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Research Article

Factors Influencing the Artificial Contraceptive Use: A Mixed Method Study among Married Women in Kasaragod District of Kerala, India

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Abstract

Background: Family planning allows women and their partners to responsibly determine the timing, spacing and number of children. Kerala, a South Indian state, is known for better health indicators including family planning. However, Kasaragod, the northernmost district is an exception with the least reported contraceptive prevalence in the state. This study tried to identify the factors influencing artificial contraceptive use by married women in Kasaragod.

Materials and methods: We did a concurrent triangulation mixed method study. We selected 162 married women from four randomly selected panchayats in Kasaragod. Quantitative data were collected using a semi-structured questionnaire. In the qualitative phase, in-depth interviews were conducted among users and non-users of artificial contraceptives. Statistical inferences were drawn using Chi-square test and logistic regression analysis of quantitative data. Thematic analysis was done for qualitative data.

Results: The current prevalence of artificial contraceptives was 27.7 percent, of which, 77.7 percent was female sterilization, 20.0 percent condoms, 2.3 percent Copper T. Factors such as age of the respondent and the partner, religion, type of family, number of children, sex of the children, felt need to delay or avoid being pregnant, women's autonomy were found to be significant predictors of current artificial contraceptive use.

Conclusion: The results showed poor utilization of artificial contraceptive use in Kasaragod district, attributed to factors that have a deeply rooted social axis that prevent women to claim the rights of her own body and contraception.

INTRODUCTION

India was the first country in the world, which declared a national programme in 1951 to stabilize the population. Fertility rate in India is still above the replacement level (2.4 vs. 2.1) though the country has made tremendous achievements in the past 70 years [1]. Across the country, a large amount of heterogeneity exists in the current modern contraceptive prevalence, unmet need and demand satisfaction with modern methods [1,2]. According to the National Family Health Survey-4 (2015-16), 53.4 percent of married women in India used any method of contraception. Among them, 47.8 percent use any modern method of contraception, which includes 36.0 percent female sterilization, 1.5 percent Intra Uterine Device/ Post-Partum Intrauterine Device (IUD/PPIUD), 4.1 percent pills and 5.6 percent condom.

Despite the better performance in most of the human development indicators, the contraceptive use in the state of Kerala is less than the national average, with high unmet need for family planning. There are intra state disparities also. The NFHS-4 reported that out of 14 districts in Kerala, Kasaragod district had the lowest contraceptive prevalence and the second highest unmet need for family planning. Studies across the world proved that contraceptive use by women is contextual and the local, social and cultural differences like religious beliefs, relationship with the partner and family members, social norms on women's status and their economic freedom etc. have significant impact. Therefore, the current study tried to identify the specific sociodemographic, economic and cultural factors influencing contraceptive use by married women in Kasaragod, a less developed district compared to other districts in Kerala.

MATERIALS AND METHODS

The present study was a mixed method study using the 'concurrent triangulation' design, in which both quantitative and qualitative data were collected, analysed and presented during the same period. This design is used in studies, which try to obtain in-depth information about a phenomenon of interest, as well as which could not be done through quantitative approach or qualitative approach alone [6]. We selected four Gramapanchayats (elected governing body at the grass root level in India) randomly from Kasaragod district of Kerala. The study sample included 162 married women of reproductive age group (18-40 years) selected randomly from these panchayats.

A semi-structured questionnaire and an interview guide were used for data collection in the quantitative and qualitative phases respectively. The questionnaire had 22 questions on

various socio-demographic and economic factors found to have an effect on contraceptive use among women as per the existing literature. It also includes women's autonomy, assessed in terms of household decision-making power, economic and movement freedom. A validated tool consisting of seven items (cooking decision, hospital decision, purchasing of gold, decision on where you live, permission to go out, see friends and relatives, to deal money) were used to measure women's autonomy. It was derived using the median score; women with score above the median were considered as autonomous and score less than or equal to median were considered as not autonomous. In-depth interviews of 10 women including both users (4) and non-users (6) of any type of artificial contraception in the quantitative survey were done.

We sought the help of Accredited Social Heath Activist (ASHA) workers (community health worker instituted by the Ministry of Health and Family Welfare, Government of India for every 1000 population in rural regions) in the respective areas helped to get introduced to the participants. We requested all the participants to give informed consent and separate consent forms were used for quantitative and qualitative phases. Participants' privacy and confidentiality were strictly maintained.

