the District Medical Officer Palakkad, and Medical Officer of the Primary Health Centre for their permissions to conduct the study.

REFERENCES

[1] Park K. Park's textbook of preventive and social medicine. 27th ed. Jabalpur: M/s Banarsidas Bhanot Publishers; 2023.
[2] Ravaghi H, Guisset AL, Elfeky S, Nasir N, Khani S, Ahmadnezhad E, et al. A scoping review of community health needs and assets assessment: Concepts, rationale, tools and uses. BMC Health Serv Res. 2023 Jan 17;23(1):44.
[3] Ouahid H, Sebbani M, Cherkaoui M, Amine M, Adarmouch L. The influence of gender norms on women's sexual and reproductive health outcomes: A systematic review. BMC Womens Health. 2025;25(1):224.
[4] Bahuguna M, Das S, Shende S, Manjrekar S, Pantvaidya S, Fernandez A, et al. To use or not to use: Exploring factors influencing the uptake of modern contraceptives in urban informal settlements of Mumbai. Palermo TM, editor. PLOS Glob Public Health. 2023;3(3):e0000634.
[5] Dongre A, Deshmukh P. Practical guide: Qualitative methods in health and educational research. 1st ed. Chennai: Notion Press; 2021.
[6] National Family Health Survey (NFHS-5) 2019-21: Kerala [Internet]. 2021 [cited 2025 May 27]. Available from: https://ruralindiaonline.org/en/library/resource/national-family-health-survey-nfhs-5-2019-21-kerala/.
[7] Pawar Anant T, John A, Kumar D. Family planning practices in rural Kerala. Scholars Journal of Applied Medical Sciences. 2014;2:19-21.
[8] Koshy N, KV J. Contraceptive practices and unmet need for family planning in currently married women of 15-49 years of age in a rural area of Thrissur district. International Journal of Medicine & Public Health. 2024;14(4).
[9] NHSRC, National Health Mission. Health Dossier 2021: Reflections on Key Health Indicators – Kerala [Internet]. Available from: https://nhsrcindia.org/sites/default/files/practice_image/HealthDossier2021/Kerala.pdf.
[10] Ewerling F, McDougal L, Raj A, Ferreira LZ, Blumenberg C, Parmar D, et al. Modern contraceptive use among women in need of family planning in India: An analysis of the inequalities related to the mix of methods used. Reprod Health. 2021;18(1):173
[11] Bunce A, Guest G, Searing H, Frajzyngier V, Riwa P, Kanama J, et al. Factors Affecting Vasectomy Acceptability in Tanzania. Int Fam Plan Perspect. 2007;33(01):13-21.
[12] de Oliveira IT, Dias JG, Padmadas SS. Dominance of sterilization and alternative choices of contraception in India: An appraisal of the socioeconomic impact. PLoS ONE. 2014;9(1):e86654.
[13] Thota V. Levels and trends of male sterilization In India: Evidence From National Family Health Survey (NFHS) Over Decades. 2023;10(4).
[14] Couple-Engage-Evidence-Review.pdf [Internet]. [cited 2025 Feb 9]. Available from: https://www.icrw.org/wp-content/uploads/2020/06/Couple-Engage-Evidence-Review.pdf.
[15] Char A, Saavala M, Kulmala T. Male perceptions on female sterilization: A community- based study in rural central India. Int Perspect Sex Reprod Health. 2009;35(03):131-38.
[16] Atuahene MD, Afari EO, Adjuik M, Obed S. Health knowledge, attitudes and practices of family planning service providers and clients in Akwapim North District of Ghana. Contracept Reprod Med. 2016;1(1):5.
[17] Wani RT, Rashid I, Nabi SS, Dar H. Knowledge, attitude, and practice of family planning services among healthcare workers in Kashmir – A cross-sectional study. J Fam Med Prim Care. 2019;8(4):1319-25.
[18] Morgan R, Ayiasi RM, Barman D, Buzuzi S, Ssemugabo C, Ezumah N, et al. Gendered health systems: Evidence from low- and middle-income countries. Health Res Policy Syst. 2018;16:58.
[19] Chipeta EK, Chimwaza W, Kalilani-Phiri L. Contraceptive knowledge, beliefs and attitudes in rural Malawi: Misinformation, misbeliefs and misperceptions. Malawi Med J J Med Assoc Malawi. 2010;22(2):38-41.
[20] Rimal RN, Sripad P, Speizer IS, Calhoun LM. Interpersonal communication as an agent of normative influence: A mixed method study among the urban poor in India. Reprod Health. 2015;12:71.
[21] Kabagenyi A, Jennings L, Reid A, Nalwadda G, Ntozi J, Atuyambe L. Barriers to male involvement in contraceptive uptake and reproductive health services: A qualitative study of men and women's perceptions in two rural districts in Uganda. Reprod Health. 2014;11:21.
[22] Adolescent pregnancy [Internet]. [cited 2025 Feb 9]. Available from: https://www.who.int/news-room/fact-sheets/detail/adolescent-pregnancy.
[23] Santhya KG, Jejeebhoy S, Ghosh S. Early marriage and sexual and reproductive health risks: Experiences of young women and men in Andhra Pradesh and Madhya Pradesh, India [Internet]. Population Council; 2008 [cited 2025 Jun 16]. Available from: https://knowledgecommons.popcouncil.org/departments_sbsr-pgy/230.
[24] Munakampe MN, Zulu JM, Michelo C. Contraception and abortion knowledge, attitudes and practices among adolescents from low and middle-income countries: A systematic review. BMC Health Serv Res. 2018;18(1):909.
[25] 140701-ICRW-Family-Planning-Rpt-Web.pdf [Internet]. [cited 2025 Jun 16]. Available from: https://www.icrw.org/wp-content/uploads/2016/10/140701-ICRW-Family-Planning-Rpt-Web.pdf.
[26] Mozumdar A, Gautam V, Gautam A, Dey A, Uttamacharya, Saith R, et al. Choice of contraceptive methods in public and private facilities in rural India. BMC Health Serv Res. 2019;19(1):421.
[27] Rajaraman R, Vaithilingan S, Selvavinayagam TS. Acceptance, adherence, and side-effects of depot medroxyprogesterone acetate: A prospective observational study. Cureus [Internet]. 2024 Apr 21 [cited 2025 Jun 16].
[28] Press Release: Press Information Bureau [Internet]. [cited 2025 Feb 9]. Available from: https://pib.gov.in/PressReleasePage.aspx?PRID=2086511.
[29] Hellwig F, Moreira LR, Silveira MF, Vieira CS, Rios-Quituizaca PB, Masabanda M, et al. Policies for expanding family planning coverage: Lessons from five successful countries. Front Public Health [Internet]. 2024 May 14 [cited 2025 Feb 9];12. Available from: https://www.frontiersin.org/journals/public- health/articles/10.3389/fpubh.2024.1339725/full.
[30] COVID 19 era: A beginning of upsurge in unwanted pregnancies, unmet need for contraception and other women related issues: The European Journal of Contraception & Reproductive Health Care: Vol 25, No 4 [Internet]. [cited 2025 Feb 9]. Available from: https://www.tandfonline.com/doi/10.1080/13625187.2020.1777398?url_ver=Z39.88- 2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%20%200pubmed.
[31] Mustafa G, Azmat SK, Hameed W, Ali S, Ishaque M, Hussain W, et al. Family planning knowledge, attitudes, and practices among married men and women in rural areas of Pakistan: Findings from a qualitative need assessment study. Int J Reprod Med. 2015;2015:190520.
[32] Yadav K, Agarwal M, Shukla M, Singh JV, Singh VK. Unmet need for family planning services among young married women (15–24 years) living in urban slums of India. BMC Womens Health. 2020;20:187.

