# INTRODUCTION

***"For most women, including women who want to have children, contraception is not an option; it is a basic health care necessity."***

-Louise Slaughter

The world is in the midst of a dramatic expansion in population and it may be overburdened by its success: the decline in death rates and the continued high birth rates in developing countries result in rapid population growth.[1] India accounts for 2.4% of the world's surface area yet it supports more than 17.5 % of the world's population. India's population as per 2011 census was 1.21 billion second only to China in the world, and is estimated to overtake China by 2050.[2] The single most threat of India's health, economic and social development is uncontrolled population growth[3] and the rate of population growth is a matter of concern to the policy makers.[4]

Family planning has crucial strategy to halt the fast population growth, to reduce child mortality rate and to improve maternal health in developing countries. [5] World Health Organization defined Family planning as "A way of thinking and living that is adopted voluntarily, upon the basis of knowledge, attitudes and responsible decisions by individuals and couples, in order to promote the health and welfare of the family group and thus contribute effectively to the social development of the country".[6]

India became the first country in the world to formulate a National Family Planning Programme in 1952, with the objective of "reducing birth rate to the extent necessary to stabilize the population at a level consistent with requirement of national

economy.[7] Family planning is one of the least expensive and most cost effective strategy that the government has taken to have more lasting impact on health of women. This programme in India has experienced significant growth and adaptation over the past half century since its inception. During this period, financial investments in the programme have substantially increased and service delivery points have significantly expanded.

The range of contraceptive products delivered through the programme has been widened. Multiple stakeholders, including the private sector and non-governmental sector, have been engaged in providing contraceptive services. Of late, the programme has been integrated with the broader Reproductive and Child Health Programme.[8]

Inspite of all these, several issues continue to daunt the programme and many goals remain under-achieved: a significant proportion of pregnancies continue to be unplanned; the contraceptive needs of millions of women remain unmet; several subpopulation groups including adolescents and men continue to be neglected and under-served; and contraceptive choice remains conspicuous by its absence, as is quality of care within the programme.

Couple protection rate (CPR) is an indicator of the prevalence of contraceptive practice in the community. It is defined as "The percent of eligible couples effectively protected against child birth by one or the other approved methods of family planning.[9] Contraceptive prevalence is also an indicator of access of maternal and child health including family planning services which is one of the eight element of primary health care. Population stabilization and a gradual lowering of population growth is the basic aim behind contraceptive practice.

The extent of acceptance of contraceptive methods still varies within societies and also among different castes and religious groups. The factors responsible for such varied picture operate at the individual, family and community level with their roots in the socio-economic and cultural milieu of Indian Society.[10] We see a contrast between the knowledge of contraception and acceptance of family planning methods because of economical status, social hierarchies and of course religious faith.[11]

More than 100 million women in developing countries or about 17% of all married women would prefer to avoid a pregnancy but are not using any form of family planning. Not infrequently, opposition from the male partner has been found to thwart aspirations of the female to use family planning methods.[12] Such opposition may arise because of the apprehension that allowing women freedom to make reproductive decisions will: [a] erodes the authority of the male partner within the family, [b] encourage the wife to be unfaithful, or [c] lose face within the community. It is also pointed out that even if contraceptive use is approved in theory, it may be disapproved in practice [13] reflected in the refusal to use male condoms. In some instances, women have been documented to have made covert use of contraceptives; this exposes women to violence if found out by their male partners.

"It is estimated that 1, 00,000 maternal deaths could be avoided each year if all women who said they want no more children were able to stop child bearing" and "Achieving adequate birth spacing (more than two years apart) could reduce child death by up to a third in some countries".[14]

Therefore prevalence of utilization of contraceptives will have greater impact to programme managers for designing programme, proper implementation and evaluation of their contribution regarding family planning and thereby reducing

unintended pregnancies. In this study along with the assessment of knowledge and use of contraceptive among urban women, special importance was given to know the prevalence of gender preference. Thus with the above perspectives the present study was undertaken to assess the current status of contraceptive practice among the eligible couples, to determine social, demographic, economic covariates influencing it, and to recommend suggestive measures for promotion of contraceptive acceptance.

# OBJECTIVES OF THE STUDY

- To know the prevalence of contraceptive use among married women.
- To study the factors influencing the use of contraceptive.

# REVIEW OF LITERATURE

According to Best, review of literature helps in many ways. It helps to assess what is already known, what is still unknown and what is untested. Also it justifies the need for its replication and throws some light on the feasibility of the study and problem that may encounter. It also helps to cover methodology tools with shed light on ways to improve the efficiency of data collection to obtain useful information and on how to increase the effectiveness of data analysis.[15]

Contraceptive are devices, techniques and methods used to prevent fertilization. The commonly used contraceptive devices include condom, intra uterine contraceptive device, female condom, cervical cap, and diaphragm. Hormonal contraceptive inhibit female ovulation thus preventing fertilization. These include injectable and oral contraceptive. The most common hormonal contraceptive is the combined oral contraceptive (OC) pill, commonly referred as "The Pill", which includes a combination of an estrogen and progestin. The minipill is another oral contraceptive pill containing only synthetic progestogen. The currently used depot preparation is norplant implant. Sterilization is a permanent form, providing contraception using surgical techniques, such as tubal ligation for female, and vasectomy for male. Emergency contraceptive, or "morning-after pills", are the drugs that prevent pregnancy which is taken after sexual intercourse which disrupt ovulation or fertilization in order.[1] The rhythm method is the only birth control method (besides total abstinence) which is officially approved by the Roman Catholic Church. It is also referred to as "safe period or temporary abstinence."

**History of contraception:**

The literature regarding fertility regulation at the personal level dates back to the 13th century and references regarding to fertility regulation exist in many historical records. The methods to which the ancient scholars refer fall into three general categories:

1) Those that seemed reasonable at the time but are now futile e.g., wiping out the vagina after intercourse – Soranus.

2) The reasonable and perhaps effective methods like using honey, pepper, alum, or lactic acid as pessaries and barriers.

3) The irrational and noticeably ineffective methods such as the woman holding her breath at the time of ejaculation or jumping backward seven times after coitus.

The use of dung of animals, such as crocodiles (Petri Papyrus), elephants (Rhazes), or mice (Pliny) to manufacture vaginal pessaries is perhaps more of a Freudian method than pharmacologic concerns, although as Himes says, most animal dung is alkaline. Among descriptions that come close to certain modern method of contraception are Jewish references to “cohabit with a sponge.”

Most sections of the society are aware that withdrawal of the penis before ejaculation reduces the possibility of pregnancy. The prevalence of coitus interruptus in historical and modern societies varies; both early and current references regarding this are relatively common in Jewish, Christian, and Islamic texts.

By the turn of the 19th century, all the major leads in contraceptive development had taken place. Condoms were described as protection against venereal disease by Fallopius as early as 1504. Female barrier methods were well established, attempts were made to block the cervix with metal pessaries. The devices required an intrauterine portion to hold them in place, and sometimes even they broke, but they still acted as successful contraceptives. The biologic possibility of imitating early pregnancy to inhibit ovulation was well understood by the Austrian physiologist Haberlandt when he published a series of papers, beginning in 1921, on what he called "hormonal sterilization". The female sterilization operation had been described in 1881. In short, the scientific basis for all the modern methods of contraception was established by the end of World War I. Social and family life were changing and the demand for family planning was strong. Professional groups were already having small families. The 1911 British Census showed a range of advanced fertility (Table 1).[16]

**Table 1. Fertility by occupation: 1911 Census (Britain) [16]**

| Group | Births per 1000 men younger than age 55 |
|---|---|
| Clergy | 96-101 |
| Doctors | 103 |
| Policemen | 153 |
| Dock labourers | 231 |
| Miners | 258 |
| General labourers | 438 |

A community based cross sectional study conducted among the married women in urban Bangalore to know the knowledge about contraception showed that 176 (58.6%) were currently using methods of contraception. Among the study participants, 140 (46.7%) were aware of male sterilization and 129 (92.2%) had negative opinion towards male sterilization. In the study group, 92 (30.6%) of them first named contraceptive method was OC Pills and the first source of information for the named method was Health personnel 189 (66.54%), 234 (96.7%) women told limiting birth as the reason to use of contraception, Majority 280 (93.4%) of husbands of study population had agreed for contraception and only 20 (6.6%) had disagreed. Majority 284 (94.4%) of husbands wanted same number of children as wife and 15 (5%) wanted more number of children than wife. In the study group 291 (97%) of women were involved in decision making for contraception usage.135 (76.7%) of women accessed contraceptives from tertiary government hospital.[17]

The cross sectional study done among Muslim women of urban slums of Raichur, showed that 76.8% women were literates, 39% women didn't use any contraceptive till they completed family and 86.5% women were aware of all the methods of contraception. Among study participants, 36.6% received information from doctors. Only 11% women were aware of emergency contraception. Despite 76.8% literacy and 86.5% of awareness of contraception, contraceptive practice was low among women. Nearly 57 (69.5%) of women reported having some kind of gynaecological symptoms. Among all symptomatic women, 43.9% women did not seek care for their reproductive health problems as they considered their problems were not serious enough to seek care. Delaying marriage and first pregnancy in adolescents will reduce the pregnancy and child bearing related complications and

will help in improving their educational status and thereby improving scope for their empowerment.[18]

A hospital based study was done among 705 women of reproductive age group attending K. S. Hegde Medical College Hospital, Mangalore to know the contraceptive practices showed that, 671 (95.2%) were aware of one or multiple methods of contraception, 615 (87.2 %) accepted the contraceptive practice, and 495 (71.2%) followed or were following contraception at the time of study. Of 705 women, 366 (51.9%) followed or used temporary methods, 227 (32.2%) followed permanent method of contraception. Awareness about the contraception is not sufficient enough to use contraception in the community, also shows that more programmes are required to combat the influence of various factors on contraception usage, and emphasizing on the positive effects of the use of contraception.[2]

A study was done on currently married women residing in an urban slum of Bijapur, to assess the knowledge and perceptions towards emergency contraceptives showed that of the 300 women participated in the study, only 68 (22.7%) heard of emergency contraception, 65 (21.6%) of these women knew about hormonal method of Emergency Contraception and only 12 (4%) knew the correct timing of Emergency Contraceptive pills. Mass media (15.3%) was major source of information and private hospitals (17.6%) were main source for availing service. The knowledge of emergency contraceptive is poor among women. Improved Information Education Communication activities will help to create awareness and better utilization of emergency contraceptives, thus preventing morbidity and mortality from unwanted pregnancy and childbirth.[19]

A study was undertaken to assess the post-natal coverage and contraceptive use in Bhadravati Taluk of Shimoga district, Karnataka. Of 210 deliveries, 58.5% were conducted in government institutions; Lower segment caesarean section was performed in 80 (38.3%).Nearly 44.5% had three or more postnatal checkups. In the study population, 35.2% underwent tubectomy, 15.3% were already pregnant at the time of interview and none of their husbands underwent vasectomy. In the rest of sample, spacing methods were used such as Copper T (16.4%), Oral contraceptive pill (7.7%), and condom (4.8%), and 9.6% had lactational amenorrhea; 67.6% of women had unmet need for contraception, and 61.1 % of live births occurred within 30 months from the previous live birth.[20]

Among the slum dwelling migrant women in coastal Karnataka, a cross sectional survey was done to study the determinants of contraceptive usage, showed that the contraceptive prevalence rate was 44.3% and the most preferred method of contraception was female sterilization (97.84%). Marital duration and parity were independently associated with contraceptive usage. The lack of family planning knowledge and opposition to its use were the main barriers, compounded by lack of autonomy due to the poor status of migrant women. Universal reliance on female sterilization and non-acceptance of spacing methods could account for the low CPR. Knowledge and good attitude did not ensure contraceptive usage among these slum dwelling migrant women. [21]

The study was conducted to assess the knowledge, attitude and practice regarding emergency contraceptives among 286 married women in age group 15-45 years residing in the field practice area of Urban Health Centre attached to Department of Community Medicine, Bagalkot, Karnataka. The results found that

56% women had accepted one or other contraceptive. Only 12% women were aware about emergency contraception while among literates, 29% were aware about emergency contraception out of which only 4.38% had idea about the correct dosage, availability and side effects of the pill. Willingness to use emergency contraception was seen among 29% of women out of which majority i.e. 54.78% were literate and 68.32% were employed. Among the study population 3% of the women actually practiced emergency contraceptive. Educational status of female had significant association with awareness about emergency contraceptive pill and positive attitude towards usage of emergency contraceptive pill.[22]

A study was done to assess the socio-demographic determinants of contraceptive use among married women from urban area of North Karnataka, showed that the prevalence of contraceptive use was found to be 58.05% in the study area. Around 3/4$^{th}$ of the subjects i.e. 72.28% adopted tubectomy as method of contraception. None of the respondents had opted for vasectomy as contraceptive measure. Temporary methods were followed by 27.72% of current contraceptive users. Contraceptive acceptance was more in women who were graduate and above (95.45%), women from a nuclear family (62.38%), and upper middle socioeconomic class women (81.46%). Significant association was found between contraceptive acceptance and literacy status, occupation, type of family, socioeconomic status and age at marriage. Temporary contraception was better accepted by those females who were educated up to high school and above, among those who were occupied in skilled and above occupation.[23]

A study was done to know the use of traditional contraceptive methods in India and its socio-demographic determinants among Indian women. The data from

the three rounds of National Family Health Survey (NFHS) were used. The latest round of the District Level Household Survey (2007-2008) revealed that 6.7 per cent currently married women were using traditional contraceptive methods in India. More than half of the currently married women (56%) have ever used these methods. In terms of socio-demographic determinants, the odds ratios of using these methods were significantly higher for women aged 35 years and above, rural, Hindu, other than Scheduled Castes/Tribes (SCs/STs), secondary and above educated, non-poor, having two plus living children, and at least one surviving son in most of the States as well as at the national level. The north-eastern region showed higher odds ratios (5 times) of women using traditional contraceptive methods than the southern region. A large number of currently married women have ever used the traditional contraceptive methods in India. On the basis of the findings from this study, the total size of those women who were using traditional methods and those who were having unmet need, and are required to use modern spacing methods of family planning in achieving the reproductive goals .[24]

A study was conducted among women attending urban health centre in Punjab showed that contraceptive prevalence was found to be 53.84% .Among the permanent sterilization methods, the most commonly used method was tubectomy (4.23%), while 0.7% of eligible couples opted for vasectomy. Among spacing methods condom was the most common method used (41.6%). A huge contrast was seen in the context of socio-economic status where most of the families belonging to the upper socio-economic status were using one or the other contraceptive method while it was only 1/3$^{rd}$ of eligible couples belonging to lower socio-economic status. Increased usage of contraceptive requires continuous motivation and the factors affecting the prevalence rates of usage should be found in the local community.[6]

A cross sectional study was conducted among married women residing in urban slums of Lucknow, it was found that 99.2% had the knowledge of contraceptive but its use was 46.7%.Most commonly used contraceptive was condom. Among women who had ever used contraceptive, about 56.3% women were current users. Fears of side effects/ health concern were the main reason for discontinuing contraceptive use. In this study though the knowledge of contraception among women was good but contraceptive use was far lagging behind. [25]

The study was conducted among the adolescent married women of Tamilnadu, showed that about 92% of women were currently not using any method of contraception. In terms of social characteristics of married women, who were currently using any one of the family planning method, caste was found to be highly significant. In economic characteristics percent of using contraception is considerably higher in women with medium standard of living. This study is indicative implementation of new programme which may increase awareness about family planning in Tamil Nadu.[8]

A cross-sectional population based study was conducted to find out contraceptive prevalence in married women of reproductive age group and to study epidemiological correlates affecting contraceptive practices in the village Chanai, Beed district of Maharastra. Out of 512 married women 48.63% were contraceptive acceptors. Contraceptive acceptance was more in women who were graduate and above (82.76%), women from nuclear family (58.79%), Upper middle socioeconomic class (79.62%). Contraceptive acceptance was lowest in agricultural labourer (38.87%). A significant association was found between contraceptive acceptance and literacy status, occupation, type of family, socioeconomic status and age at marriage.[7]

A cross-sectional, community based study was conducted among 352 married women of 15 - 49 year age group to assess the Knowledge and practice of family planning methods of urban field service area, Kasba of Calcutta National Medical College, Kolkata. Only 9% had no idea about contraception. Family members were the major source of knowledge (39.8%) followed by Television (38%). Oral contraceptives pill (52.6%) was the most commonly used contraceptive followed by condom (24. 6%). About 2/3rd of the study population were currently using no contraceptive methods. The percentage of non users is more in case of per capita family income of Rs <1000 and male sex of the last child. Common reasons for not using any method were desire of a child (42.0%), amenorrhoea since last delivery (26.1%) and lack of motivation (20.2%). Most of the couples (53.5%) themselves made decisions on contraception though role of mother-in-law (6.8%) was not negligible. [10]