Quantitative analysis was done by using SPSS statistical software, version 22. Mean and frequencies were estimated respectively for continuous and categorical variables. Bivariate analysis was done using Pearson Chi-square test and multivariate analysis done using binomial logistic regression. A standard error (p-value) less than 0.05 was considered as statistically significant. Qualitative analysis was carried out by using Braun and Clarke framework of thematic analysis [7].

The ethics clearance for the study was obtained from the Institutional Human Ethics Committee of the Central University of Kerala.

RESULTS AND DISCUSSION

The study samples constituted almost equal number from urban (49.4 percent) and rural (50.6 percent) areas. Majority of the women in the survey fall into 25-35 years age group with a mean age of 30.7 years (standard deviation- 6.0 years). The mean age of the partners was 38.0 years with a standard deviation of 6.8 years.

Contraceptive use by married women

Among the 162 study participants, 46.3 percent ever used an artificial contraceptive method and 27.7 percent were current users. Sterilization (77.7 percent) was the most used method followed by condom (20 percent) and copper T (2.3 percent). Among the ever-used women, more than 60 percent were current users. Table 1 describes respondents' need and use of contraception.

Factors affecting current artificial contraceptive use

As described in methods section, we considered socio-demographic and economic background, obstetric factors and women's autonomy as predictors of artificial contraceptive use based on existing evidences. The results of bivariate and multivariate analysis describing the association between artificial contraceptive use and these predictor variables are given in (Tables 2-5).

Table 1: Need for and use of contraception by the respondents.

Category (N= 162)	Frequency (n)	Percentage (%)
Felt need to delay or avoid being pregnant		
Yes	120	74.1
No	42	25.9
Ever used an artificial contraceptive method		
Yes	75	46.3
No	87	53.7
Ever used any of the given artificial contraceptive methods (N= 75) *		
Pills		
Yes	11	14.7
No	64	85.3
Copper T		
Yes	16	21.3
No	59	78.7
Condoms		
Yes	26	34.7
No	49	65.3
Female sterilization		
Yes	35	46.7
No	40	53.3
Contraceptive Injections		
Yes	1	1.3
No	74	98.7
Current use of any artificial contraceptive method (N= 75)+		
Yes	45	60
No	30	40
Current use of specific artificial contraceptive method (N=45)#		
Copper T	1	2.3
Condom	9	20
Female sterilization	35	77.7

* Women those who ever used an artificial contraceptive method
# Women those who were currently using any artificial contraceptive method
Source: Primary survey

Association between current artificial contraceptive use and sociodemographic and economic factors

Among all the factors considered, religion, type of family, age of respondents and age of their partners showed significant association with artificial contraceptive use. The contraceptive use was more among women who were Hindus and who belonged to nuclear families. It was also found more if the age of the women is more than 31 years and age of their partner is more than 38 years. Use of artificial methods of contraception was more among rural women compared to urban women and this finding was significant at 10% level.

Table 2: Association between current artificial contraceptive use and sociodemographic and economic factors.

Category (N=162)	Current use of any artificial contraceptives		p-value
	Yes (n, %)	No (n, %)	
Residence			
Urban (82)	18 (22.2)	64 (78.0)	0 .094
Rural (80)	27 (33.8)	53 (66.3)	
Religion			
Hindu (84)	32 (38.1)	52 (61.9)	**0.003**
Muslims and Christian (78)	13 (16.7)	65 (83.3)	
Type of family			
Nuclear family (68)	26 (38.2)	42 (61.8)	**0 .013**
Joint family and extended families (94)	19 (20.2)	75 (79.8)	
Age of the respondent (in years)			
<=31 years	11 (12.8)	75 (87.2)	**<0.001**
>31 years	34 (44.7%)	42 (55.3)	
Age of the partner (in years)			
<=38 years	16 (18.2)	72 (81.8)	**0.003**
>38 years	29 (39.2)	45 (60.8)	
Educational status of the respondent			
Primary education (22)	9 (40.9)	13 (59.1)	0.335
Up to high school education (54)	14 (25.9)	40 (74.1)	
Higher secondary and above (86)	22 (25.6)	64 (74.4)	
Educational status of the partner			
Primary education (33)	11 (33.3)	22 (66.7)	0.665
Up to high school education (83)	23 (27.7)	60 (72.3)	
Higher secondary and above (46)	11(23.9)	35 (76.1)	
Type of the ration card			
AYY and priority card (61)	15 (24.6)	46 (75.4)	0.599
Non- priority state subsidy card and general non-priority card (101)	30 (29.7)	71 (70.3)	
Monthly household income			
<=2164 (79)	23 (29.1)	56 (70.9)	0.495*
2165-6430 (70)	17 (24.3)	53 (75.7)	
Above 6431 (13)	5 (38.5)	8 (61.5)	

a-Fishers Exact Test, Source: Primary survey

Table 3: Association between current artificial contraceptive use and obstetric factors.

