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## Original Research Article

# Contraceptive trends in an industrial belt of central India: a study in ESIC Model hospital over three years

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## ABSTRACT

**Background:** India was the first country to adopt a population policy and launch family planning program in 1952. Contraceptive usage has tripled in last 40 years. Although the national fertility rate has dropped significantly, the total fertility rate of MP is still at 2.0. The unmet need of contraception was evaluated at 9 % (NHFS 4), dropped down to 5.2 % in urban areas (NHFS 5, phase 1). The focus is mainly on birth limitation.

**Methods:** The study was conducted in department of obstetrics and gynecology in ESIC Model hospital, Indore. Period of study was from January 2019 to December 2021. Study population comprised of 300 married non-pregnant women. Data was divided into three categories-traditional methods, temporary modern methods and terminal methods. Study population was divided into five groups-number of living children, religion, education, residence, income.

**Results:** 48% of study population had two or more living children. Maximum women belonged to Hinduism (62.5%) followed by Islam (26.3%). Majority of women belonged to urban residence (55.33%). Traditional method of contraception usage was overall low (5-6.7%). The most popular method was the terminal method (69-75 %) followed by temporary method (20-23%). No male sterilization done in this period.

**Conclusions:** Female sterilization accounts for two thirds of all contraceptive use. The usage of modern methods is limited. Male sterilization is soon going to be a thing of past. The burden of contraception still falls on women. The focus should shift from birth limitation to birth spacing.

**Keywords:** Contraception, Sterilizations, Unmet need

## INTRODUCTION

India was the first country to adopt a Population policy and launch Family planning program in 1952.<sup>1</sup> Since then, a variety of contraceptive methods are available in the country. India has one of the largest Govt expenditure on domestic family welfare programmes. Family planning in India is based on efforts, largely sponsored by the Central Government. Contraceptive usage has tripled in last 40 years and although the national fertility rate has dropped significantly the TFR of Madhya Pradesh, a large state in

central India is still 2.0.<sup>2</sup> It is now estimated that by 2027, India will most likely overtake China to become the most populous country in the world with 1.47 billion people.<sup>3</sup>

Despite availability of wide range of temporary measures of contraception, the trends are skewed towards sexual modesty (self-control), termination of unwanted pregnancy and female sterilization.

Nearly 75.4% of married men in India currently don't use any method of contraception.<sup>4</sup> The burden of contraception

still falls on women. Universal adoption of a small family norm still remains a distant dream.

The unmet need of contraception was evaluated at 9 % in NHFS 4 and has dropped down to 5.2 % in urban areas as reported in NHFS 5, Phase 1.<sup>4</sup> This may be a yardstick in measuring the efficacy of existing health programs.

### Aims and objectives

The aims were to determine the pattern and year-wise trend of contraception use, in the study population, for a period of three years (2019-2021) and to analyze the factors that influence the choice of contraception in the study population.

### METHODS

This study was conducted in the department of obstetrics and gynecology in ESIC Model Hospital, Indore. It was the largest ESIC hospital of Madhya Pradesh catering to 12 lakh beneficiaries. The data collection was done through interviews, IPD-OPD records and registers for the last three years. Study period was January 2019 to December 2021.

Data was divided into three categories namely traditional methods (rhythm method, coitus interruptus), temporary modern methods (barrier/ IUCD/pill) and terminal methods (male/ female sterilization). The study population was divided into five groups-number of living children, religion, education, residence and house-hold income.

### Inclusion criteria

The study population included 300 married non-pregnant women.