The cross sectional study was carried out in 10 villages of a rural area of Ludhiana, Punjab to assess the contraceptive practices and related factors among married women showed that there were 12.9% non users, 49.5% were using spacing methods and 37.6% had accepted permanent method. A highly statistical significant association was observed between parity and contraceptive usage. Education of husband and education of study subjects significantly affects the choice of family planning method. The acceptance for permanent methods of family planning was higher in subjects having 1 or 2 male children. Only 1.2% couples accepted sterilization without having a male child while the acceptance of sterilization was 52.9% among subjects having two living sons.[3]

A study was conducted about knowledge, attitude and practice of natural family planning methods in a population with poor utilization of modern contraceptives in Nigeria. Result showed that the awareness rate for rhythm method, lactational amenorrhea method and coitus interruptus was 50.7%, 42% and 36.1% respectively. There is a relatively low level of awareness of natural family planning methods in the study population, poor utilization and wrong use of methods. Therefore, improving the correct level of information on natural family planning methods is likely to improve the use of both natural family planning and modern contraceptive methods. [26]

A cross-sectional study was done to find the contraceptive use among married women living in rural China showed that the prevalence of contraceptive use in the study population was 93.9% (19,599/20,878 eligible women). Among the women using contraceptive, 53.1% used sterilization (female and male) and 35.4% chose an intrauterine device. In total, 11.4% women used short-acting contraceptive (SAC) method: condom and pill accounted for 8.7% and 1.0% respectively. Young age, high level of education, low parity, increased number of abortions, low frequency of sexual intercourse, long duration between marriage and delivery and marriage after 1994 were all associated with SAC usage. Although contraceptive use was high in rural China, the participants' awareness of free selection of contraceptive method and the rate of SAC use were both low. Appropriate and diverse family planning services should be provided to meet the needs of women living in rural areas. [27]

A descriptive cross sectional study was done to know the prevalence of contraceptive use among married women of reproductive age group in a rural area of Bangladesh showed that among 265 respondents, 62.3% were using contraceptive

method at the time of study and rest 37.7% were not using due to some different reasons, such as pregnancy, breast feeding, eagerness to take child etc. Maximum couple (81.9%) took decision jointly to adopt contraceptive method and most of them (69.8%) lived in a nuclear family. Majority (62.63%) had 1 to 2 children. Mostly used contraceptive method among ever users (81.69%) and current users (60%) was oral contraceptive pill. Majority (45.28%) mentioned no side effect from any of the method. Relatives and neighbours were the highest informer (33.96%) than the family planning workers (20.75%) and even mass media (7.54%). In this study the prevalence of contraceptive use was found 62.3%. [1]

A study done among the married women of Afghanistan to know the prevalence of contraceptive use and the predictors for the use of contraceptives showed that the prevalence of self-reported current use of any contraceptive method was 21.8% at the national level though there was a wide variation in practice between provinces. Herat province in the West region had a highest contraceptive prevalence rate of 49.4% while Paktika in the Southeast region had the lowest CPR of 2%. Multiple logistic regression analysis showed that a family size of greater than 6 living children strongly predicted contraceptive use. Other independent predictors included: secondary or high level of education and being in the wealthiest stratum. Rural residence predicted a lower use of contraception. Contraceptive uptake rate was low overall with wide inter provincial variation. Strengthening female education, targeting married women in rural area and women with no education may enhance the effectiveness of National Family planning program in Afghanistan. [28]

The study was conducted about family planning practices before and after childbirth in Lusaka, Zambia. Among 376 of these women, the interviews were

conducted in their homes or at the postpartum clinic at the university teaching hospital at the end of puerperium. Family planning method was used by 34% of the women before the present childbirth. Most of those (90%) had used modern method. Women with eight and more years of education used modern contraceptive method more often than those with less education. One year after delivery, 64% of the women were using modern or traditional family planning method, of those who used traditional method, 15% relied on lactational amenorrhea. Result showed that 66% reported knowledge of at least one contraceptive method, 34% had no contraceptive knowledge, 97% of those with some knowledge knew about modern method, 56% of adolescents were unaware of any contraceptive method and 67% is not using any contraceptive.[29]

The study was conducted to assess the knowledge about the use of traditional method of contraception among Turkish couples. The study was conducted among 5257 ever married women aged 15-49 years. The findings were that contraceptive prevalence increased from 38% in 1978 to 63% in 1988 among married women, and among women exposed to the risk of pregnancy from 50% to 70%. 26% of married respondents and 41% of all respondents practiced withdrawal method. Only 2% had tubal ligation. Withdrawal as a method declined from 44% to 41%, traditional methods in general declined from 65% to 51%, and ineffective methods declined from 7% to 3%. Traditional methods were the most widely used in the north, but in general, traditional methods were widely used in all regions. In the north, 54% used withdrawal method and 60% used only traditional method, compared to all the other regions, where 36-42% practiced withdrawal method 47-51% used any traditional method.[30]

# METHODOLOGY

The present study was conducted in three field practice areas namely Ashoknagar, Ramnagar, Rukmininagar of Department of Community Medicine, Jawaharlal Nehru Medical College, Belagavi. Ashoknagar caters to a population of 31,933 with 12 Anganwadis, 5,728 eligible couples, 16 educational institutions, 10 health care centers and predominant language spoken in this area is Hindi. Ramnagar caters to a population of 32,815 with 18 Anganwadis, 5,200 eligible couples, 16 educational institutions, 15 health care centres and predominant language spoken in this area is Kannada. Rukmininagar caters to a population of 43,600 with 46 anganwadis, 6,450 eligible couples, 18 educational institutions, 18 health care centres and predominant language spoken in this area is Hindi and Marathi.

## STUDY POPULATION

Married women aged 15 to 44 years residing in three urban health centres, Belagavi.

## STUDY DESIGN

A community based cross-sectional study

## STUDY PERIOD

The study was conducted over a period of one year from 1$^{st}$ January to 31$^{st}$ December 2015.

**SAMPLE SIZE**

Calculated using the formula:

$n = 4 p q / d^2$

n = sample size

p = 40% (Prevalence of contraceptive use)[9]

q = (p- 100%) = (40%-100%) = 60%

d = relative error 10% of p, i.e 10% of 40% = 4

$$n = \frac{4 \times 40 \times 60}{4X4}$$

$$= 600$$

**SAMPLING PROCEDURE**

The population of Rukmininagar is 43,600 and number of eligible couple are 6,450.

The population of Ashoknagar is 31,933 and number of eligible couple are 5,728.

The population of Ramnagar is 32,815 and number of eligible couple are 5,200.

As population of eligible couple in all three health centres was almost in the same range, so we selected 230 subjects from each urban health centre. About 30 extra subjects from each study area were selected to take care of exclusion criteria. Sampling frame was available. Subject selection was done by computer generated random number.

**INCLUSION CRITERIA**

1. Married women between the age group of 15- 44 years.
2. Permanent residents of study area.

## EXCLUSION CRITERIA

1. Women who had undergone hysterectomy.
2. Women who had attained menopause.
3. Women with primary and secondary infertility.

## ETHICAL CLEARANCE

The study was approved from Institutional Ethics Committee for Human Subject's Research, Jawaharlal Nehru Medical College, Belagavi (Annexure I), Letter No. MDC/DOME/177.

## DATA COLLECTION PROCEDURE

The subjects were interviewed using predesigned and pretested questionnaire (Annexure III). A detailed questionnaire was prepared and was pretested and validated during the pilot study. It included information regarding socio-economic status, educational status, age at marriage, married life, total number of children, usage of contraceptive method, reason for non usage and knowledge about contraceptive method.

Study subjects were interviewed by the candidate in-person. Interview was carried out with adequate privacy in a quite comfortable room at their household. All the subjects were informed about the purpose of the study and after obtaining informed consent from the study subjects who were aged 18 years and above and assent from 15-17 years subjects (Annexure II), they were interviewed. It took about 20-30 minutes for interviewing a study subject.

## DATA ANALYSIS

Data was entered in Excel sheet after coding. SPSS (Trial version) 21.0 software was used for analysis of the data. Numerical variables were analysed as mean and standard deviation. Categorical data were summarized using percentage. Chi-square test was used to test the association between various study variables.

## DEFINITION OF STUDY VARIABLES

1. **Age:** Calendar age in years was considered for the study (nearest completed year)
2. **Illiterate:** A person who cannot read and write with understanding in any language.
3. **Primary school:** A person who has studied from first to seventh standard.
4. **Secondary school:** A person having studied at least until $8^{th}$ standard but not beyond $10^{th}$ standard.
5. **Post SSLC:** A person having studied at least until $11^{th}$ standard but not beyond $12^{th}$ standard.
6. **Graduate**: A person who had a bachelor's degree in any field.
7. **Nuclear family:** Married couple along with their dependent children who live in the same house.
8. **Joint family:** More than one married couple along with their dependent children who live in the same household. Male members are blood relatives and female members of the family are related by either marriage or blood.
9. **Socio-Economic status (SES):** Information regarding per capita income (in Rupees / month) was collected and socio-economic status was classified using Modified B G Prasad's classification for the study period (2015).[45] This was

obtained by multiplying per capita monthly income of 1961, (as suggested by BG Prasad) with the Multiplication factor.

| Socio-Economic Class | Prasad's classification 1961 (per capita income in Rupees/month) | Modified Prasad's classification 2015 (per capita income in Rupees/month) |
|---|---|---|
| **I** | 100 and above | 5965 and above |
| **II** | 50-99 | 2983-5964 |
| **III** | 30-49 | 1789-2982 |
| **IV** | 15-29 | 895-1788 |
| **V** | <15 | Below 895 |

Monthly Per Capita Income = $\frac{\text{Total monthly income of family}}{\text{Total members of family}}$

Modification was done with the aid of Multiplication factor (MF), which was obtained as below:

As our study period was from 1st January to 31st December 2015, the mean consumer price index for the period was considered.

Average consumer price index for year 2015 was 1210.

$$MF = \frac{\text{Value of consumer price index average for the study period (2015)}}{100} \times 4.93$$

$$= \frac{1210 \times 4.93}{100} = 59.65$$

**Modified B. G. Prasad** =Per capita family monthly income of 1961 (B.G. Prasad) x MF

10. **Eligible couple:** Currently married couple wherein the wife is in the reproductive age, which is generally assumed between the age of 15-45 years.
11. **Contraceptive method:** Preventive method to help women to avoid unwanted pregnancy.
12. **Abstinence:** Complete avoidance of sexual act.
13. **Coitus interruptus:** The male withdraws before ejaculation thereby preventing the deposition of semen into the vagina.
14. **Rhythm method:** Avoidance of sexual intercourse around ovulation. The method is based on the fact that the ovulation occurs from 12 to 16 days before the onset of menstruation. The fertile period is determined by subtracting 18 days from the shortest cycle and 10 days from the longest cycle which gives the first day and last day of the fertile period respectively.
15. **Lactational amenorrhea:** Lactation prolongs postpartum amenorrhea and provides some degree of protection against pregnancy. Regular breast feeding with atleast one feed at night is shown to prevent pregnancy for 6 months.
16. **Menopause:** The time of cessation of ovarian function resulting in permanent amenorrhea.
17. **Infertility:** Failure of a couple to conceive for one or more reasons.
18. **Primary infertility:** If conception has never occurred.
19. **Secondary infertility:** If patient fails to conceive after having achieved a previous conception.

# RESULTS

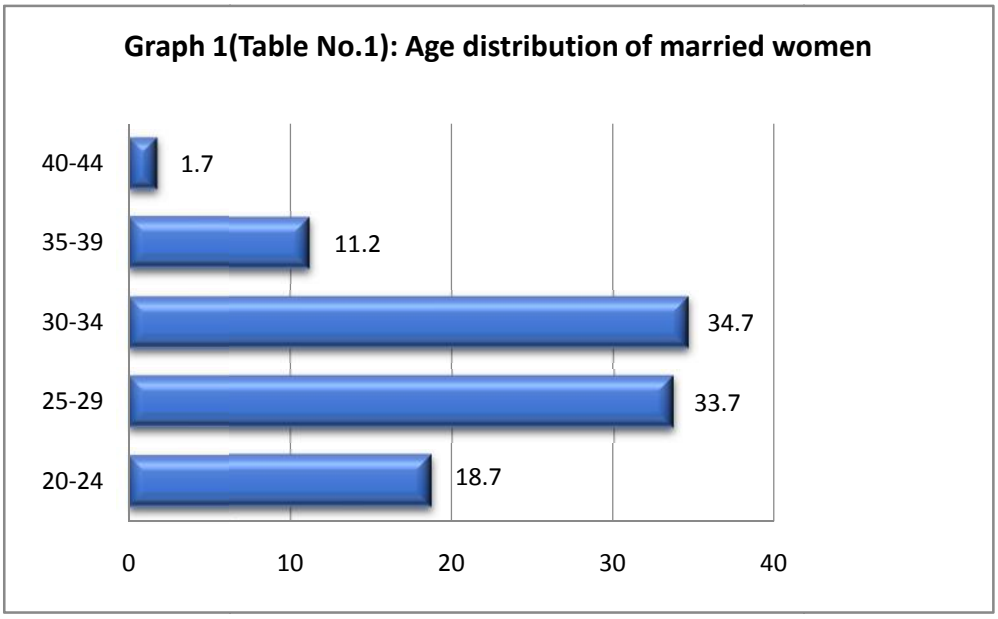
The present study was conducted in the three urban field practice areas of Department of Community Medicine, Jawaharlal Nehru Medical College, Belagavi among 600 married women during the period of January to December 2015. Most of the population can fluently speak and understand Kannada, Hindi and Marathi languages. The data obtained was tabulated and analyzed under following headings:

1. **Socio-demographic profile of married women**
2. **Assessment of knowledge and practice of married women regarding contraception**
3. **Association between socio-demographic factors and current use of contraception among married women**
4. **Association between knowledge score and practice of contraception among married women**

## I SOCIO-DEMOGRAPHIC PROFILE OF MARRIED WOMEN

**Table No. 1: Age distribution of married women**

| Age (in years) | Number | Percentage |
|---|---|---|
| 20-24 | 113 | 18.7 |
| 25-29 | 202 | 33.7 |
| 30-34 | 208 | 34.7 |
| 35-39 | 67 | 11.2 |
| 40-44 | 10 | 1.7 |
| **Total** | **600** | **100** |




In the present study, age of the married women ranged from 20 to 42 years. Out of 600 respondents, 113 (18.7%) women were in the age group of 20-24 years followed by 208 (34.7%) in 30-34 years, 202 (33.7%) in 25-29 years, 67 (11.2%) in 35-39 years and 10 (1.7%) in 40-44 years age group. The mean age (± SD) of the respondents was 29 ± 4.52 years.

**Table No. 2: Age distribution of study participants Husbands'**

| Age (in years) | Number | Percentage |
|---|---|---|
| 21-30 | 141 | 23.5 |
| 31-40 | 364 | 60.7 |
| 41-50 | 92 | 15.3 |
| 51-60 | 3 | 0.5 |
| **Total** | **600** | **100** |

The age of study participant's husbands' in the study ranged from 24 to 56 years. Most of the study participant's husbands' 364 (60.7%) belonged to age group 31-40 years, followed by 141 (23.5%) in age group of 21-30 years, 92 (15.3%) in age group 41-50 years and only 3 (0.5%) belonged to 51- 60 years age group. The mean age (± SD) of the study participant's husbands' was 35.21 ± 5.54 years.

**Table No. 3: Distribution of married women according to religion**

| Religion | Number | Percentage |
|---|---|---|
| Hindu | 302 | 50.3 |
| Muslim | 234 | 39.0 |
| Christian | 46 | 7.7 |
| Sikh | 15 | 2.5 |
| Jain | 3 | 0.5 |
| **Total** | **600** | **100** |

Out of 600 respondents studied, 302 (50.3%) women were Hindus, followed by 234 (39.0%) Muslim, 46 (7.7%) Christian, 15 (2.5%) Sikh and the least were 3 (0.5%) who belonged to Jain religion.

**Table No.4: Literacy status of married women and their husbands'**

| Literacy status | Married women | | Husbands' | |
|---|---|---|---|---|
| | Number | Percentage | Number | Percentage |
| Illiterate | 15 | 2.5 | 0 | 0 |
| Primary | 128 | 21.3 | 76 | 12.6 |
| Secondary | 172 | 28.7 | 115 | 19.2 |
| Post SSLC | 210 | 35.0 | 240 | 40.0 |
| Graduate | 75 | 12.5 | 169 | 28.2 |
| **Total** | **600** | **100** | **600** | **100** |

In our study, majority 585 (97.5%) of the women were literates and only 15 (2.5%) of them were illiterates. Out of 585 literates, 128 (21.3%) of them had studied up to Primary school, 172 (28.7%) up to Secondary school, 210 (35.0%) studied beyond SSLC and 75 (12.5%) were graduates. Among the husbands of married women, 76 (12.6%) of them had studied up to Primary school, 115 (19.2%) up to Secondary school, 240 (40.0%) studied beyond SSLC and 169 (28.2%) had pursued bachelors' degree and above.