Category (N=162)	Current use of any artificial contraceptives		p-value
	Yes (n, %)	No (n, %)	
Respondent's age at marriage (in years)			
<=21 years (111)	36 (32.4)	75 (67.6)	0.051
>21 years (51)	9 (17.6)	42 (82.4)	
Number of children			
Have no child (14)	1 (7.1)	13 (92.9)	**0.018***
<=2 children (106)	26 (24.5)	80 (75.5)	
>=3 children (42)	18 (42.9)	24 (57.1)	
Number of sons			
Have no son (51)	6(11.8)	45(88.2)	**0.005***
<=2 sons (104)	37(35.6)	67(64.4)	
>=3 sons (7)	2(28.6)	5(71.4)	
Number of daughters			
Have no daughters (66)	11 (16.7)	55 (83.3)	**0.015***
<=2 daughters (87)	32 (36.8)	55 (63.2)	
>=3daughters (9)	2 (22.2)	7 (77.8)	

History of abortion			
Yes (42)	13 (31.0)	29 (69.0)	0.594
No (120)	32 (26.7)	88 (73.3)	
History of still birth			
Yes (7)	3 (42.9)	4 (57.1)	0.398*
No (155)	42 (27.1)	113 (72.9)	
*Fishers Exact Test, Source: Primary survey			

Table 4: Women's autonomy and its association with current artificial contraceptive use.

Domains of women's autonomy - Household decision making				
Household member who makes Decisions	**Cooking decision (n, %)**	**Hospital decision (n, %)**	**Purchasing gold (n, %)**	**Decisions related to where do you live (n, %)**
Self	87 (53.7)	49 (30.2)	34 (21.0)	12 (7.4)
Husband	5 (3.1)	36 (22.2)	51 (31.5)	110 (67.9)
Joint decision made by both	6 (3.7)	34 (21.0)	51 (31.5)	29 (17.9)
Other members of family	46 (28.4)	24 (14.8)	18 (11.1)	10 (6.2)
Decision made by discussing with other family members	18 (11.1)	19 (11.7)	8 (4.9)	1 (0.6)
Domains of women's autonomy - Economic and movement autonomy				
Activity		**Autonomy**		
		Yes (n, %)	**No (n, %)**	
Have to seek permission to go out		40 (24.7)	122 (75.3)	
Have to seek permission to see friends and relatives		123 (75.9)	39 (24.1)	
Have to seek permission to deal money independently		98 (60.5)	64 (39.5)	
Association between women's autonomy and current artificial contraceptive use				
Women's autonomy (N=162)		**Current artificial contraceptive use**		**p-value**
	Yes (n, %)		**No (n, %)**	
Yes (55)	22 (40.0)		33 (60.0)	**0.009**
No (107)	23 (21.5)		84 (78.5)	
Source: Primary survey				

Table 5: Independent effects of predictors on current artificial contraceptive use.

Category	**Odds ratio (Unadjusted)**	**95% confidence interval**	**Odds ratio (Adjusted)**	**95% confidence interval**
Age of the respondent				
<= 31 years	1		1	
>31 years	0.181	0.083- 0.394	0.420	0.129- 1.369
Age of the partner				
<=38 years	1		1	
>38 years	0.287	0.140- 0.589	0.920	0.294- 2.871
Religion				
Hindus	1		1	
Muslims and Christians	3.077	**1.467- 6.453**	6.286	**1.958- 20.183**
Type of family				
Nuclear family	1		1	
Joint and extended family	2.444	**1.2111- 4.930**	1.430	0.591- 3.458
Number of children				
Have no child	1		1	
<=2 child	0.237	0.030- 1.897	1.331	0.097- 18.209
>=3 child	0.103	**0.012- 0.858**	0.447	0.019- 10.283
Number of sons				
Have no son	1		1	
<=2 sons	0.241	**0.094- 0.619**	0.200	**0.054- 0.744**