PARTICULARS OF CONTRIBUTORS:
1. Junior Resident, Department of Community Medicine, Government Medical College, Palakkad, Kerala, India.
2. Associate Professor, Department of Community Medicine, Government Medical College, Palakkad, Kerala, India.
3. Professor and Head, Department of Community Medicine, Government Medical College, Palakkad, Kerala, India.
4. Rehabilitation Officer, Department of Ministry of Labour Employment, National Career Centre for differently Abled, Dimapur, Nagaland, India.
5. Statistician Cum Lecturer, Department of Community Medicine, Government Medical College, Palakkad, Kerala, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:
N Divyamol,
Associate Professor, Department of Community Medicine, Government Medical College, Palakkad-678013, Kerala, India.
E-mail: divyanallat@gmail.com

PLAGIARISM CHECKING METHODS: [Jain H et al.]
- Plagiarism X-checker: Apr 30, 2025
- Manual Googling: Aug 09, 2025
- iThenticate Software: Aug 11, 2025 (3%)

ETYMOLOGY: Author Origin

EMENDATIONS: 6

AUTHOR DECLARATION:
- Financial or Other Competing Interests: None
- Was Ethics Committee Approval obtained for this study? Yes
- Was informed consent obtained from the subjects involved in the study? Yes
- For any images presented appropriate consent has been obtained from the subjects. NA

Date of Submission: **Apr 28, 2025**
Date of Peer Review: **May 27, 2025**
Date of Acceptance: **Aug 13, 2025**
Date of Publishing: **Oct 01, 2025**