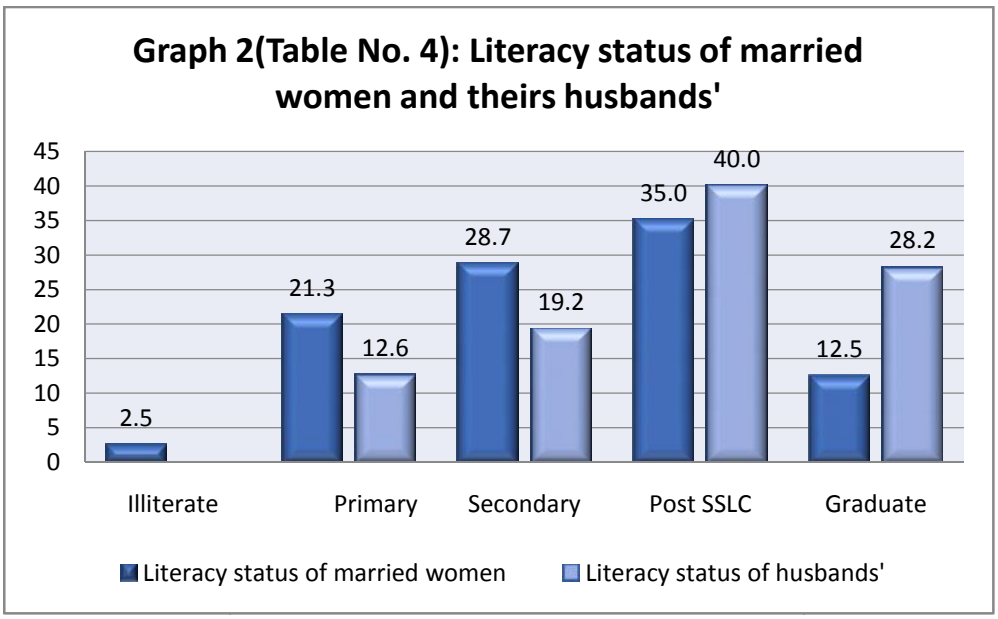



**Table No. 5: Distribution of the married women according to their occupation**

| Occupation | Number | Percentage |
|---|---|---|
| Housewife | 494 | 82.3 |
| Private Service/Self employed | 69 | 11.5 |
| Government Service | 37 | 6.2 |
| **Total** | **600** | **100** |

In our study, 494 (82.3%) of the women were housewives, 69 (11.5%) were working in private sector and few were self employed. The rest 37 (6.2%) were in government service.

**Table No. 6: Distribution of married women according to their husbands' occupation**

| Husbands' occupation | Number | Percentage |
|---|---|---|
| Government Service | 193 | 32.2 |
| Businessmen | 189 | 31.5 |
| Daily wage worker | 132 | 22.0 |
| Private Service | 86 | 14.3 |
| **Total** | **600** | **100** |

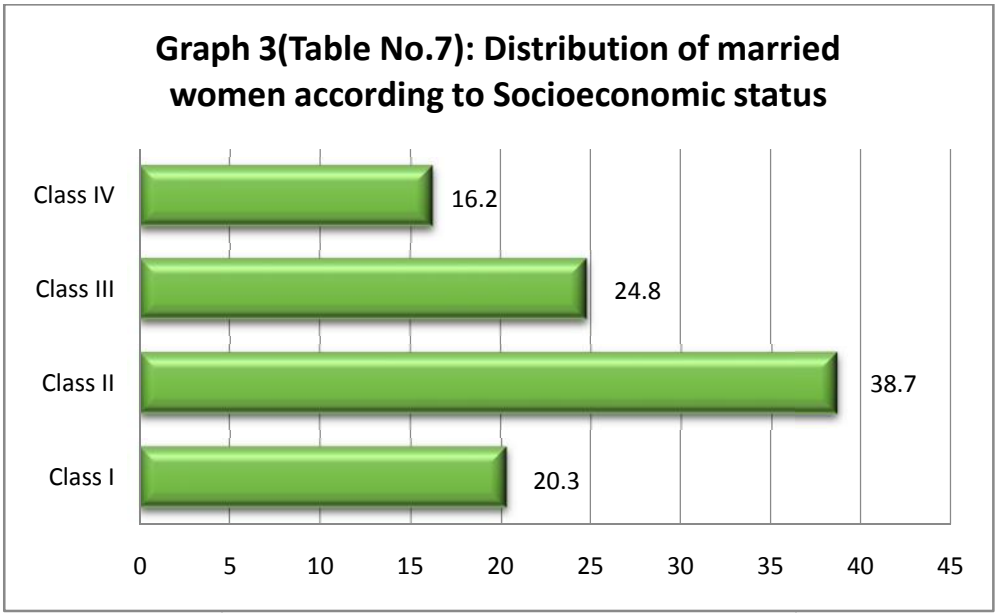
In the present study, 193 (32.2%) and 86 (14.3%) husbands' of study participants were in private and government services respectively, 189 (31.5%) were businessmen and 132 (22.0%) were daily wage workers.

**Distribution of married women according to the type of family:** In our study, 347 (57.8%) of the study participants belonged to nuclear family, 253 (42.2%) to joint family.

**Table No. 7: Distribution of married women according to socio economic status**

| Socio economic status | Number | Percentage |
|---|---|---|
| Class I | 122 | 20.3 |
| Class II | 232 | 38.7 |
| Class III | 149 | 24.8 |
| Class IV | 97 | 16.2 |
| **Total** | **600** | **100** |

In our study, according to the modified B.G. Prasad classification, 232 (38.7%) of study participants were from families of socioeconomic class II, 149 (24.8%) were from class III, 122 (20.3%) from class I, 97 (16.2%) from class IV and none of the women belonged to class V.




**Distribution of study participants according to age of marriage:** Of the 600 study participants, the age of marriage ranged from 18 – 28 years. The mean ( $\pm$ SD) age of the marriage was 20.35 $\pm$ 2.00 years.

**Table No. 8: Distribution of married women according to duration of married life**

| Duration of married life (in years) | Number | Percentage |
|---|---|---|
| 1-5 | 139 | 23.2 |
| 6-10 | 226 | 37.6 |
| 11-15 | 178 | 29.7 |
| ≥15 | 57 | 9.5 |
| **Total** | **600** | **100** |

Most 226 (37.6%) of the participants had the duration of married life ranging between 6-10 years, followed by 178 (29.7%) between 11-15 years, 139 (23.2%) between 1-5 years and 57 (9.5%) had ≥ 15 years of married life.

**Table No.9: Distribution of married women according to number of children**

| Number of children | Number | Percentage |
|---|---|---|
| None | 14 | 2.3 |
| One | 179 | 29.8 |
| Two | 280 | 46.7 |
| Three | 93 | 15.5 |
| Four | 34 | 5.7 |
| **Total** | **600** | **100** |

Among the 600 respondents, 280 (46.7%) of the women had 2 children followed by 179 (29.8%) with one child, 93 (15.5%) with 3 children, 34 (5.7%) with 4 children and only 14 (2.3%) of the married women had no children.

**Table No.10: Distribution of married women according to number of male and female children**

| Number of children | Male | | Female | |
|---|---|---|---|---|
| | **Number** | **Percentage** | **Number** | **Percentage** |
| None | 202 | 33.7 | 188 | 31.3 |
| One child | 275 | 45.8 | 276 | 46.0 |
| Two children | 108 | 18.0 | 77 | 12.8 |
| Three children | 15 | 2.5 | 51 | 8.5 |
| Four children | 0 | 0.0 | 8 | 1.4 |
| **Total** | **600** | **100** | **600** | **100** |

Among the study participants, 202 (33.7%) of the women did not have male child, 275 (45.8%) of the women had one male child followed by 108 (18.0%) had two male children and 15 (2.5%) of the women had three male children. Similarly among the study participants, 188 (31.3%) of the women did not have female child, 276 (46.0%) of the women had one female child followed by 77 (12.8%) had two female children, 51 (8.5%) of the women had three female children and 8 (1.4%) of women had four female children.

**Table No.11: Distribution of the married women according to age of last child**

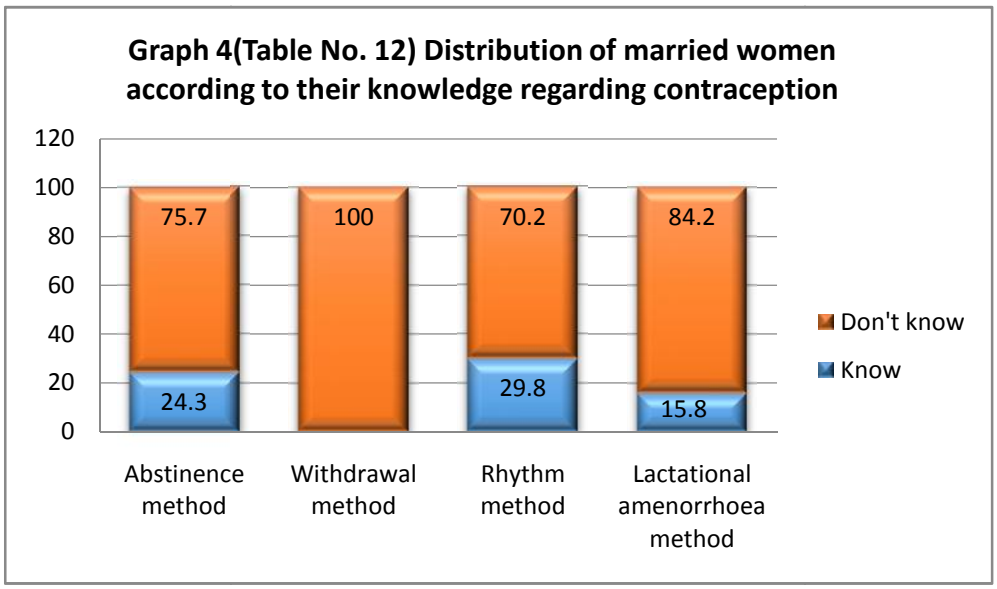
| Age of last child (in years) | Number | Percentage |
|---|---|---|
| No child | 14 | 2.3 |
| 1-5 | 409 | 68.2 |
| 6-10 | 111 | 18.5 |
| ≥10 | 66 | 11.0 |
| **Total** | **600** | **100** |

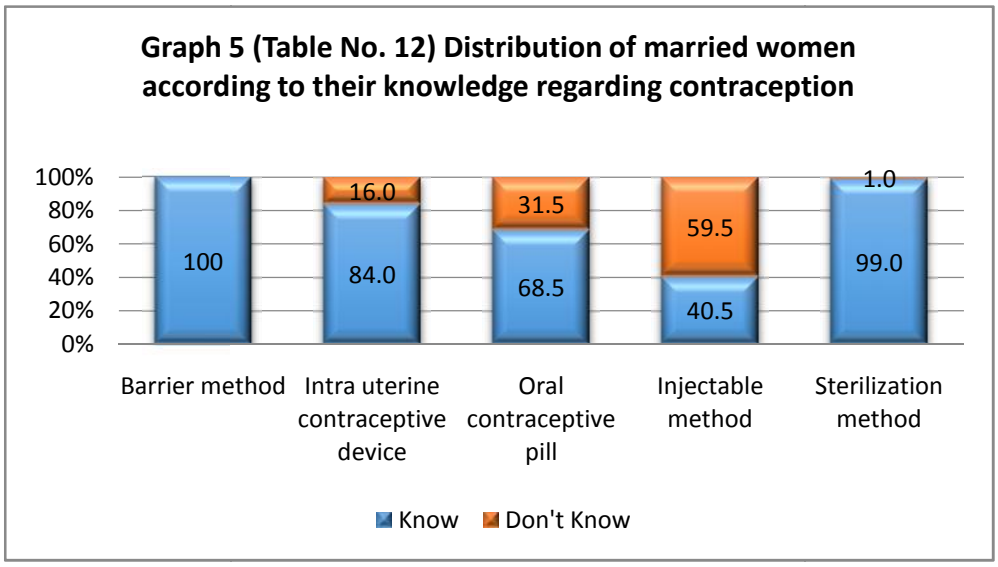
In our study among the 600 married women, the age of the last child ranged from 1-20 years. Most 409 (68.2%) of the women had last child with age between 1-5 years, 111 (18.5%) of women had last child with age between 6-10 years and 66 (11.0%) of them had last child with age more than or equal to ten years.

## II ASSESSMENT OF KNOWLEDGE AND PRACTICE OF MARRIED WOMEN REGARDING CONTRACEPTION

**Table No.12: Distribution of married women according to their knowledge regarding contraception**

| Knowledge regarding contraception | Number | Percentage |
|---|---|---|
| **Abstinence method** | | |
| Know | 146 | 24.3 |
| Don't Know | 454 | 75.7 |
| **Withdrawal method** | | |
| Know | 0 | 0 |
| Don't Know | 600 | 100 |
| **Rhythm method** | | |
| Know | 179 | 29.8 |
| Don't Know | 421 | 70.2 |
| **Lactational amenorrhea method** | | |
| Know | 95 | 15.8 |
| Don't Know | 505 | 84.2 |
| **Barrier method (Condom)** | | |
| Know | 100 | 100 |
| Don't Know | 0 | 0 |
| **Intra Uterine Contraceptive Device** | | |
| Know | 504 | 84.0 |
| Don't Know | 96 | 16.0 |
| **Oral contraceptive pill** | | |
| Know | 411 | 68.5 |
| Don't Know | 189 | 31.5 |
| **Injectable contraceptive method** | | |
| Know | 243 | 40.5 |
| Don't Know | 357 | 59.5 |
| **Sterilization method** | | |
| Know | 594 | 99.0 |
| Don't Know | 6 | 1.0 |
| **Total** | **600** | **100** |

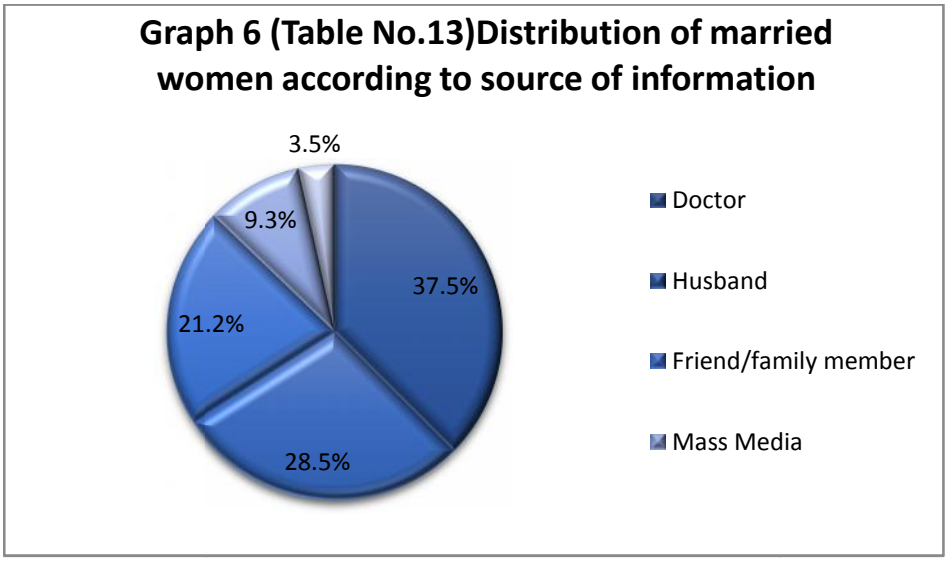



In our study, 600 (100%) of the women had knowledge regarding Condom and 594 (99.0%) of the women had knowledge about Sterilization method. Majority 504 (84.0%) of the women had knowledge about Intrauterine contraceptive device and most 411 (68.5%) of the women knew about oral contraceptive pill. Only few had knowledge about injectable 243 (40.5%), rhythm method 179 (29.8%), abstinence method 146 (24.3%), lactational amenorrhoea method 95 (15.8 %) and none of them had knowledge about withdrawal method.