>=3 sons	0.333	0.053- 2.115	0.363	0.031- 4.192
Number of daughters				
Have no daughters	1		1	
<=2 daughters	0.344	**0.158- 0.750**	0.323	**0.109- 0.957**
>=3daughters	0.700	0.128- 3.830	0.677	0.062- 7.431
Women's Autonomy				
Not autonomous	1		1	1
Autonomous	0.394	**0.193-0.802**	0.491	0.205-1.176
Binary Logistic Regression, Source: Primary survey				

Association between current artificial contraceptive use and obstetric factors

Of all the obstetric factors, number of living children, number of living sons and number of living daughters were found to be significantly affecting the contraceptive use.

This variable was derived from three factors given in Table 4. They are freedom to make decisions in household matters, freedom to handle monetary matters and freedom for movement. Autonomy score of the study participants ranged from zero to seven. The mean and median score of autonomy were 3.2 and 3.0 respectively. Women scored three and above were considered as autonomous and those who scored below three was considered not autonomous. Only one third of women in the study were autonomous and it showed a significant association between women's autonomy and current use of contraceptives.

Independent effects of predictors on current artificial contraceptive use

Binary logistic regression was done to understand the independent effects of each significant factor in the bivariate analysis. The results are given in Table 5. Religion, number of sons and daughters were significant predictors of current artificial contraceptive use, even after adjusting for other factors.

Findings of qualitative phase

The objective of the qualitative phase was to get an in-depth understanding of facilitators and barriers of artificial contraceptive use. In the in-depth interview, we asked participants about the influence of religion, family and their perceptions related to the childbirth, and family planning services obtained etc. to get more information about the contraceptive practices. The themes emerged from the interview were given below.

Religious influence on contraceptive use

Different religion has different ideologies and beliefs. Women from Muslim community reported that stopping pregnancy is against the religious norms. Christian women also reported the same. The non-user Muslim women reported that sex and the number of children is based on one's faith and Allah gives children. Hence, they will not do anything to control or delay pregnancy.

"Children are given by Allah, we are accepting them without hesitation, women become pregnant without planning, even if they did not plan for that, so it's all upon faith and it's not our decision" (Respondent-1, non-user).

"My husband is religiously strict, and nothing will do beyond that. After talking with my husband regarding the usage of such thing, I felt guilty. Because the children are given by Allah" (Respondent-2, non-user)

Influence of family

Most of the respondents from joint and extended families reported the involvement of close relatives in decision making related to family planning. In a joint family, woman communicate the family planning matters with other women of same age and jointly make the decision after considering the opinion from experienced members.

"We have no secrets in between, all talk freely. In the family, no one did the operation till now. (Respondent-1, non-user)

In my family, no one does the operation. Everyone has more than three children; they did not have any problem without stopping the pregnancy. (Respondent-6, non-user)

"My mother-in-law does not allow me to do the operation; many have lost their children after stopping the pregnancy. I would like to stop after three" (Respondent-2, non-user)

Poor quality of services in public facility and high cost in private facility

Respondents who were from poor families reported more sterilization than temporary methods. They decided to do sterilization after two children in most cases. Postpartum sterilization was postponed in certain unfavourable situations. Government facilities do not promote sterilization after two children and it act as a barrier for women. In addition, the sterilization through camps was not acceptable for many women in the community.

"After second child I thought about that. But nowadays, the government facilities do not do the operation even after having three healthy children. I think so. Anyway, they said something like that. My husband also allows me to do the operation. In private hospitals, it costs around ten thousand. Now it is not affordable for us. I don't want to do the operation through camp" (Respondent-3, non-user)

Side effects of temporary methods

Copper T was an infamous method among women as they have experienced or heard of side effects associated with its use. It was reported that copper T causes back pain, bleeding and menstrual irregularities.

"I heard about the pills and copper T; my sister-in-law had bleeding and her periods also were not correct after starting using copper T. So, she removed it after three months" (Respondent-1, non-user)

Desired numbers of children and sex of the child

Nearly all participants reported that the number of children was desired by her husband. They accepted husband's choice on number of children. The preference for sons or daughters were strong among couples, if they don't have one at present.

"I wish to have two children; my husband needs three. It's upon my husband's wish. At least two years of gap is needed between pregnancies otherwise it's very difficult to handle" (Respondent-4, non-user).

"My husband liked to have a girl child, unfortunately my second child was also a boy, had some problem within the blood, and need to take an injection. Finally, I took the decision to stop pregnancy. My husband had no opposition on that, because we were not in a good condition at that time" (Respondent-6, user)

Contraceptive prevalence among married women in Kasaragod district

Contraception is one of the proximal determinants of fertility influenced by various sociocultural and demographic factors. The present study reported a low artificial contraceptive prevalence rate of 27.7 percent in Kasaragod district when compared with 37.5 percent reported in NFHS-4 [8]. It is far below the state average (50.3 percent) and national average (47.8 percent). This prevalence was very low even compared to other districts in Kerala (Thiruvananthapuram- 58 percent, Thrissur- 68.5 percent) [8,9]. However, it was higher than the prevalence reported in District Level Household Survey-4 in 2013 (19.7 percent) [10]. The annual increase in the use of contraception among married women in Kasaragod district was less than three percent since 2013. Among the total study population, 32.5 percent reported as they were using some traditional methods and 39.8 percent were not using any methods of contraception currently. One multistate study reported that traditional methods account for more than 50 percent of the spacing methods used and it was around 59 percent in Kerala after Manipur (65 percent) and Lakshadweep (63 percent) [11].

The current study found that female sterilization with a prevalence of 21.6 percent, which account for more than 75 percent of all current contraceptive methods. Female sterilization is the most accepted and popular method of contraception in India [12]. The current prevalence of female sterilization reported by the study was less than that reported in NFHS-4 (34.2%) [4]. However, it is worth noticing that the mean age of the study participants was just 30.75 years and majority of them had undergone sterilization at such a younger age. This could be read along with the recent reports of increased 'unwarranted hysterectomies', considering ovary and uterus as unwanted organs in the body after family planning.

The prevalence of using temporary methods of contraception was found to be very low and it was 20 percent for condoms and 2.3 percent for copper T. Nearly 35 percent of the women used condom at least once. Compared with prevalence of 1.6 percent reported in NFHS-4, it was higher [13]. Use of condom were higher in central and western India than the southern states. The prevalence reported was 15.7 percent in Uttarakhand, 11.7 percent in Himachal Pradesh and 5.6 percent in Maharashtra. Among the southern states, the prevalence was 2.3 percent in Tamil Nadu and 1.7 percent in Karnataka [14]. Study from Trissur district of Kerala also reported almost similar proportion of using condoms (18 percent) [8]. In contrast to this, studies from Kerala reported that IUDs were the second most common method of contraception following female sterilization [15,16]. These findings clearly indicate that the mass campaigns by the government of India to promote male sterilization, temporary contraceptive methods etc. did not succeed as envisaged.

Comparing to the prevalence of ever using copper T, the current prevalence of copper T was less (21.3 percent vs. 2.3 percent). Discontinuation of copper T is attributed to menstrual bleeding and dysmenorrhea among users [17]. This study underlines the finding as many participants shared their view that copper T has side effects such as back pain and menstrual irregularities, disturbed sexual relationships with partners. Other methods such as pills, male sterilization, emergency contraceptives, and contraceptive injections were seldom reported by the study population. However, the ever use of methods such as pills (14.7 percent) and contraceptive injections (1.3 percent) were reported in the current study. Compared with other methods, women were not familiar to contraceptive injections (44.4 percent), emergency contraception (16.4 percent) and male sterilization (54.9 percent).

The current study did not report male sterilization and emergency contraception. According to NFHS-4, the male sterilization rate in India was 0.3 percent. In Kerala, it was 0.1 percent and in Kasaragod it was almost nil. Almost of all the districts of Kerala reported zero percent of male sterilization [4].

Socio-demographic and economic, and cultural factors influencing artificial contraceptive use

In the present study, area of residence was not significantly associated with current contraceptive use. However, multiple studies from India and other countries reported that the artificial contraceptive use was more among urban women due to their high education, occupational status and awareness regarding the methods [19,20]. The variation in the finding might be due to the limited disparity between urban and rural areas in Kerala, compared to the other states of the country [22].