**Table No. 13: Distribution of married women according to source of information**

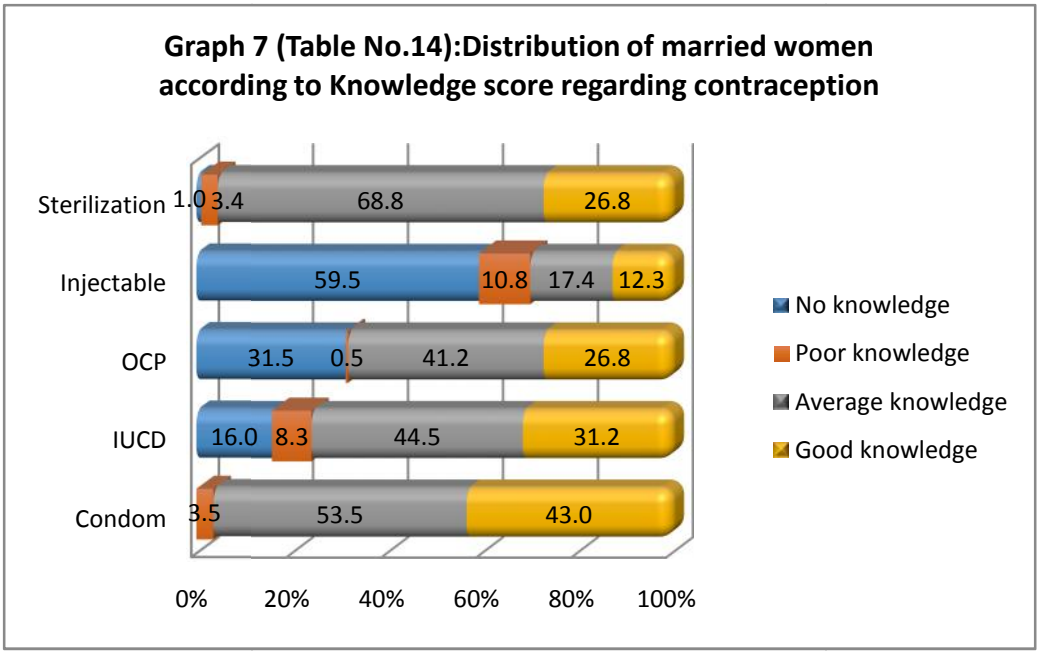
| Source of information | Number | Percentage |
|---|---|---|
| Doctor | 225 | 37.5 |
| Husband | 171 | 28.5 |
| Friend/family member | 127 | 21.2 |
| Mass Media | 56 | 9.3 |
| Health worker female/ASHA worker | 21 | 3.5 |
| **Total** | **600** | **100** |




Among the 600 married women who had knowledge about atleast one contraceptive method, the source of information were: 171 (28.5%) from husband, 225 (37.5%) from doctor, 127 (21.2%) from friend or family member, 56 (9.3%) of them acquired information through mass media and 21 (3.5%) from health personnel ( Female health worker or ASHA worker).

**Table No.14: Distribution of married women according to Knowledge score regarding contraception**

| Knowledge Score | Condom | | IUCD | | OCP | | Injectable | | Sterilization | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Zero (No knowledge) | 0 | 0.0 | 96 | 16.0 | 189 | 31.5 | 357 | 59.5 | 6 | 1.0 |
| One (Poor knowledge) | 21 | 3.5 | 50 | 8.3 | 3 | 0.5 | 65 | 10.8 | 20 | 3.4 |
| Two (Average knowledge) | 321 | 53.5 | 267 | 44.5 | 247 | 41.2 | 104 | 17.4 | 413 | 68.8 |
| Three (Good knowledge) | 258 | 43.0 | 187 | 31.2 | 161 | 26.8 | 74 | 12.3 | 161 | 26.8 |
| **Total** | **600** | **100** | **600** | **100** | **600** | **100** | **600** | **100** | **600** | **100** |



In our study, we did knowledge scoring according to knowledge of contraception among married women based on three criteria.The study participants were asked to name the different contraceptive method along with place of availability and side effects following their usage. Each correct answer was scored one and nonresponse or wrong answer was scored zero. Depending upon the knowledge score the participants were categorised, No knowledge (score zero), Poor knowledge (score one), Average knowledge (score two) and Good knowledge (score three).

According to knowledge score, among the married women who had good knowledge, knowledge score for condom 258 (43.0%) was highest followed by intrauterine contraceptive device 187 (31.2%), oral contraceptive pill 161 (26.8%), sterilization 161 (26.8%) and least was with injectable contraceptive 74 (12.3%). Among married women who had average knowledge, knowledge score was highest for sterilization 413 (68.8%) followed by condom 321 (53.5%), intrauterine contraceptive device 267 (44.5%), oral contraceptive pill 247 (41.2%) and comparitively less among Injectable 104 (17.4%).Among married women, knowledge regarding injectable contraceptive was poor 65 (10.8%) and no 357 (59.5%) respectively.

**Table No. 15: Distribution of married women according to gender preference**

| Gender preference | Number | Percentage |
|---|---|---|
| Male | 188 | 31.3 |
| Female | 96 | 16.0 |
| No preference | 316 | 52.7 |
| **Total** | **600** | **100** |

Out of 600 study participants, 284 (47.3%) of the women had gender preference, among them 188 (31.3%) of the women had preference towards male child and 96 (16.0%) of the women had preference towards female child.

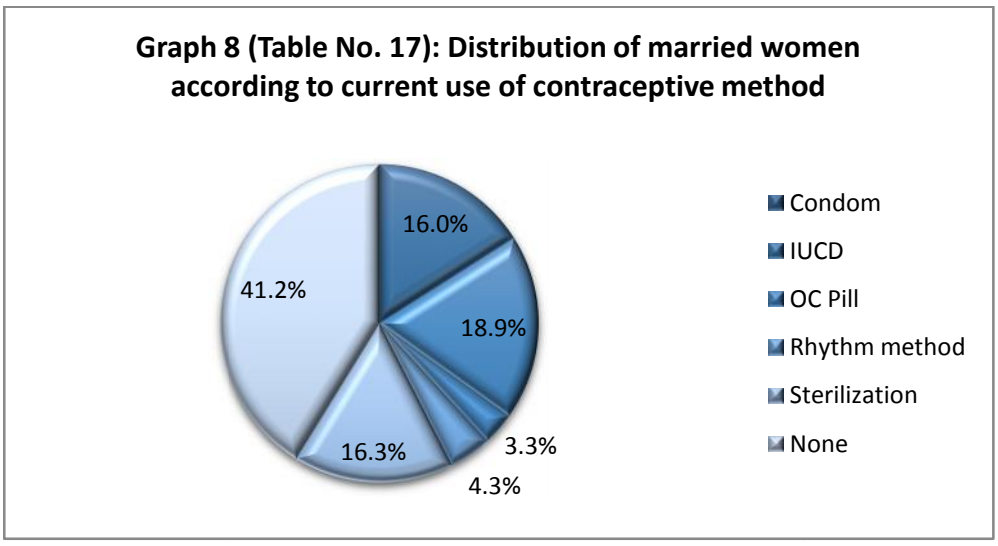
**Table No.16: Distribution of married women according to reason for gender preference**

| Reason for gender preference | Number | Percentage |
|---|---|---|
| Male gender preference (n=188) | | |
| Son is an asset | 27 | 14.4 |
| Future source of income | 30 | 16.0 |
| To control family asset | 38 | 20.2 |
| To continue future generation | 93 | 49.4 |
| Female gender preference (n= 96) | | |
| Take care of parents | 55 | 57.2 |
| They are affectionate | 9 | 9.4 |
| They are equal to male | 32 | 33.4 |

In the present study, 188 of the married women had gender preference towards male, among them 27 (14.4%) of the women said that the reason for male gender preference is that son is like an asset, 30 (16.0%) of the women said that son is a future source of income, 38 (20.2%) said that son is needed to control family assets and 93 (49.4%) said son is needed to control future generation. Among 96 of the women who had preference towards female gender gave the following reasons, 55 (57.2%) of them said that female children take care of parent ,9 (9.4%) of them said female children are affectionate and 32 (33.4%) of them said that female are equal to male.

**Table No.17: Distribution of married women according to current use of contraceptive method**

| Type of contraceptive | Number | Percentage |
|---|---|---|
| Condom | 96 | 16.0 |
| IUCD | 113 | 18.9 |
| OC Pill | 20 | 3.3 |
| Rhythm method | 26 | 4.3 |
| Sterilization | 98 | 16.3 |
| None | 247 | 41.2 |
| **Total** | **600** | **100** |




In our study, the prevalence of contraceptive use was 353 (58.8%), among these 96 (16.0%) were condom users, 113 (18.9%) were using Intra uterine device, 26 (4.3%) were practicing rhythm method, 20 (3.3%) of them were using Oral Contraceptive pill, 98 (16.3%) were practicing sterilization method and 247 (41.2%) of the married women did not practice any of the contraceptive method at the time of the study.

**Table No. 18: Distribution of married women according to duration of contraceptive use**

| Duration of contraceptive use (in years) | Number | Percentage |
|---|---|---|
| 1-5 | 186 | 52.7 |
| 6-10 | 157 | 44.5 |
| 11-15 | 7 | 1.9 |
| ≥15 | 3 | 0.9 |
| **Total** | **353** | **100** |

Among 353 married women who were practicing contraceptive method in our study, 186 (52.7%) of them were using since 1-5 years, 157 (44.5%) were using since 6-10 years, 7 (1.9%) were using since 11-15 years and only 3 (0.9%) of the women were using since 15 years or more.

**Table No.19: Distribution of married women according to reason for not using contraception**

| Reason for not using contraception | Number | Percentage |
|---|---|---|
| Planning for pregnancy | 87 | 35.3 |
| Family disagree | 82 | 33.2 |
| Against my religion | 29 | 11.7 |
| Husbands' disapproval | 28 | 11.4 |
| Fear of side effects | 18 | 7.2 |
| Other reason | 3 | 1.2 |
| **Total** | **247** | **100** |

Among 247 of the married women who were not practicing any of the family planning method gave the following reasons for not using contraceptive method, 87 (35.3%) did not use as they were planning for child, 82 (33.2%) of them said that their families disagree for the use, 29 (11.7%) said that using contraceptive is against my religion, 28 (11.4%) of them said they are not using because of husbands' disapproval, 18 (7.2%) said that they feared side effects of contraceptive and 3 (1.2%) of them gave other reason.

**Tabe No.20: Distribution of the married women according to advice given during antenatal or postnatal period about contraception**

| Advice regarding contraception | Number | Percentage |
|---|---|---|
| Doctor | 220 | 36.7 |
| Health worker | 193 | 32.2 |
| Family member /friend | 40 | 6.6 |
| None | 147 | 24.5 |
| **Total** | **600** | **100** |

Among 600 respondents in the study, 453 (75.5%) of them had received advice about contraceptive method during antenatal or postnatal period and 147 (24.5%) said that they did not receive advice regarding contraceptive method. Out of 453 women, 220 (36.7%) of the women said they received advice from the treating doctor, 193 (32.2%) said they received advice from health worker and 40(6.6%) of the women received advice from their family member/ friend.

**Table No.21: Distribution of married women according to knowledge regarding duration of spacing between pregnancy**

| Duration of spacing between the pregnancy (in years) | Number | Percentage |
|---|---|---|
| 1 | 21 | 3.5 |
| 2 | 264 | 44.0 |
| 3 | 247 | 41.2 |
| 4 | 39 | 6.5 |
| 5 | 29 | 4.8 |
| **Total** | **600** | **100** |

In our study 264 (44.0%) of the women said that two years of spacing is essential between two pregnancies, 247 (41.2%) of women said three years, 39 (6.5%) women said four years, 29 (4.8%) women said five years and 21 (3.5%) of women said that one year spacing was essential between two pregnancies.

**Table No. 22: Distribution of married women according to knowledge regarding the reason to use contraceptive**

| Reason to use contraceptive | Number | Percentage |
|---|---|---|
| Birth spacing | 290 | 48.3 |
| Limiting birth | 203 | 33.8 |
| Preventing unwanted pregnancy | 82 | 13.7 |
| Reducing maternal and child death | 21 | 3.5 |
| Prevents STD's | 4 | 0.7 |
| **Total** | **600** | **100** |

In our study, most 290 (48.3%) of the women said that contraceptive are used for spacing between the pregnancies, 203 (33.8%) women said it was used for limiting birth, 82 (13.7%) women said that it was used to prevent unwanted pregnancy, 21 (3.5%) women said it was used to reduce maternal and child death, and only 4 (0.7%) of the women said that it prevents transmission of sexual transmitted diseases.

**Distribution of married women regarding husbands' opinion and their involvement in decision making in contraceptive use:** In our study, 403 (67.2%) of the husbands' of study participants agreed for the use of contraception and 197 (32.8%) of them did not agree for the contraceptive use. Among the 600 married women, 373 (62.2%) of them had their involvement in decision making regarding contraception and 227 (37.8%) women did not have involvement in the decision making regarding contraceptive use.

**Table No.23: Distribution of married women according to place of access of contraceptive**

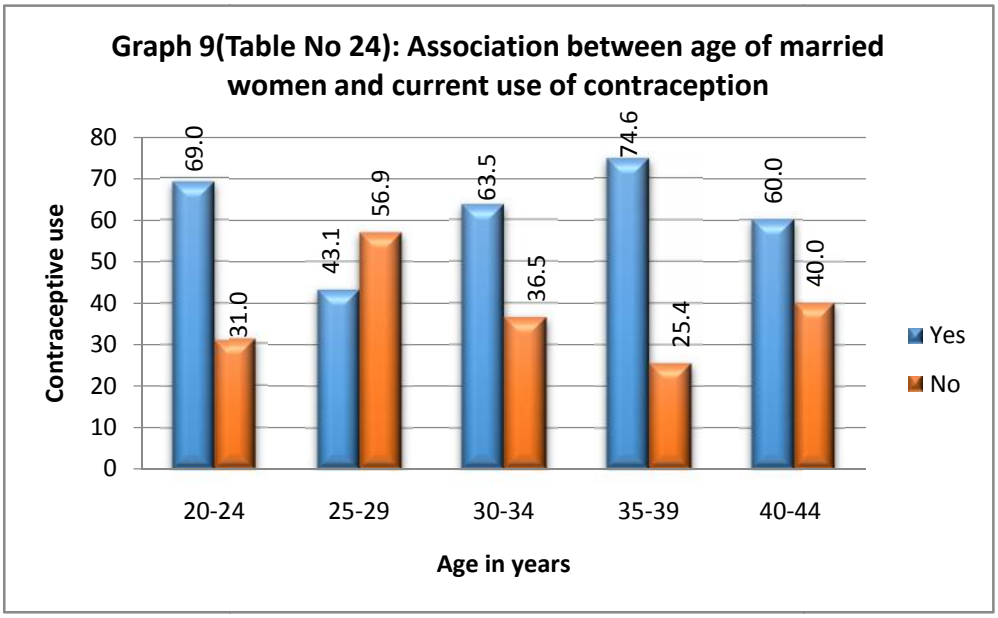
| Place of access of contraceptive | Number | Percentage |
|---|---|---|
| Tertiary hospital | 142 | 40.2 |
| Pharmacy | 130 | 36.8 |
| Urban Health Centre | 65 | 18.4 |
| Private hospital | 16 | 4.6 |
| **Total** | **353** | **100** |

In the present study, 142 (40.2%) of the married women accessed contraceptive from tertiary hospital, 130 (36.8%) of the women accessed from pharmacy, 65 (18.4%) women accessed from urban health centre and only 16 (4.6%) women accessed from private hospital.

## III ASSOCIATION BETWEEN SOCIO-DEMOGRAPHIC FACTORS AND CURRENT USE OF CONTRACEPTION AMONG MARRIED WOMEN

**Table No.24: Association between the age of married women and current use of contraception**

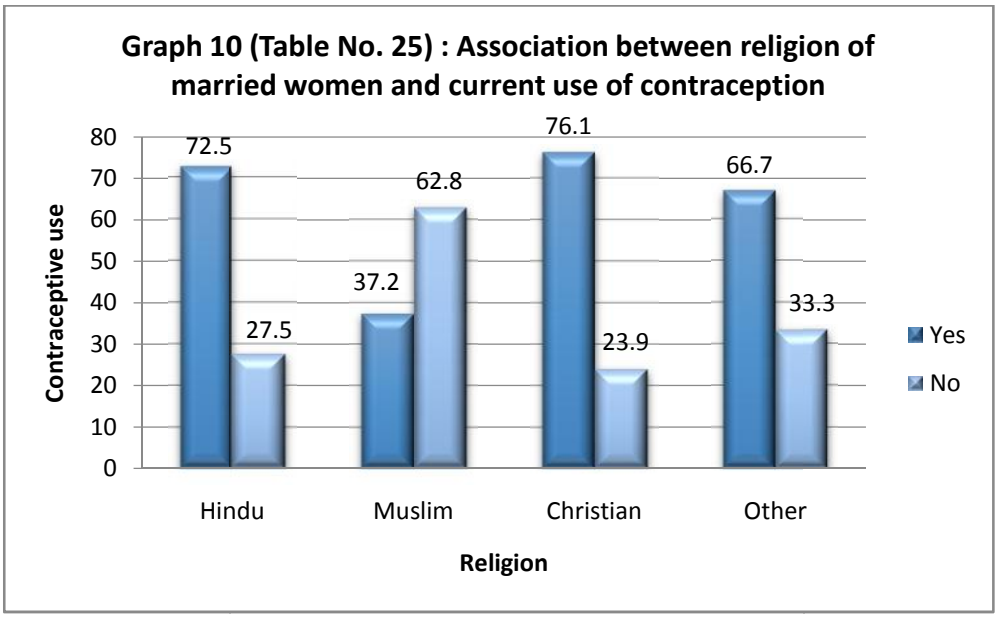
| Age (in years) | Contraceptive use | | Total |
|---|---|---|---|
| | Yes | No | |
| 20-24 | 78(69.0%) | 35(31.0%) | 113(100%) |
| 25-29 | 87(43.1%) | 115(56.9%) | 202(100%) |
| 30-34 | 132(63.5%) | 76(36.5%) | 208(100%) |
| 35-39 | 50(74.6%) | 17(25.4%) | 67(100%) |
| 40-44 | 6(60.0%) | 4(40.0%) | 10(100%) |
| **Total** | **353(58.8%)** | **247(41.2%)** | **600(100%)** |
| **$\chi^2$ = 34.3** | **df = 4** | **p <0.001** | |




In our study, there was significant ($p<0.001$) association between the age of married women and the prevalence of contraceptive use. The highest 50 (74.6%) prevalence of contraceptive was found among women in age group 35-39 years followed by 20-24 years 78 (69.0%) , 30-34 years 132 (63.5%), 40-44 years 6 (60.0%) and least in the age group of 25-29 years 87 (43.1%).