Age was shown to be significantly associated with current contraceptive use among both respondents and their partners and it has a positive effect. Elder age group were more likely to use an artificial contraceptive than the younger age group (Table 12). One of the studies from Bangladesh also reported similar finding [23]. Another study found that contraceptive use was more among sexually active women of 25- 34 years compared to 15- 24 years of age [24]. The current study showed that women were more likely to accept contraception in their thirties. Women's mean age of marriage in Kasaragod district was 20.4 years and the mean number of children was two. By the age of thirty years, most of the women would complete their family and adopt some contraceptives, more likely to stop pregnancy. This

is reflected in the skewness towards female sterilization as the preferred contraceptive method in this study.

The education and employment status of the respondents and their partners were not found to be significantly associated with current artificial contraceptive use (P>0.05) in this study. This finding is not in coherent with other studies that reported increased contraceptive use among women who are educated and employed [25]. The use of contraception is seldom an independent decision by the women. Husbands are the primary decision makers and even the immediate family members have sometimes a 'say'. This would be reflecting in this finding even though education status of women in general was high in Kerala.

The household income was not found to be a significant factor associated with current contraceptive use (P= 0.495). However, women belonging to lowest income category and highest income category were more likely to use artificial contraceptives. The higher prevalence of contraception among low income category may be due to the increased adoption of permanent sterilization. One multinational study reported that the likelihood of female sterilization increased with lower socioeconomic status in India and Bangladesh, while it shows a reverse trend in Latin American and Caribbean regions [27]. One of the studies from Tirupati, Andhra Pradesh also reported higher prevalence of contraception among lowest household income category [28]. The qualitative results of the current study also strengthened the fact that women from poor household were more intended to use contraception, especially the permanent methods. The reason reported was that increased number of children may cause financial burden and it would be difficult to look after the existing children.

Religion was found to be significantly associated with current contraceptive prevalence (P=0.008). Muslims and Christians were less likely to utilise an artificial contraceptive method compared to Hindus. One study in Kozhikode district of Kerala also reported similar finding as Muslims were less likely to use an artificial contraceptive than Hindu and Christian community [33]. However, another study reported increased odds of using traditional and modern temporary methods among Muslim women [32]. Some studies showed high contraceptive use among Christians in some regions and they reported that there is considerable difference in the practice within religion [36,37]. One of the main reasons for women for not using artificial contraceptives was religious prohibition by husband or other members in the household. Similar reasons were reported by women in a study from Pakistan [36].

Type of family was another factor found to be significantly associated with current contraceptive use (P= 0.013). Women from nuclear families were 2.4 times more likely to use artificial contraceptives than women from joint and extended families (OR= 2.44, 95% CI= 1.211- 4.930). Similar findings were reported in a study conducted in Dharwad district of India. Women from nuclear family were more independent in decision-making than women from joint and extended families where the decision is influenced by other members in the family [37,38]. This could be the reason for higher prevalence of contraceptive use among women from nuclear families. The qualitative interviews conducted in this study also revealed the same finding that in joint families, women discuss the family planning matters with other members in the household, especially elders such as mothers-in-law. Their opinions and perceptions influence women's contraceptive decision.

The number of children and current contraceptive use were significantly associated (P=0.018). Women with more than or equal to three children are more likely to use contraception than women with no child (OR= 0.103, 95 % CI= 0.012- 0.858). No association was found between women with less than or equal to two children and current contraceptive use, compared to those without any child. Multiple studies from different countries support these findings [39,40]. However, this finding was a mere reflection of predominant female sterilization among the participants. While adjusted for other factors, the finding was not significant.

The number of sons and daughters were significantly associated with current contraceptive use in the present study (P >0.05). Compared to women who had no son, those with less than or equal to two sons were more likely to use a contraceptive (OR=0.241, 95% CI=0.065- 0.841). Similarly, women with less than or equal to two daughters were more likely to use contraception than those without a girl child (OR=0.329, 95% CI - 0.111- 0.974). These findings were significant even after adjusting for other factors. However, no association was found as the number of sons and daughters increased more than or equal to three. Other studies also reported the same result that the contraceptive prevalence increased with increased number of sons and daughters [41,42]. In contrast to the present study, one Afghanistan study reported that all reproductive factors of women were positively associated with contraceptive use, except number of daughters [40]. The qualitative interview from the current study revealed that most of the women want at least two children, have one son and one daughter. After two or more sons or daughters in consecutive births, couples plan for one more child expecting it as a girl or boy according to the sex of the living children. Another Indian study also reported the fact that after two or more surviving girl children, women were less likely to use any method, expecting a boy in the subsequent pregnancies [43]. These factors could not be considered independently under the obstetric factors of women given that the preference of number and sex of the children is deeply rooted in the social norms and values.

Women's autonomy was a significant factor affecting their contraceptive use. It was reported by other studies also that women with comparatively better decision-making power are more likely to use efficient contraceptive methods and continue to use them for a longer duration [44,45]. However, after adjusting for other factors, it was found to have no influence on contraceptive use. The reason for this could be found in this study itself. Almost all women in the study reported that the number of children and the use of contraception are decisions primarily taken by their partners. Therefore, other freedoms might not have an impact on these two factors.

CONCLUSION

The present study found that current contraceptive use by married women in Kasaragod district was influenced by factors such as religion, type of family, the number and sex of the living

children. Women's autonomy with respect to the household decision making, economic and movement freedom was not found to be sufficient to make decisions on contraception. These factors are not mutually exclusive, rather, closely knit through the social structure and norms that prohibit a woman to decide for herself and her children. The family planning programme in the district should more focus on women-centric approaches to enhance the contraceptive use, specifically temporary methods, considering the fact that most preferred contraception is female sterilization and that too occur at a younger age.

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REFERENCES

1. Economic and social affairs. Trend in contraceptive use worldwide 2015. 2015.
2. Census. Kerala's Development Paradox. 2011.
3. New JR, Cahill N, Stover J, Gupta YP, Alkema L. Levels and trends in contraceptive prevalence, unmet need, and demand for family planning for 29 states and union te rritories in India: a modeling study using the Family Planning Estimation Tool. Lancet Glob Health. 2017; 5: e350–e358.
4. Alagarajan M, Singh SK, Lhungdim H. National Family Health Survey (NFHS-4). Mumbai: International Institute for Population Sciences (IIPS) and ICF; 2015.
5. Kumar KG. Kerala and the Census of India 2011. @businessline. 2012.
6. NFHS-4. National Family Health Survey-4, Kasaragod. 2015.
7. Braun V, Clarke V. Thematic analysis. In: APA Handbook of Research Methods in Psychology. American Psychological Association; 2012; 57–70.
8. Bency A T J, Jose P. Epidemiological determinants of contraceptive practices among eligible couples in a rural area of Thrissur, Kerala. Natl J Res Community Med. 2016; 5.
9. Thulaseedharan JV. Contraceptive use and preferences of young married women in Kerala, India. Open Access J Contracept. 2018; 9: 1–10.
10. International institute for population sciences. DLHS-4 Fact sheet Kerala (internent). Mumbai: Ministry of health and family welfare; 2012.
11. Ram F, Shekhar C, Chowdhury B. Use of traditional contraceptive methods in India & its socio-demographic determinants. Indian J Med Res. 2014; 140: S17–28.
12. Dutta B. Female sterilization in India: A comparison of static and mobile services delivery. 2012; 4.
13. Hassan DH. A Study on the Prevalence and Determinants of Female Sterilisation Failure in A Tertiary Health Care Centre in Thiruvananthapuram, Kerala. 2015; 5.
14. United nations population division, Department of Economic and Social Affairs. Trends in contraceptive use worldwide. New York; 2015.
15. Suchithra E, Sujina C. Current Practice and Determinants of Family Planning Methods among Married Females in the Reproductive Age Group (15-49yrs) in a Rural Setting, Kerala. 2016.
16. Haveri S, Nath A. Unmet needs for family planning in a municipal area in North Kerala, India. Int J Reprod Contracept Obstet Gynecol. 2016; 2322–2327.
17. Kaneshiro B, Aeby T. Long-term safety, efficacy, and patient acceptability of the intrauterine Copper T-380A contraceptive device. Int J Womens Health. 2010; 2: 211–220.
18. Ann M, Rob S, Sanjay J. Myths and Misconceptions: Barriers to Reversible Contraception Use in a Rural Indian Village. 2006.
19. Islam S, Hasan M. Women Knowledge, Attitude, Approval of Family Planning and Contraceptive Use in Bangladesh. Asia Pac J Multidiscip Res. 2016; 4: 76–82.
20. Kerketta S, Kumar A. Knowledge of family planning and current use of contraceptive methods among currently married women in Uttar Pradesh, India. 2015; 2.
21. Olalekan AW, Olufunmilayo A-OE. A Comparative Study of Contraceptive Use among Rural and Urban Women in Osun State, Nigeria. 2012.
22. Centre for developmental studies. Rural-Urban Continuum: Concept and Importance. 2006.
23. Huda FA, Robertson Y, Chowdhuri S, Sarker BK, Reichenbach L, Somrongthong R. Contraceptive practices among married women of reproductive age in Bangladesh: a review of the evidence. Reprod Health. 2017; 14.
24. Asiimwe JB, Ndugga PPN, Mushomi JJM. Socio-Demographic Factors Associated with Contraceptive Use among Young Women in Comparison with Older Women in Uganda. ICF International Calverton, Maryland, USA; 2013.
25. Islam Mondal N, Morshad Nasir Ullah M, Islam R. Sociodemographic and Health Determinants of Inequalities in Life Expectancy in Least Developed Countries. 2015; 4: 1–10.
26. Zohirul Islam A, Islam Mondal N, Khatun L. Prevalence and Determinants of Contraceptive use among Employed and Unemployed Women in Bangladesh. Int J MCH AIDS. 2016; 5: 92–102.
27. Global issues and trends. factors influencing sterlization use and outcome. In Engender health; 2002.
28. Lakshmi DSG, Chandrasekhran DPA, RadhaRani DG. A study on Factors Influencing the choice of Permanent Method of Family Planning. 2015; 7.
29. Ministry of Health and Family Welfare,GOI. Annual Report of Department of Health and Family Welfare 2016-17. 2016; 81–97.
30. Johnson OE. Determinants of Modern Contraceptive Uptake among Nigerian Women: Evidence from the National Demographic and Health Survey. Afr J Reprod Health. 2017; 21: 89–95.
31. Solanke BL. Factors influencing contraceptive use and non-use among women of advanced reproductive age in Nigeria. J Health Popul Nutr. 2017; 36: 1.
32. Oliveira IT, Dias JG, Padmadas SS. Dominance of Sterilization and Alternative Choices of Contraception in India: An Appraisal of the Socioeconomic Impact. 2014.
33. Pawar AT, John A, Kumar D. Family Planning Practices in Rural Kerala. Sch J App Med Sci. 2014; 2: 19–21.
34. Abdulla S. Religious Affiliation and Contraceptive use in Kenya. 2014.
35. Agadjanian V. Religion and Contraception in Mozambique: A Multidimensional Analysis. Center for Population Dynamics Arizona State University; 2011.
36. Mahmood N, Ringhem K. Factors Affecting Contraceptive Use in Pakistan. Pakistan; 1996.