**Table No.25: Association between religion of married women and current use of contraception**

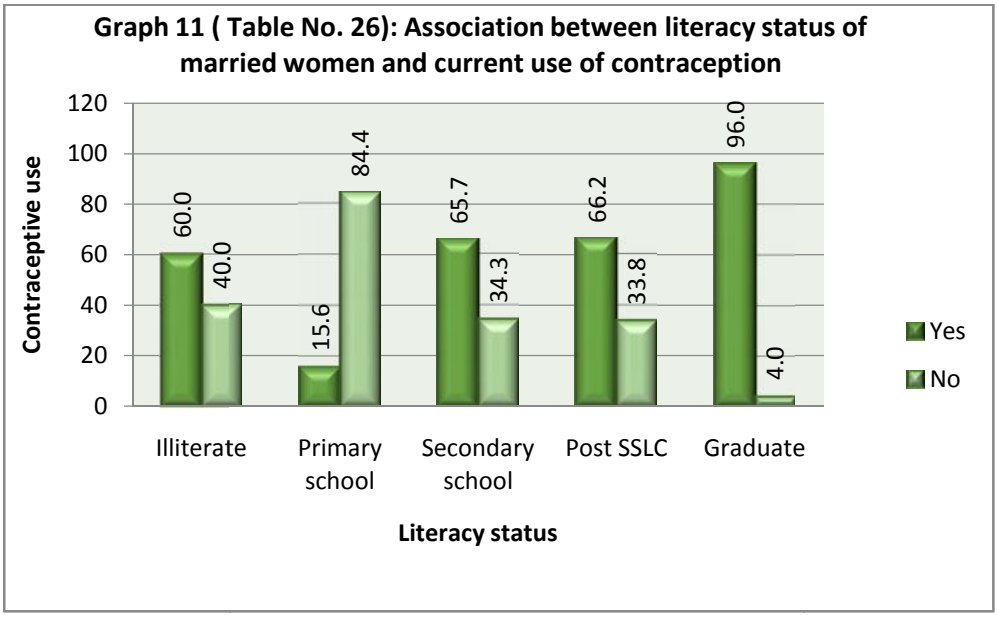
| Religion | Contraceptive use | | Total |
|---|---|---|---|
| | Yes | No | |
| Hindu | 219(72.5%) | 83(27.5%) | 302(100%) |
| Muslim | 87(37.2%) | 147(62.8%) | 234(100%) |
| Christian | 35(76.1%) | 11(23.9%) | 46(100%) |
| Other | 12(66.7%) | 6(33.3%) | 18(100%) |
| **Total** | **353(58.8%)** | **247(41.2%)** | **600(100%)** |
| **$\chi^2$ = 74.7** | **df = 3** | **p <0.001** | |




In our study, the prevalence rate of contraceptive use was high among Christian 35 (76.1%) followed by Hindu 219 (72.5%) and comparatively less among Muslim 87 (37.2%) and prevalence rate was least 12 (66.7%) among women belonging to other religion. There was significant ($p<0.001$) association between religion and the prevalence rate of contraceptive use.

**Table No. 26: Association between literacy status of married women and current use of contraception**

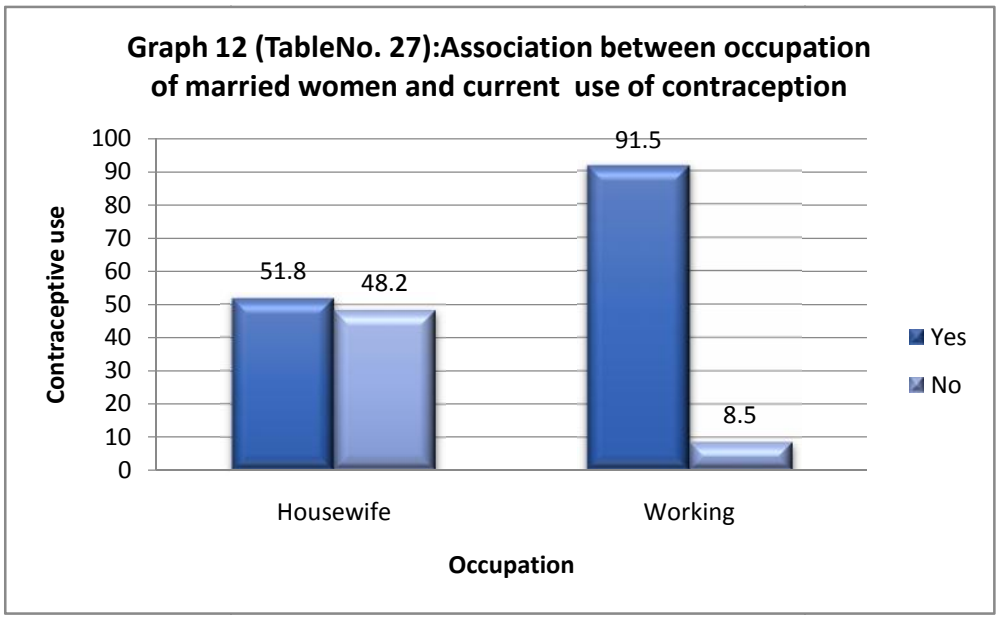
| Literacy status | Contraceptive use | | Total |
|---|---|---|---|
| | Yes | No | |
| Illiterate | 9(60.0%) | 6(40.0%) | 15(100%) |
| Primary school | 20(15.6%) | 108(84.4%) | 128(100%) |
| Secondary school | 113(65.7%) | 59(34.3%) | 172(100%) |
| Post SSLC | 139(66.2%) | 71(33.8%) | 210(100%) |
| Graduate | 72(96.0%) | 3(4.0%) | 75(100%) |
| **Total** | **353(58.8%)** | **247(41.2%)** | **600(100%)** |
| **$\chi^2$ = 149.4** | **df = 4** | **p <0.001** | |




In our study the literacy status of the married women was significantly ($p<0.001$) associated with the prevalence rate of contraceptive use. As the literacy status increased the prevalence of contraceptive use also increased and was highest 72 (96.0%) among the women who were graduate.

**Table No.27: Association between occupation of married women and current use of contraception**

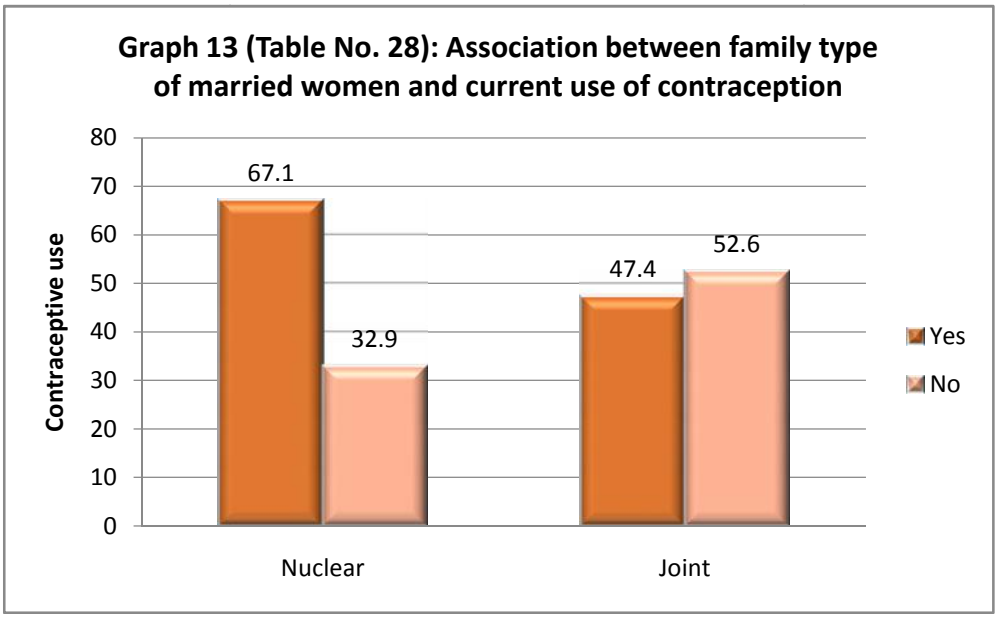
| Occupation | Contraceptive use | | Total |
|---|---|---|---|
| | Yes | No | |
| Housewife | 256(51.8%) | 238(48.2%) | 494(100%) |
| Working | 97(91.5%) | 9(8.5%) | 106(100%) |
| **Total** | **353(58.8%)** | **247(41.2%)** | **600(100%)** |
| $\chi^2$ = 57.74 | df = 1 | p <0.001 | |




In the present study the occupation of the married women was significantly (p<0.001) associated with the prevalence rate of contraceptive use. The prevalence rate was higher among the working married women compared to women who were housewife.

**Table No.28: Association between type of family of married women and current use of contraception**

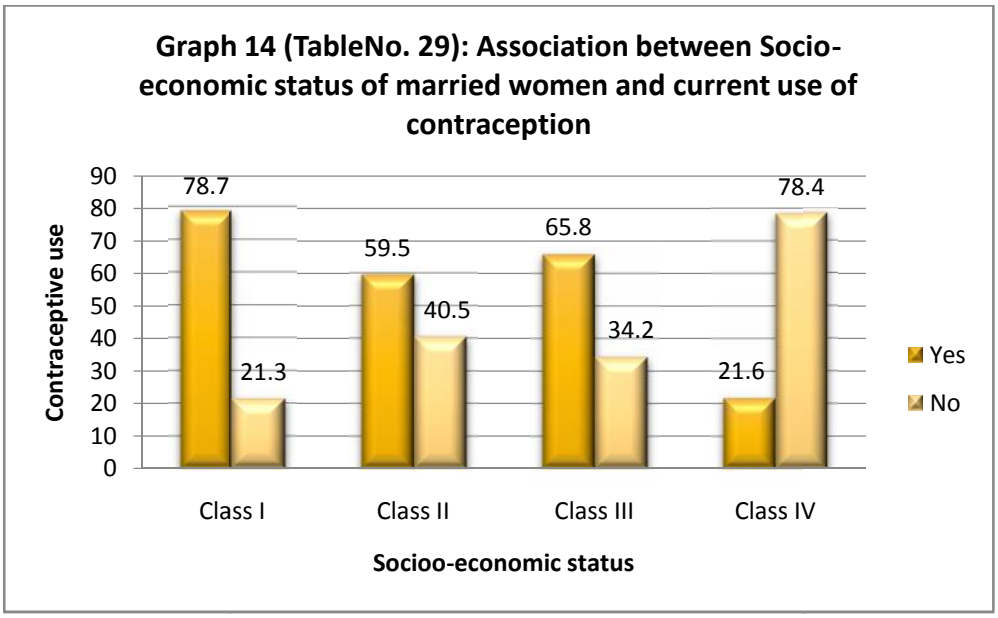
| Family type | Contraceptive use | | Total |
|---|---|---|---|
| | Yes | No | |
| Nuclear | 233(67.1%) | 114(32.9%) | 347(100%) |
| Joint | 120(47.4%) | 133(52.6%) | 253(100%) |
| **Total** | **353(58.8%)** | **247(41.2%)** | **600(100%)** |
| **$\chi^2$ = 23.4** | **df = 1** | **p <0.001** | |




This study showed that the family type of the married women was significantly (p<0.001) associated with the prevalence rate of contraceptive use. The prevalence rate was higher 233 (67.1%) among the women who belonged to nuclear family compared to women who belonged to joint family.

**Table No.29: Association between Socio Economic Status of married women and current use of contraception**

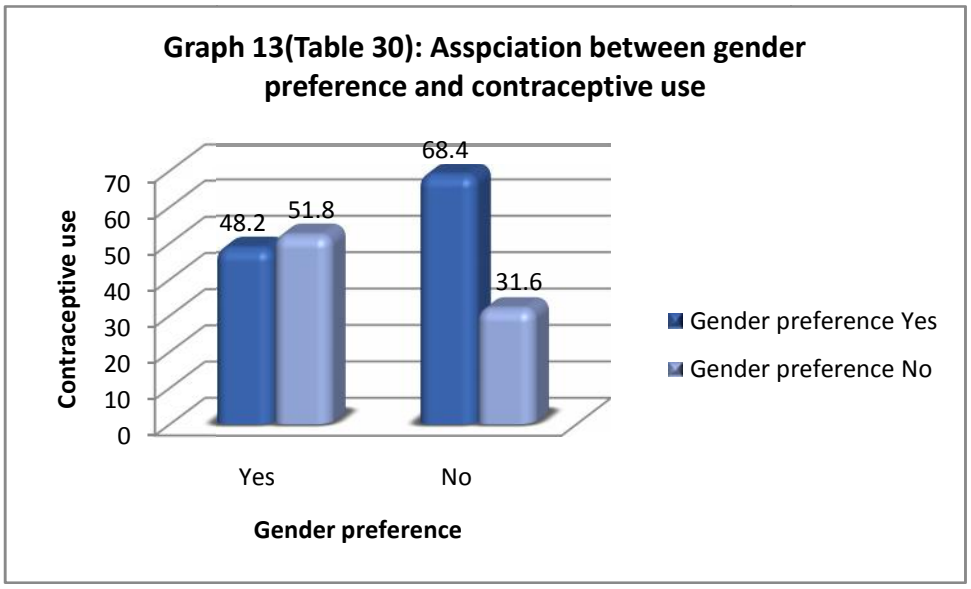
| Socio Economic Status | Contraceptive use | | Total |
|---|---|---|---|
| | Yes | No | |
| Class I | 96(78.7%) | 26(21.3%) | 122(100%) |
| Class II | 138(59.5%) | 94(40.5%) | 232(100%) |
| Class III | 98(65.8%) | 51(34.2%) | 149(100%) |
| Class IV | 21(21.6%) | 76(78.4%) | 97(100%) |
| **Total** | **353(58.8%)** | **247(41.2%)** | **600(100%)** |
| **$\chi^2$ = 78.2** | **df = 3** | **p <0.001** | |




Present study showed that the socio-economic status of the married women was significantly (p<0.001) associated with the prevalence rate of contraceptive use. It was highest 96 (78.7%) among the women who belonged to class I and least 21 (21.6%) among women who belonged to class IV. This shows that as the socio economic status increases the prevalence of contraceptive use also increases.

**Table No.30: Association between gender preference by married women and current use of contraception**

| Gender preference | Contraceptive use | | Total |
|---|---|---|---|
| | Yes | No | |
| Yes | 137(48.2%) | 147(51.8%) | 284(100%) |
| No | 216(68.4%) | 100(31.6%) | 316(100%) |
| **Total** | **353(58.8%)** | **247(41.2%)** | **600(100%)** |
| **$\chi^2$ = 24.9** | **df = 1** | **p <0.001** | |

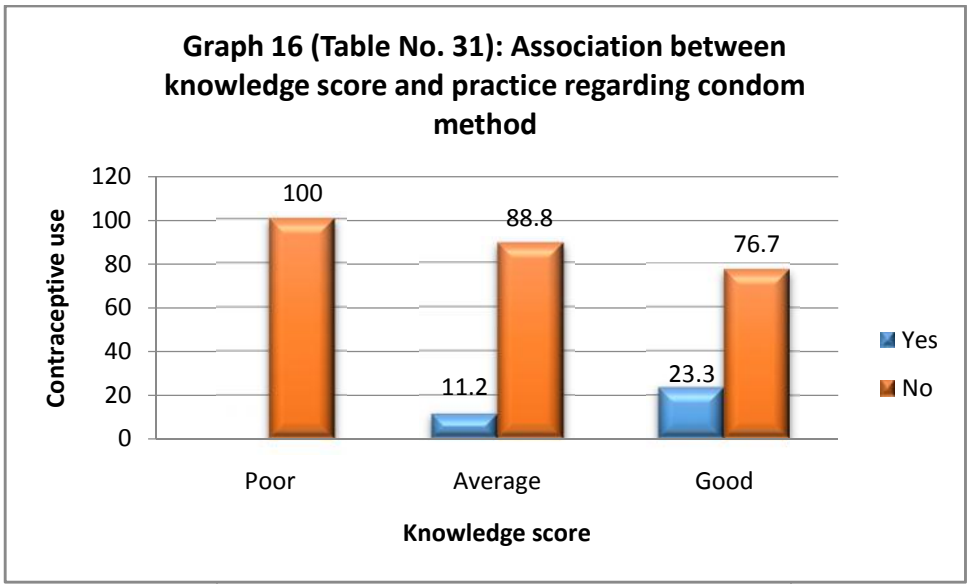



In our study, the gender preference was significantly (p< 0.001) associated with prevalence of contraceptive use. The contraceptive use was highest 216 (68.4%) among married women who did not have gender preference and it was lowest 137 (48.2%) in women who had gender preference to either male or female child.