37. Pushpa SP, Venkatesh R, Shivaswamy MS. Study of fertility pattern and contraceptive practices in a rural area - A cross-sectional study. Indian J Sci Technol. 2011; 4.

38. Hajason J, Piña K, Raveloharimisy J. The Influence of Family Dynamics on Contraceptive Use in Madagascar and the Ensuing Impact on Family Well-Being. 2013.

39. Gupta A, Roy TK, Sarker G, Banerjee B, Ghosh S, Pal R. Determinants of contraceptive practices among eligible couples of Urban Slum in Bankura District, West Bengal. J Fam Med Prim Care. 2014; 3: 388.

40. Osmani AK, Reyer JA, Osmani AR, Hamajima N. Factors influencing contraceptive use among women in Afghanistan: secondary analysis of Afghanistan Health Survey 2012. Nagoya J Med Sci. 2015; 77: 551–561.

41. Chidinma Salami I, Oladosu M. Socio-Demographic Factors, Contraceptive Use and Fertility Preference among Married Women in South Region of Nigeria. 2016.

42. Jayaraman A, Mishra V. The Relationship of Family Size and Composition To Fertility Desires, Contraceptive Adoption and Method Choice in South Asia. 2009; 29–38.

43. Prusty RK. Use of Contraceptives and Unmet Need for Family Planning among Tribal Women in India and Selected Hilly States. J Health Popul Nutr. 2014; 32: 342–355.

44. Saleem S, Bobak M. Women's autonomy, education and contraception use in Pakistan: a national study. Reprod Health. 2005; 2: 8.

45. Kohan S, Talebian F, Ehsanpour S. Association between women's autonomy and family planning outcome in couples residing in Isfahan. Iran J Nurs Midwifery Res. 2014; 19: 451–455.

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