## IV ASSOCIATION BETWEEN KNOWLEDGE SCORE AND PRACTICE OF CONTRACEPTION AMONG MARRIED WOMEN

**Table No. 31: Association between knowledge score and practice regarding Condom method**

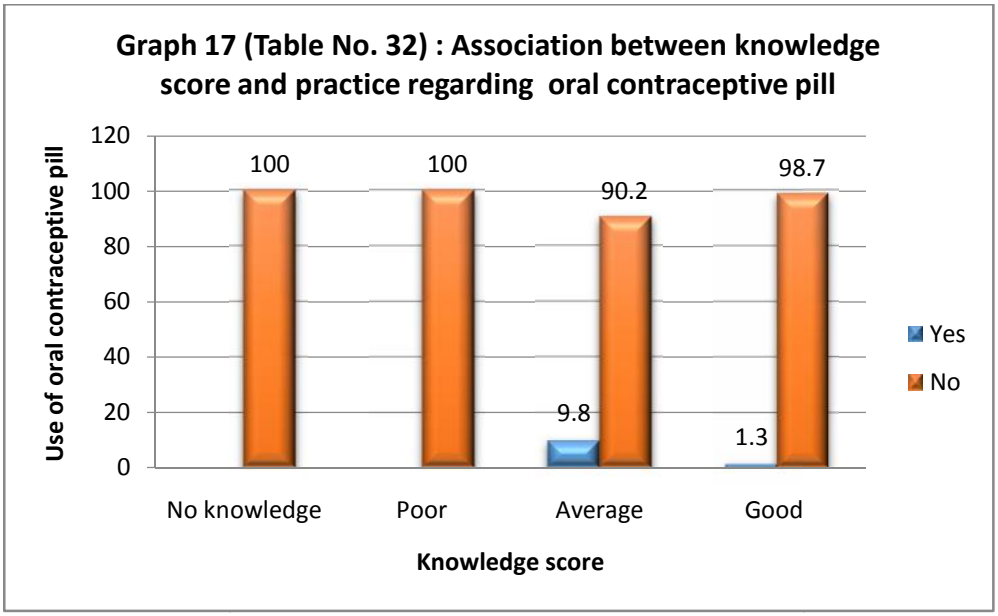
| Knowledge score | Condom usage | | Total |
|---|---|---|---|
| | Yes | No | |
| Poor | 0(0.0%) | 21(100%) | 21(100%) |
| Average | 36(11.2%) | 285(88.8%) | 321(100%) |
| Good | 60(23.3%) | 198(76.7%) | 258(100%) |
| **Total** | **96(16.0%)** | **504 (84.0%)** | **600 (100%)** |
| $\chi^2$ = 19.5% | df = 2 | p < 0.001 | |




In our study, significant association was found between knowledge score and practice of condom method by their partners (p<0.001). As the knowledge score increased the practice also increased.

**Table No. 32: Association between knowledge score and practice regarding Oral contraceptive pill**

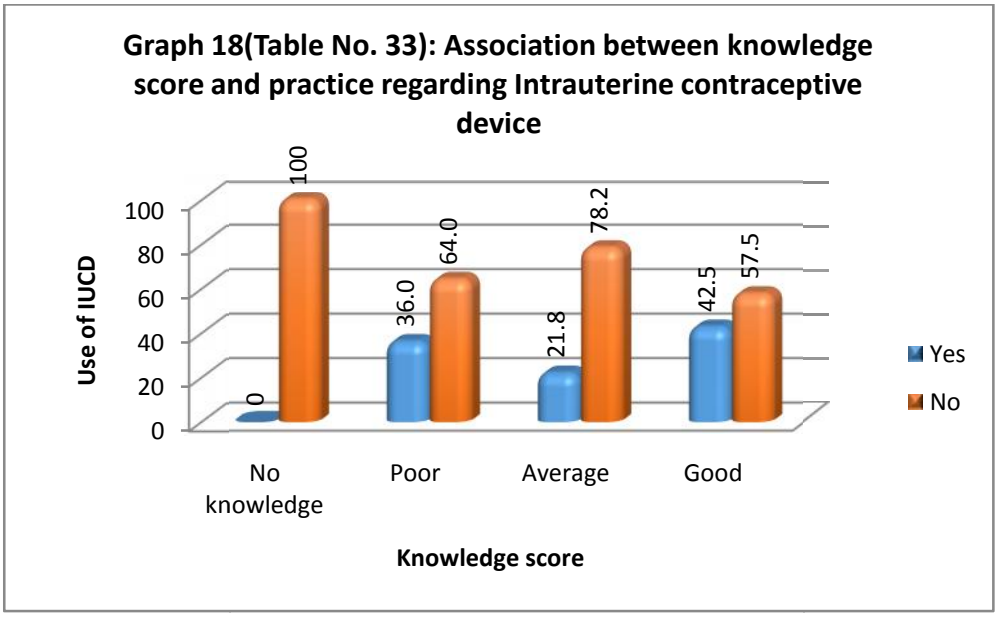
| Knowledge score | OCP usage | | Total |
|---|---|---|---|
| | Yes | No | |
| No knowledge | 0(0.0%) | 189(100%) | 189(100%) |
| Poor | 0(0.0%) | 3(100%) | 3(100%) |
| Average | 17(9.8%) | 158(90.2%) | 175(100%) |
| Good | 3(1.3%) | 230(98.7%) | 233(100%) |
| **Total** | **20(3.3%)** | **580 (96.6%)** | **600 (100%)** |
| $\chi^2$ = 17.36 | df = 3 | p < 0.001 | |




In our study, significant association was found between knowledge and practice of oral contraceptive pill (p<0.001). Among the married women who had average knowledge about oral contraceptive pill, they were more users as compared to women who had good knowledge 3 (1.3%) and the women who had poor knowledge did not use oral contraceptive pill.

**Table No. 33: Association between knowledge score and practice regarding intrauterine contraceptive device**

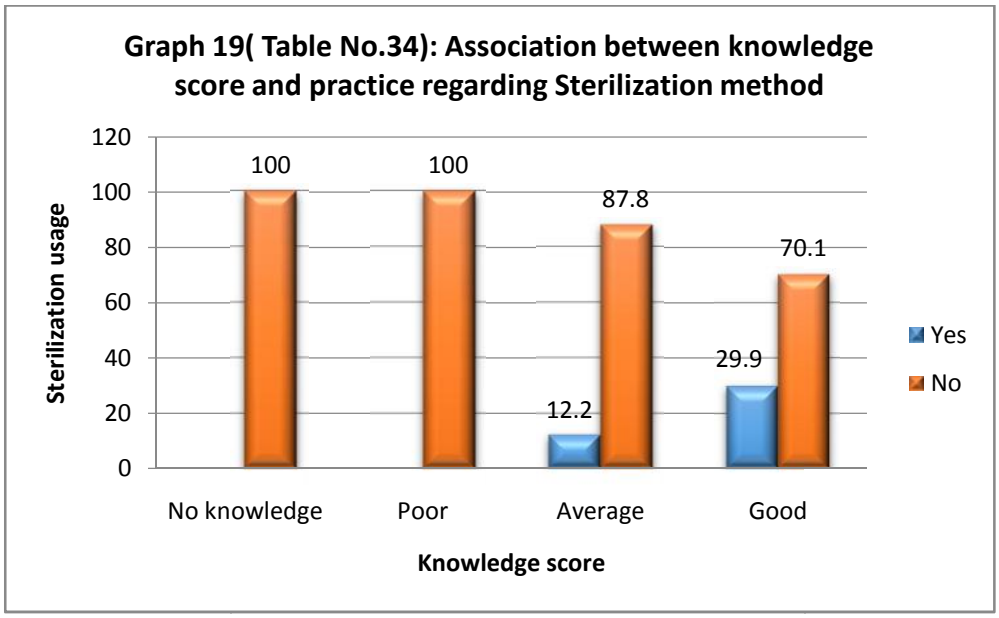
| Knowledge score | IUCD usage | | Total |
|---|---|---|---|
| | Yes | No | |
| No knowledge | 0(0.0%) | 96(100%) | 96(100%) |
| Poor | 18(36.0%) | 32(64.0%) | 50(100%) |
| Average | 58(21.8%) | 209(78.2%) | 267(100%) |
| Good | 37(42.5%) | 50(57.5%) | 87(100%) |
| **Total** | **113(18.8%)** | **487 (80.6%)** | **600 (100%)** |
| **$\chi^2$ = 33.4 df = 3 p < 0.001** | | | |




In our study, significant association was found between knowledge and practice of Intra uterine contraceptive device (p<0.001). Among the married women who had good knowledge about intrauterine contraceptive device had highest 37 (42.5%) practice.

**Table No. 34: Association between knowledge score and practice regarding Sterilization method**

| Knowledge score | Sterilization method | | Total |
|---|---|---|---|
| | Yes | No | |
| No knowledge | 0(0.0%) | 09(100%) | 9(100%) |
| Poor | 0(0.0%) | 20(100%) | 20(100%) |
| Average | 50(12.2%) | 360(87.8%) | 410(100%) |
| Good | 48(29.9%) | 113(70.1%) | 161(100%) |
| **Total** | **98 (16.3%)** | **502 (83.6%)** | **600 (100%)** |
| **$\chi^2$ = 32.2 df = 3 p < 0.001** | | | |




In our study, significant association was found between knowledge score and practice of sterilization method (p<0.001). Highest 48 (29.9%) sterilization practice was there among the married women who had good knowledge about it. As the knowledge score increased, the level of practicing sterilization also increased among married women.

# DISCUSSION

The present study was conducted in an urban field practice area of Department of Community Medicine, J.N Medical College, Belagavi, during the period January to December 2015 among 600 married women. The objective of this study was to know the prevalence of contraceptive use among married women and to assess the factors influencing the use of contraceptive.

**Table No. 1-6: Socio-demographic profile of study participants:**

In the present study, 600 married women of age group 15- 44 years were included. The age of the married women in the study ranged from 20 to 42 years. The mean age (± SD) was 29 ± 4.52 years. A similar study was conducted in Bagalkot [22] and Bangalore[13] among married women of age group 15- 45 years, majority of study participants were in the age group of 20- 30 years with mean age of 28 years. Study participants belonging to Hindu religion were 302 (50.3%), which was quite low in our study as compared to a study done in Bangalore[17] (98%) and Delhi[31] (98%). Majority 585 (97.5%) of the women were literates and 82.3% of women were housewives in our study, but literacy level was slightly low 67% and also 94.8% of women were housewives in a study done in Lucknow [25]. The husbands' literacy rate in our study was 100% which is higher than the average male literacy rate of Belagavi city which is 93.5% according to 2011 census[32]. In our study, 347 (57.8%) of the study participants belonged to nuclear family which was low when compared to studies done in urban slums of Bangalore 72% [13] and Raichur 67.1%.[18]

**Table No. 7 and 8: Distribution of married women according to socioeconomic status, age of marriage and duration of married life**

The married women belonged to socioeconomic class IV 97 (16.2%), class III 149 (24.8%), class II 232 (38.7%) and 122 (20.3%) of them were from class I as per Modified B.G. Prasad Classification. In a study done in urban areas of Maharashtra it showed that 27.5% of women belonged to class V, 25.2% class IV, 8.3% class III,10.5% class II and 5.8% of women to class I.[7] Another similar study done among the married women in rural areas of Belagavi[40] showed that about 63% belonged to class IV and V which is in contrast to our study, this difference is due to the reason that our study was conducted in an urban setting. According to NFHS-III[33] report 46% of the Indian women marry below the legal age of marriage but, in our study the age of marriage ranged between 18-28 years which is above the legal age of marriage. Similar study done in rural area of Belagavi[40] showed that maximum women (>67%) got married between 18-21 years and about 22% before 18 years. The reason may be that the literacy rate in rural area is less as compared to urban area and hence women may be forced to get marry before the legal age of marriage. Most 226 (37.6%) of the participants had the duration of married life ranging between 6-10 years, followed by 178 (29.7%) between 11-15 years, 139 (23.2%) between 1-5 years and 57 (9.5%) had $\geq$ 15 years of married life. But when compared to a rural study done in Belagavi[40] the duration of married life ranged between less than one year to more than twenty years.

**TABLE No.9, 10 and 11: Distribution of married women according to number of children, male and female children and age of last child**

Among the 600 respondents in our study, most 280 (46.7%) of the women had 2 children followed by 179 (29.8%) with one child, 93 (15.5%) with 3 children, 34 (5.7%) with 4 children and only 14 (2.3%) of the married women had no children but, in a similar study conducted in resettlement area of Delhi[31] showed that, 21.7% of the women had one child, 32.4% of them had two children, 42% had three or more children and 1.9% of them didn't had any child. Similar study done in rural areas of Belagavi[40] showed that more than 65% of married women became pregnant between 18-21 years and 40% of married women had 2 children, 23% had 3 children and 7% had 4 or more children which are quite similar to our study. Similar results was shown in a community based study done in North West Ethiopia.[41] In our study 398 (66.3%) of the study participants had atleast one male child and 412 (68.7%) of the married women had atleast one female child and the age of the last child ranged from 1-20 years.

**Table No. 12: Knowledge of married women regarding contraception**

Women who had knowledge regarding Condom were 100%, sterilization method 594 (99.0%), 504 (84.0%) of the women had knowledge about IUCD and 411 (68.5%) of the women knew about oral contraceptive pill, 243 (40.5%) injectable, 179 (29.8%) rhythm method, 146 (24.3%) abstinence method, 95 (15.8 %) lactational amenorrhea method but, in a study done among the married women in urban Lucknow [25] showed that the knowledge regarding condom was 97%,OC pill 98.8%, intrauterine contraceptive devices 94.3%, injectable 37.2% and sterilization was 95.2% which is higher compared to our study except knowledge about sterilization method. Another

study done in Chandigarh[4] showed that married women had knowledge about condom (55.7%), oral contraceptive pill (55.7%), intrauterine contraceptive device (37.5%), sterilization (6.9%), rhythm method (3.2%), injectable (2.5%) and coitus interruptus (1.4%).

**Table No.13: Distribution of married women according to source of information**

In a study done in Lahore, showed that the major source of information about contraceptive method was the family planning center 76 (24.8%) and friend 46 (25%), other sources of information included mother in law 18 (5.9%), dai 28 (9.1%) and mass media 24 (7.8%).[34] In the present study the source of information were:171 (28.5%) husband, 225 (37.5%) doctor, 127 (21.2%) friend or family member, 56 (9.3%) of them acquired information through mass media and 21 (3.5%) from health personnel ( Female health worker or ASHA worker). Similar study done in Bangalore[17] showed that the first source of information for contraception were, health personnel (66.5%), media (15.8%),family members (6.7%), friend (6.7%) and only 4.2% from their husbands'. Another study done in Southern Nigeria[35] showed that source of information for contraception were,health worker (34.3%), media (38.4%), friend (15.5%), husband (0.6%) and others (11.1%).

**Table No.14: Distribution of married women according to knowledge score regarding contraception**

Among the married women who had good knowledge, knowledge score for condom 258 (43.0%) was highest, married women who had average knowledge, knowledge score was highest for sterilization 413 (68.8%). Knowledge regarding injectable contraceptive was poor 65 (10.8%) and no 357 (59.5%) respectively.

**Table No. 15 and 16: Distribution of married women according to gender preference and reason for male and female gender preference**

In our study, 284 (47.3%) of the women had gender preference, among them 188 (31.3%) of the women had preference towards male child and 96 (16.0%) of the women had preference towards female child. A similar study done in Bangalore[13] showed that 24% of the married women had gender preference towards male child and the reasons for preference were 6.9% of women think that son is an asset, 20.84% of women said that to control family assets, 63.88% of them said that they are future source of income and 8.33% of women said that to continue future generation. The reasons for male gender preference in our study were, 27 (14.4%) of the women said that son is like an asset, 30 (16.0%) of the women said that son is a future source of income, 38 (20.2%) said that son is needed to control family assets and 93 (49.4%) said son is needed to control future generation.The reasons given by the study participants for male gender preference is similar to the reasons observed in our study. Among 96 of the women who had preference towards female gender gave the following reasons, 55 (57.2%) of them said that female children take care of parent ,9 (9.4%) of them said female children are affectionate and 32 (33.4%) of them said that female are equal to male.

**Table No.17: Distribution of married women according to current use of contraceptive method**

The prevalence of contraceptive use in our study was 353 (58.8%) which is quite low compared to the contraceptive prevalence rate (64%) in urban population of India according to NHFS -III.[33] Similar study done among the reproductive age group married women in urban areas of Bangalore[13] and Punjab[6] showed that the prevalence

rate was 58.6% and 53.84% respectively and a study done in urban slums of Lucknow district[25] showed 56.2% which was almost similar to our study. Another study among women attending hospital in Mangalore[2] showed that the prevalence rate was 71.2% which is higher compared to our study the reason may be that it was a hospital based study.

Among the users, 96 (16.0%) of the women husbands' were using condom, 113 (18.9%) of women were using Intra uterine device, 26 (4.3%) were practicing rhythm method, 20 (3.3%) of them were using oral contraceptive pill, 98 (16.3%) were practicing sterilization. Study conducted in Mangalore[2] showed that 15.6% of their husbands' were condom users, 13.3% of women were practicing rhythm method, 5% were using oral contraceptive pill, 18.4% were using Intrauterine contraceptive device, 31.8% were practicing sterilization,which was quite similar to our study in indices like condom,intrauterine contraceptive device and oral contraceptive pill. Another study conducted in urban areas of Punjab[6] showed that, among the contraceptive users, Condom, oral contraceptive pill and intra uterine device were used by 41.6%, 28.4% and 8.0% respectively and 4.93% were practicing sterilization which is quite high compared to our study. Study done in resettlement colony of Delhi[31] showed that the prevalence of condom usage was 23.7%, 12.1% OC pill, 9.6% intrauterine contraceptive device and 53.9% sterilization shows quite high prevalence of sterilization method usage. The above results are higher because of the fact that these studies are conducted in metro cities as compared to Belgaum which is tier II city. A study done in Ethiopia [36] showed that, Injectable (62.9%) were most frequently used contraceptive, followed by Intrauterine contraceptive device (16.8%), OC pill (14%), norplant (17%), condom (1.2%) and least was sterilization (0.8%) which is in contrast to our study.

**Table No.18: Distribution of married women according to duration of contraceptive use**

In our study among contraceptive users, 186 (52.7%) of them were using since 1-5 years, 157 (44.5%) were using since 6-10 years, 7 (1.9%) were using since 11-15 years and only 3 (0.9%) of the women were using since 15 years or more.Similar study done in Southern Nigeria[35],showed most of the women 69.5% were using contraceptive since 1-5 years which is in par to our study.

**Table No.19:Distribution of married women according to reason for not using contraception**

In the present study, 247 of the married women who were not practicing any of the family planning method gave the following reasons for not using contraceptive method, 87 (35.3%) did not use as they were planning for child, 82 (33.2%) of them said that their families disagree for the use, 29 (11.7%) said that using contraceptive is against my religion, 28 (11.4%) of them said they are not using because of husbands' disapproval, 18 (7.2%) said that they feared side effect of contraceptive and 3 (1.2%) of them gave other reasons. In a study done in Tamil nadu[8] showed that the nonusers gave the following reasons, due to lack of knowledge 3.7% ,against their religion 2.3%, husbands' opposition 5.6% ,fear of side effects 14% ,family constraint 0.9% and remaining gave other reasons. In a study done in rural Bangladesh[1] showed that among non users, majority 65% were planning for a child, 12% did not use due to fear of side effects, 6 (6%) of them told that their husbands forbade them to do so, 5% complained of dissatisfaction, 2% preferred male baby and 1% mentioned about religious bindings and rest 9% of them mentioned other reasons. Another study done in urban areas of Bangalore[13] showed that reasons for not using contraception were,

70 (56.5%) desired for more children, 25 (20.2%) felt there was no need, 13 (10.5%) said it's against religion and misconception about contraception and 1 (0.80%) due to opposition by mother in law, lack of information and fear of side effects. Similar Study done in Kolkata[10] showed that the reasons for not using contraception, 42% of women had desire to have a child, 20.02% lack of motivation, 13.4% lack of knowledge, 6.7% harmful for health and 0.8% resistance from other family members. All the reasons from the above studies were almost in par with our study.

**Table No.20 : Distribution of the married women according to the advice given during antenatal or postnatal period about contraception**

Out of 453 women who had received advice about contraceptive method during antenatal or postnatal period, 220 (36.7%) of the women said they received advice from the treating doctor, 193 (32.2%) received advice from health worker and 40 (6.6%) of the women received advice from their family member/ friend. In a study conducted in Mumbai[36] showed that, 36.6% received information from doctor, while for remaining participants, source of information for contraceptive were, Health worker 14.6%, Media 7.3%, Relative 23.2% and Friend 4.9%. This shows most of the women receive advice from doctor or health worker.

**Table 21 and 22: Distribution of married women according to knowledge regarding the reason to use contraceptive and spacing between pregnancy**

In our study, most 290(48.3%) of the women said that contraceptive were used for spacing between the pregnancy, 203(33.8%) women said it was used for limiting birth, 82(13.7%) women said that it was used to prevent unwanted pregnancy, 21(3.5%) women said it was used to reduce maternal and child death, and only 4(0.7%) of the women said that it prevents transmission of sexual transmitted

diseases. In a study done in Nigeria[35], 51.8% said that contraceptive were used to prevent unwanted pregnancy, 25.2% of women said it is used for spacing between the pregnancy,13.6% said that it is necessary to limit family size and 5.6% of women said that it is used to prevent Sexually transmitted diseases.

In our study 264(44.0%) of the women said that two years of spacing is essential between two pregnancies,247(41.2%) of women said three years,39(6.5%) women said four years,29(4.8%) women said five years and 21(3.5%) of women said that one year spacing was essential between two pregnancies.

**Distribution of married women regarding husbands' opinion and their involvement in decision making in contraceptive use**

In our study, 403 (67.2%) of the husbands of study participants agreed for the use of contraception and 373 (62.2%) of them had their involvement in decision making regarding contraception. In a study done in slums of Mumbai[36] showed that 67.52% of women were involved in decision making regarding contraceptive use which was almost similar to our study. In a study done in Mozambique, Africa[37] showed that, 71.6% of the women in the study reported that they were involved in taking decision, while 28.4% reported that the husband/ partner alone made decision regarding contraception which was almost similar to our study.

**Table No. 23: Distribution of married women according to place of access of contraceptive**

In the present study, 142 (40.2%) of the married women accessed contraceptive from tertiary hospital, 130 (36.8%) of the women accessed from pharmacy, 65 (18.4%) women accessed from urban health centre and only 16 (4.6%)

women accessed from private hospital. In a study done in urban slums of Lucknow[25] showed that 23.5% of women accessed from Government hospital, 5.1% from CHC/ PHC, 4.4% from ASHA/ Anganwadi worker and 62% of them accessed from private hospital.

**Table No.24: Association between the age of married women and current use of contraception**

In our study, there was significant (p <0.001) association between the age of married women and the prevalence of contraceptive use. The highest 50 (74.6%) prevalence of contraceptive was found among women in age group 35-39 years which is similar in a study done in Maharashtra.[7] Similar studies done in Bangalore[17] and Haryana[11] also showed significant association and the highest prevalence was found in age group 25-29 and 30-34 years respectively. Similar findings were observed in Delhi[42] and Amhara[43] region study. The reason may be that most of the women in age group between 35-39 years may have completed their family and because of the age experience they might have a better knowledge of contraceptive use.

**Table No. 25: Association between religion of married women and current use of contraception**

The prevalence rate of contraceptive use was highest among Christian 35(76.1%) and there was significant (p <0.001) association between religion and the prevalence rate of contraceptive use which is similar to a study conducted in Mangalore.[2] Similar studies conducted in urban areas of Bangalore[13] and urban slums of Kolkata[10] also showed the significant association but the prevalence rate was high among Hindus, 56.81% and 36.0% respectively which is in contrast to our study. This is because most

of the Christian participants in our study were literates and belonged to a better socio-economic class.

**Table No.26: Association between literacy status of married women and current use of contraception**

In our study the literacy status of the married women was significantly ($p<0.001$) associated with the prevalence rate of contraceptive use. As the literacy status increased the prevalence of contraceptive use also increased and was highest 72 (96.0%) among the women who were graduate which is similar to a study done in Maharashtra[7] (82.76%). Study done in China[27] also showed similar results. Another study done in Ethiopia[38] showed no significant association between literacy status of women with prevalence rate of contraceptive use. All these are in contrast to a study done in rural areas of Dakshina Kannada[44] which showed that education of married women was not associated with use of contraceptive method. This may be due to the reason that women who are more educated usually have more control over resources and more autonomy in decision-making. Education can transform attitudes, leading to the questioning of traditional belief and practice, such as those supporting high fertility.

**Table No.27: Association between occupation of married women and current use of contraception**

In the present study the occupation of the married women was significantly ($p<0.001$) associated with the prevalence rate of contraceptive use. The prevalence rate was higher among the working married women 97 (91.5%) as compared to women who were housewives 256 (51.8%) which is similar to a study done in Kolkata[10] which shows that most of the housewives were nonusers (68.3%). This may be because of

the fact that urban working women are more literates and are more likely to have discussed family planning as compared to their rural counterparts. Similar study done in rural Maharashtra[7] showed that the prevalence rate of contraceptive use was high in housewives (55.09%) as compared to employed women (44.91%). The reason may be housewives are better recipient of health care services as compared to employed women.

**Table No.28: Association between type of family of married women and current use of contraception**

This study showed that the family type of married women was significantly ($p<0.001$) associated with the prevalence rate of contraceptive use. The prevalence rate was higher 233 (67.1%) among the women who belonged to nuclear family as compared to women who belonged to joint family, which is similar to a study done in Haryana[11] (79.44%) and Ludhiana[3] (57.1%). This may be because, couples in the joint family may not have power to take decision due to peer pressure and also the wife in a joint family obtains a higher position in her husband's family only after the birth of child. So in a joint family the women will be encouraged to produce more children.

**Table No.29: Association between Socio Economic Status of married women and current use of contraception**

Present study showed that the socio-economic status of the married women was significantly ($p<0.001$) associated with the prevalence rate of contraceptive use. It was highest 96 (78.7%) among the women who belonged to class I and least 21 (21.6%) among women who belonged to class IV.A study done in rural Maharashtra[7] showed that the contraceptive rate was highest among class II and least among class IV and it was significantly. In a similar study done in Punjab[6] showed that the 100%

of upper class use some kind of contraceptive method but only 30 % of those in lower SES use any contraceptive method by this it shows that rates of contraceptive usage has shown consistent downwards trends with decrease in socio-economic status of the families whom the eligible couple belongs.

**Table No.30: Association between gender preference by married women and current use of contraception**

In our study, the gender preference was significantly ($p< 0.001$) associated with prevalence of contraceptive use. The contraceptive use was highest 216 (68.4%) among married women who did not have gender preference. Studies done in rural South India, [39] Bangalore[17] and Kolkata[10] have shown that gender preference is also a reason for non-usage of contraceptive and the association was significant.

**Table No. 31-34: Association between knowledge score and practice regarding Condom method, OC pill, intrauterine contraceptive device and sterilization**.

In our study, significant association was found between knowledge score and practice of condom method by their partners ($p<0.001$). As the knowledge score increased the practice also increased. Significant association was also found between knowledge and practice of oral contraceptive pill ($p<0.001$) and married women who had average knowledge about oral contraceptive pill, they were more users as compared to women who had good knowledge 3 (1.3%) and the women who had poor knowledge did not use oral contraceptive pill. The present study also showed significant association between knowledge and practice of use of Intra uterine contraceptive device and sterilization ($p<0.001$). Among the married women who had good knowledge about intrauterine contraceptive device and sterilization had highest practice 37 (42.5%) and 48 (29.9%) respectively.

# CONCLUSION

The present community based cross sectional study regarding the prevalence of contraceptive use revealed that the prevalence rate was just more than 50%. The important amendable reasons for not using contraception were family members disagreement, husbands' disapproval and fear of side effects. So, to increase the use of contraceptive method, it is imperative to change the attitude of both family members and husband regarding contraception, both men and women should be involved in family planning decision making and it is of utmost importance to increase the knowledge of women regarding various contraceptive method by proper counseling.

In our study literacy status of the women was directly proportional to prevalence of contraceptive use so, improving literacy rate especially female literacy will help us in a long way to improve the prevalence of contraceptive use in the community. The role of gender preference can be addressed by two major societal changes: firstly by the improving the literacy status and economic empowerment of women and secondly by providing a social security to the parents in advanced age so that they won't be dependent on their male offspring.

To increase the prevalence of contraceptive method it would be very much important to speed up social welfare programmes in order to uplift the person sitting on the lowest stair of the social hierarchy. In conclusion, the findings support the contention that there is still a need to intensify Information Education Communication activities and motivate the population to practice contraception. In order to be effective, programme must include counseling, motivation and education to help women disentangle fact from fiction regarding health and side effects of various contraceptive methods.

# LIMITATIONS

The limitations of the study were:

- The study was conducted in field practice area of J.N. Medical College. Most areas are regularly visited by Post Graduate student, intern and other health staff and Information, Education and Communication activities were carried out. This may have influenced the outcome and thereby may not be a representative of the population of Belagavi.
- The study was conducted among married women in an urban area. But a comparison study between urban and rural set up would have given better idea about the reasons for non usage of contraceptive.
- A longitudinal study which includes follow up of study participants would yield better results, as participants may start using contraception after data collection because of the knowledge gained during the process.

# RECOMMENDATIONS

Based on the findings of our study, the following recommendations are being suggested for the enhancement of contraceptive use:

- Health personnel need to educate and motivate the couple to use reversible method of contraception since delaying the birth can also help to reduce the fertility and thus help in population control.
- A multipronged strategy aimed at sustained Information, Education and Communication activities which focus on the beneficial effects and the safety of various contraceptive by clearing the misconception about contraception by counselling couples along with the family by family planning counsellors would bring out a favourable outcome regarding contraceptive use.
- Effects to promote societal receptivity to contraceptive the women to overcome social and cultural barriers to achieve small family norm.
- Inter-spouse communication should be improved by means of men's participation and access to reproductive health information and services, which will ease them to take responsible reproductive decisions. This would also perk up their attitude towards acceptance of spacing method and vasectomy.
- Improving the regular use of contraception will help decreasing maternal morbidity and mortality and will be of help for the development of nation in a long way.

- Post marital and Post-partum contraceptive counseling to the couple would influence on the use of contraception to a greater extent.
- In order to achieve two of the eight Millennium Development Goals i.e. reducing maternal mortality and combating the spread of HIV, malaria and other diseases, the campaign on contraceptive use must be intensified especially among young and recently married women who have never used contraceptive method.

# SUMMARY

The present study was a community based cross sectional study undertaken to know the prevalence of contraceptive use among married women and also to assess the factors influencing the use of contraceptive in urban areas of Belagavi. The study included 600 married women aged between 15-44 years residing in Ashoknagar, Ramnagar and Rukmininagar - urban field practice areas of Department of Community Medicine, J. N. Medical College, Belagavi. The duration of study was one year from 1st January to 31st December 2015. After obtaining informed consent, the participants were interviewed using pre-designed and pre-tested questionnaire.

In the present study the age of the married women ranged from 20 to 42 years, 34.7% of them belonged to age group 30-34 years and the mean age (± SD) of the respondents was 29 ± 4.52 years. The age of study participants' husbands' in the study ranged from 24 to 56 years. Most of the study participants' husbands' (60.7%) belonged to age group 31-40 years and mean age (± SD) of the study participants husbands' was 35.21 ± 5.54 years .About 50.3% women were Hindus and 57.8% of the study participants belonged to nuclear family. Majority (97.5%) of the women were literates, 82.3% of the women were housewives and 32.2% their husbands' were government employees. According to the modified B.G. Prasad classification, 38.7% of study participants were from families of socioeconomic class II, 24.8% were from class III, 20.3% from class I and 16.2% from class IV.

The age of marriage of study participants ranged from 18 – 28 years and the mean (± SD) age of the marriage was 20.35 ± 2.00 years. Nearly 37.6% of the participants had the duration of married life ranging between 6-10 years and 46.7% of

the women had 2 living children. About 45.8% of the women had atleast one male child and 46.0% of the women had atleast one female child. The age of the last child ranged from 1-20 years. Most (68.2%) of the women had last child with age between 1-5 years.

All the study participants (100%) had knowledge regarding Condom and 99.0% of the women had knowledge about Sterilization method. Majority (84.0%) of the women had knowledge about IUCD and most (68.5%) of the women knew about oral contraceptive pill. Few had knowledge about injectable (40.5%), rhythm method (29.8%), abstinence method (24.3%), lactational amenorrhoea method (15.8 %) and none of them had knowledge about withdrawal method. Among the married women who had knowledge about atleast one contraceptive method, the main source of information were doctor (37.5%) and husband (28.5%).

In the study, according to knowledge scoring among the married women who had good knowledge,knowledge score for condom (43.0%) was highest. Among study participants who had average knowledge, knowledge score was highest for sterilization (68.8%) and among study participants, knowledge regarding injectable contraceptive was poor (10.8%) and no (59.5%) respectively. About (47.3%) of the women had gender preference, among them 31.3% of the women had preference toward male child and the main reason for that was son is needed to control future generation (49.4%). About (16.0%) of the women had preference toward female child and the main reason for that was female children take care of parent in old age (57.2%).

The prevalence of contraceptive use was 58.8%, among these 16.0% were condom users, 18.9% were using Intra uterine device, 4.3% were practicing rhythm method, 3.3% of them were using OC pill, 16.3% were practicing sterilization method. Among the women who were using contraception, more than half (52.7%) of them were using since 1-5 years. The major reasons for not using contraceptive method were 35.3% did not use as they were planning for child and 33.2% of them said that their family members disagree for the use. Majority (75.5%) of them had received advice about contraceptive method during antenatal or postnatal period and most of the women said they received advice from the treating doctor (36.7%) and health worker (32.2%).

Less than half (48.3%) of the women said that contraceptive were used for spacing between the pregnancy, 33.8% women said it was used for limiting birth, 13.7% women said that it was used to prevent unwanted pregnancy, 3.5% women said it was used to reduce maternal and child death, and only 0.7% of the women said that it prevents transmission of sexual transmitted diseases. More than half (67.2%) of the husbands' of study participants agreed for the use of contraception and 62.2% of them had their involvement in decision making regarding contraception. Most of the married women accessed contraceptive from tertiary hospital 40.2% and pharmacy 36.8%.

There was significant association between the age of married women and the prevalence of contraceptive use and the highest (74.6%) prevalence of contraceptive was found among women in age group 35-39 years. The prevalence rate of contraceptive use was high among Christian (76.1%) and it was significantly associated. The literacy status of the married women was significantly associated with

the prevalence rate of contraceptive use and was highest (96.0%) among the women who were graduate. The occupation of the married women was significantly associated with the prevalence rate of contraceptive use and prevalence rate was higher among the working married women compared to women who were housewives.

The family type of the married women was significantly associated with the prevalence rate of contraceptive use and the prevalence rate was higher (67.1%) among the women who belonged to nuclear family compared to women who belonged to joint family. The socio-economic status of the married women was significantly associated with the prevalence rate of contraceptive use and it was higher (78.7%) among the women who belonged to class I. The gender preference was significantly associated with prevalence of contraceptive use and the contraceptive use was highest (68.4%) among married women who did not have gender preference.

There was significant association between knowledge score and practice of condom method by their partners and as the knowledge score increased the practice also increased. A significant association was found between knowledge and practice of oral contraceptive pill and among the married women who had average knowledge about oral contraceptive pill, they were more users as compared to women who had good knowledge. A significant association was found between knowledge and practice of use of Intra uterine contraceptive device and among the married women who had good knowledge about intrauterine contraceptive device had highest (42.5%) practice. A significant association was found between knowledge score and practice of Sterilization method and higher 29.9% sterilization practice was there among the married women who had good knowledge about it.

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# ANNEXURE I – ETHICAL CLEARANCE CERTIFICATE

K.L.E.UNIVERSITY'S
**JAWAHARLAL NEHRU MEDICAL COLLEGE,**
**NEHRU NAGAR, BELAGAVI-590010 (KARNATAKA-INDIA)**
**(Accredited 'A' Grade by NAAC)**

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**Ref: MDC/DOME/** 177 **Date: 13/11/2014**

To,

Dr. Kruthika K,
PG student in Community Medicine,
J.N.Medical College,
BELAGAVI.

Sub: Institutional Ethical Clearance for the study.

With reference to the above, we wish to inform you that your proposed research project titled **"PREVALENCE OF CONTRACEPTIVE USE AMONG MARRIED WOMEN RESIDING IN URBAN AREAS",** is ethical and justifiable. The proposed research project has been cleared by the JNMC Institutional Ethics Committee on Human Subjects Research.

**(Dr.Hema Dhumale)**
Member Secretary
JNMC Institutional Ethics Committee
on Human Subjects Research,
J.N.Medical College, Belagavi.

**(Dr.Ganga Pilli)**
Chairman,
JNMC Institutional Ethics Committee
on Human Subjects Research,
J.N.Medical College, Belagavi.

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# ANNEXURE II – CONSENT FORM

## INFORMED CONSENT ( 18 – 44 Years )

## PREVALENCE OF CONTRACEPTIVE USE AMONG MARRIED WOMEN RESIDING IN URBAN AREA

**INVESTIGATORS:** Dr Kruthika.K, Dr Chandra S Metgud

**Introduction:** The single most threat of India's health, economic and social development is uncontrolled population growth. Family planning has crucial strategy to halt the fast population growth, to reduce child mortality rate and to improve maternal health. Therefore prevalence of utilization of contraceptives will have greater impact to programme managers for designing programmes and evaluation of their contribution regarding family planning, thereby reducing unintended pregnancies and also in improving maternal health. In this study along with the assessment of knowledge and use of contraceptive among urban women, special importance is also given to sexually transmitted infections, reproductive tract infections and preference of male child.

**Objective/Purpose of the study:**

You are being invited to participate in the study to know the prevalence of contraceptive use among married women. The study will be carried out in Ashoknagar, Ramnagar and Rukmininagar field practice area of Belagavi..

**Procedure:**

In this study you will have to answer a few prepared questions about your education, socio-economic status, marriage and number of children, usage of contraceptive and

some other details. The entire procedure may take 20-30 minutes. If you agree to participate, I will collect the required information during my visit.

**Possible benefits:**

You will not be eligible for any kind of monetary benefits or free services by virtue of your participation in the study. You will be benefited by health education given during this study.

**Possible risks:**

No risk is involved in the study

**Cost of participation:**

You will not have any costs attached to your participation.

**Legal rights:**

By signing this consent form you are not waiving any of your legal rights.

**Privacy and Confidentiality:**

The results of the study may be published for scientific purposes. However your identity will not be revealed. All information collected will be coded so that no one other than investigator will know your identity.

**Withdrawal from the study:**

Participation in this study is voluntary .If you don't wish to participate in this study you will not lose benefits to which you are entitled. You can withdraw from the study anytime if you wish to do so.

**Authorization to publish the results:**

The researcher may use the information gathered from this study for presentation in scientific journals. However your identity will not be revealed.

**Questions:**

If you have any queries regarding the study, you can contact Dr Kruthika.K on mobile no. 8105117980 or Dr Chandra S Metgud on phone no.9449800517.If you have any questions about rights as a research participant you can contact Dr Ganga Pillai, Chairman, JNMC Institutional Ethical Committee on Human Subjects Research on 0831-2471350.

**Consent Summary:**

"I have been explained all the contents of this consent form in my local language and having understood and clarified all my queries about the study to the best of my knowledge. I hereby give my voluntary consent for participation in the study .I do sign the informed consent form in front of an eyewitness whom I recognise."

Name and Signature/left thumb impression of the participant:

Name and Signature of the interviewer:

Name and signature/left thumb impression of the witness:

Date:

## ASSENT FORM (15-17 Years)

## PREVALENCE OF CONTRACEPTIVE USE AMONG MARRIED WOMEN RESIDING IN URBAN AREA

**INVESTIGATORS:** Dr Kruthika.K, Dr Chandra S Metgud

**Introduction:** The single most threat of India's health, economic and social development is uncontrolled population growth. Family planning has crucial strategy to halt the fast population growth, to reduce child mortality rate and to improve maternal health. Therefore prevalence of utilization of contraceptives will have greater impact to programme managers for designing programmes and evaluation of their contribution regarding family planning, thereby reducing unintended pregnancies and also in improving maternal health. In this study along with the assessment of knowledge and use of contraceptive among urban women, special importance is also given to sexually transmitted infections, reproductive tract infections and preference of male child.

**Objective / Purpose of the study:**

You daughter/wife is being invited to participate in the study to know the prevalence of contraceptive use among married women. The study will be carried out in Ashoknagar, Ramnagar and Rukmininagar field practice area of Belagavi..

**Procedure:**

In this study your daughter /wife will have to answer a few prepared questions about her education, socio-economic status, marriage and number of children, usage of contraceptives and some other details. The entire procedure may take 20-30 minutes. If

you agree for your daughter's/wife's participation in the study, I will collect the required information during my visit.

**Possible benefits:**

You daughter/wife will not be eligible for any kind of monetary benefits or free services by virtue of her participation in the study. She will be benefited by health education given during this study.

**Possible risks:**

No risk is involved in the study

**Cost of participation:**

You daughter/wife will not have any costs attached to her participation.

**Legal rights:** By signing this consent form your daughter/wife is not waiving any of her legal rights.

**Privacy and Confidentiality:**

The results of the study may be published for scientific purposes. However your daughter/wife identity will not be revealed. All information collected will be coded so that no one other than investigator will know her identity.

**Withdrawal from the study:**

Participation in this study is voluntary .If you don't wish your daughter/wife to participate in this study she will not lose benefits to which she is entitled. She can withdraw from the study anytime if she wishes to do so.

**Authorization to publish the results:**

The researcher may use the information gathered from this study for presentation in scientific journals. However your daughter's/wife's identity will not be revealed.

**Questions:**

If you have any queries regarding the study, you can contact Dr Kruthika.K on mobile no. 8105117980 or Dr Chandra S Metgud on phone no.9449800517.If you have any questions about rights as a research participant you can contact Dr Ganga Pillai, Chairman, JNMC Institutional Ethical Committee on Human Subjects Research on 0831-2471350.

**Consent Summary:**

"I have been explained all the contents of this consent form in my local language and having understood and clarified all my queries about the study to the best of my knowledge. I hereby give my voluntary consent for my daughter's/wife's participation in the study .I will sign the informed consent form in front of an eyewitness whom I recognize."

Name and Signature/left thumb impression of the participant:

Name and Signature of the interviewer:

Name and signature/left thumb impression of the witness:

Name and signature/left thumb impression of parent/husband:

Date:

# ANNEXURE III – PROFORMA

## PREVALENCE OF CONTRACEPTIVE USE AMONG MARRIED WOMEN RESIDING IN URBAN AREA

Serial No:

1) Name:
2) Age: .....years
3) Husband's age.....years
4) Address:
5) Religion: Hindu / Muslim / Christian / Jain / Sikh
6) Literacy status: Illiterate /primary/secondary/Post SSLC/degree
7) Husband's educational status: Illiterate / primary / secondary / Post SSLC / degree
8) Occupation:
9) Husband's occupation:
10) Total monthly income:
11) Type of family: Nuclear/ joint/ three generation
12) How many members are there in your family?
13) Per capita income:

14) Socio-economic status:

15) Age at marriage:

16) Duration of married life:

17) Number of children:.....

No. of Male children..... No of female children.....

18) What is the age of your last child? .....

19) What are the family planning methods known to you? Abstinence/withdrawal method/rhythm method/ lactational amenorrhoea/condom/IUCD/OCP/ injectables / sterilization

20) What is your first source of information about family planning methods? Husband/ media/ doctors/ friends/family members/ health personnel/ health worker / others- specify

21) Knowledge score of contraceptive methods:

| **Contraceptive method** | **Name** | **Name and place of availability** | **Name, place of availability and side effects** |
|---|---|---|---|
| Condom | | | |
| IUCD | | | |
| OCP | | | |
| Injectable | | | |
| Sterilisation | | | |

22) Do you have gender preference? YES/NO

If YES Male/Female

If Male why? Do you think son as an asset/ for control of future family assets/ as a future source of income/ to continue future generation/ others- specify

If Female why? Do you think females take care of parents / they are affectionate / they are equal to male/ others- specify.

23) Currently are you using any contraceptive method? YES/NO

If YES Type: Since:

If NO why ? Husband's disapproval/ family's disagree/ Fear of side effects/ against my religion/ lack of access/planning for pregnancy

24) Did you get advice about family planning after marriage/ during antenatal / postnatal period? YES/NO

If YES By whom ? Doctor/ health worker/ family member/ friends/ others- specify.

25) Do you feel that spacing is necessary between pregnancies? YES/NO

If YES, how many years?

26) For which reason contraceptive should be used?

Limiting birth/birth spacing/ reducing maternal death/ healthy mother or child/ prevents unwanted pregnancies/ prevents STD's/ others- specify

27) What is your husband's opinion towards contraception? Agrees/disagrees

28) Is your involvement present in contraception decision making? YES/ NO

29) Where do you access contraceptive?

Urban health centre/Private/Pharmacy/Tertiary govt/Not accessed till date.

## ANNEXURE IV

## KEY TO MASTER CHART

## PREVALENCE OF CONTRACEPTIVE USE AMONG MARRIED WOMEN RESIDING IN URBAN AREAS

**A : Age of married women**

**B: Husbands' age**

**C: Religion**

1 - Hindu

2 - Muslim

3 - Christian

4 - Jain

5 - Sikh

**D: Literacy Status**

1 - Illiterate

2 - Primary School

3 - Secondary School

4 - Post SSLC

5 - Graduate

**E: Husbands' Literacy status**

1 - Illiterate

2 - Primary School

3 - Secondary School

4 - Post SSLC

5 - Graduate

**F: Occupation of Women**

1 - Housewife

2 - Government employee

3 - Private employee

4 - Business

5 - Labourer

**G: Husbands' Occupation**

1 - Not working

2 - Government employee

3 - Private employee

4 - Business

5 - Labourer

**H: Family Type**

1 - Nuclear family

2 - Joint Family

3 - Three generation Family

**I : Socio Economic Status**

1 - Class I

2 - Class II

3 - Class III

4 - Class IV

5 - Class V

**J : Age at Marriage of women**

**K : Duration of married life**

1 - 0-5 years

2 - 6- 10years

3 - 11 -15 years

4 - > 15 years

**L: Number of Children**

**M: Number of Male children**

**N: Number of female children**

**O: Age of last Child**

1- 0 -5 years

2- 6-10 years

3- >10 years

4- No child

**Knowledge about Family planning methods:**

**P: Abstinence Method**

1 – Yes

2 – No

**Q: Withdrawal Method**

1 – Yes

2 – No

**R: Rhythm Method**

1 – Yes

2 – No

**S: Lactational Amenorrhea**

1 – Yes

2 – No

**T: Barrier Method ( Condom)**

1 – Yes

2 – No

**U: Intra Uterine Contraceptive Device**

1 – Yes

2 – No

**V: Oral Contraceptive Pills**

1 – Yes

2 – No

**W: Injectable**

1 – Yes

2 – No

**X: Sterilization Method**

1 – Yes

2 – No

**Y: Source of information about Family planning**

1- Husband

2 – Doctor

3 – Friend /Family member

4 – ANM/Anganwadi worker

5 – Media

**Knowledge Score about Contraception**

**Z: Condom**

1- Name of the Contraceptive method

2 – Name and Place of availability

3 – Name, Place of availability and Side effects

**AA:Intra Uterine Contraceptive Device**

1- Name of the Contraceptive method

2 – Name and Place of availability

3 – Name, Place of availability and Side effects

**AB: Oral Contraceptive Pill**

1- Name of the Contraceptive method

2 – Name and Place of availability

3 – Name, Place of availability and Side effects

**AC: Injectable**

1- Name of the Contraceptive method

2 – Name and Place of availability

3 – Name, Place of availability and Side effects

**AD: Sterilization method**

1- Name of the Contraceptive method

2 – Name and Place of availability

3 – Name, Place of availability and Side effects

**AE: Do you have gender preference**

1 – Yes

2 – No

**AF: Which gender preference**

1 – Male

2 – Female

3 – No preference

**AG: If male gender preference, Reasons**

1 – Son is an asset

2 – To control family assets

3 – Son is a future source of income

4 – To continue future generation

5 – No preference

**AH: If female gender preference, Reasons**

1 – They take care of parents

2 – They are affectionate

3 – They are equal to males

4 – No preference

**AI: Currently using any type of contraceptive methods**

1 – Yes

2 – No

**AJ: If yes, Type of contraceptive method used**

1 – Abstinance method

2 – Barrier method( condom)

3 –Rhythm method

4 – Withdrawal method

5 – Intra Uterine Contraceptive Device

6 – Oral Contraceptive Pill

7 – Sterilization method

8 – None

**AK: Contraceptive usage since how many years**

1 – 1-5 years

2 – 6-10 years

3 – 11-15 years

4 - >15 years

5 – Not using

**AL: If not using any contraceptive method, reasons for not using**

1 – Husbands' disapproval

2 – Family disagreement

3 – Fear of side effects

4 – Against my religion

5 – Lack of access

6 – Planning for pregnancy

7 – Other reasons

8 – Using

**AM: Did you get family planning advice during antenatal / postnatal period**

1- Yes

2 – No

**AN: If yes, then by whom**

1 – Doctor

2 – ANM/Anganwadi worker

3 – Family/friend

4 – Others

5 – None

**AO: How many years of spacing is good spacing according to you**

**AP: For what reason contraception is used**

1 – Limiting birth

2 – Birth spacing

3 – Reducing maternal / child death

4 – Prevent unwanted pregnancy

5 – Prevent Sexually Transmitted Diseases

**AQ: What is your husbands' opinion towards contraception**

1 – Agree

2 – Disagree

**AR: Is your involvement is there in contraception decision making**

1- Yes

2 – No

**AS: Where do you access contraceptives**

1 – Urban Health Centre

2 – Private hospital

3 – Pharmacy

4 – Tertiary hospital

5 – Not accessed till date