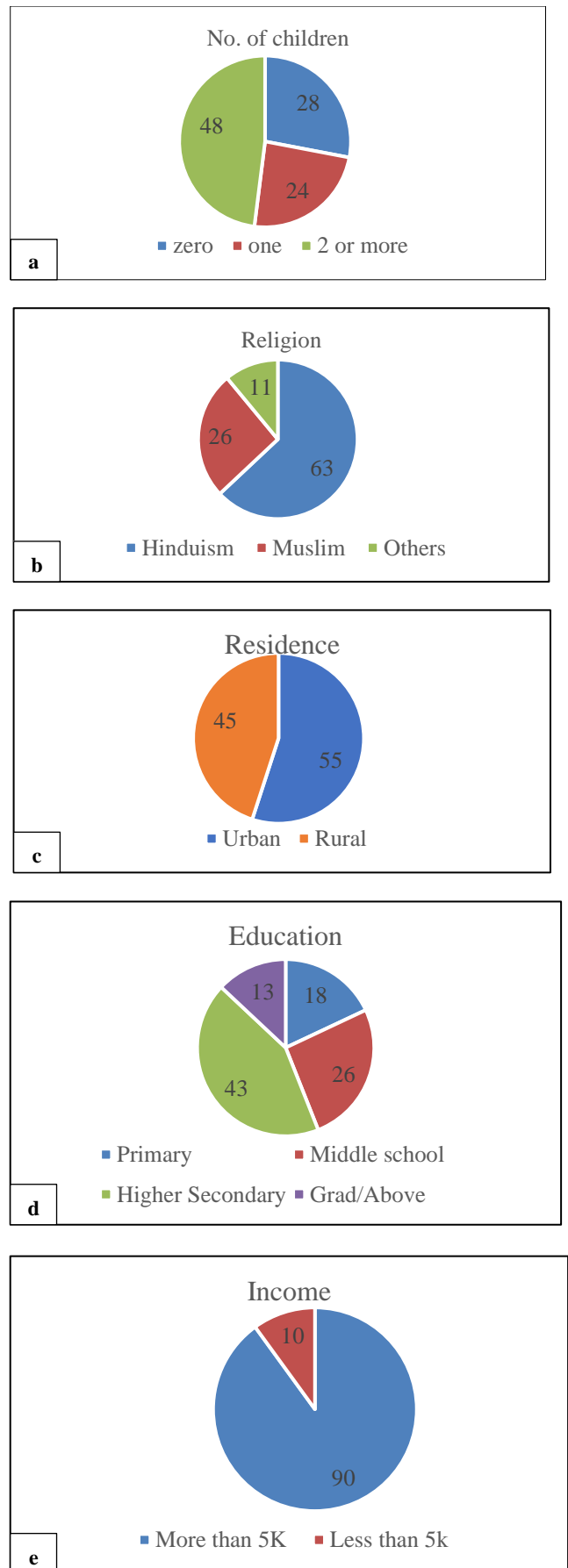
### Exclusion criteria

The exclusion criteria included pregnancy, unmarried women, women less than 18 years or more than 45 years of age and with pre- existing health conditions like diabetes, hypertension, epilepsy, active sexually transmitted disease, malignancy and history of deep vein thrombosis.

### RESULTS

48% of the study population had two or more than two living children. Nulliparas constituted 28.3 % of the women. In all three years, maximum women belonged to Hinduism (62.5%) followed by Islam (26.3%).

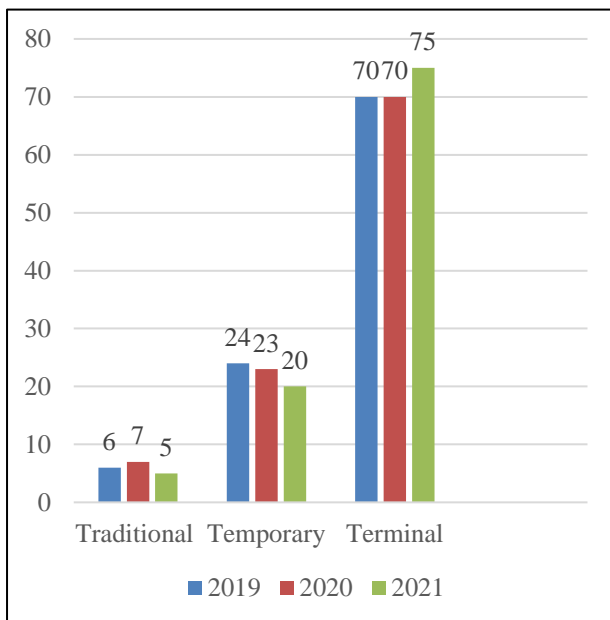
Urban area was defined as statutory towns, census cities and outgrowths. Majority of women belonged to urban residence (55.33%). The study population comprised of women of reproductive age group mainly having urban residence, mostly having basic education and belonged to low socioeconomic status (Figure 1 a-e).



**Figure 1 (a-e): Demography.**

Traditional methods were least popular but still accounted for 5-7 % of usage which reflects the unmet need for contraception. Despite decades of Govt efforts and nationwide availability, temporary modern methods of spacing were used by 20-23 % of the study population. There were no male sterilizations in the three-year period. Majority of women opted for terminal methods of contraception (69-75 %) (Figure 2).

The terminal method was used by women from low socioeconomic conditions and minimum education while the usage of modern temporary methods increased with better education and socioeconomic status. Hindu women had more acceptance for all forms of contraception. None of the couples opted for vasectomy in this study. Interestingly, a significant number of women with one living child, opted for terminal method of contraception (21%). This proportion raised to 40% after second child.



**Figure 2: Trends of contraception.**

## DISCUSSION

ESIC is a social security scheme that is applicable to all states and union territories of India. It was started in 1948 and since then, has grown exponentially. The study was conducted in the largest ESIC hospital of central India catering to about 12 lakh beneficiaries.

Majority of women belonged to low-income group. This can be explained by the fact as most of the beneficiaries are industrial workers having a ceiling salary of 20,000, so the household income is overall less, as women are largely home makers. A significant number of women included in the study had a parity of 2 or more (48%). The skewed ratio is probably due to two reasons-firstly, we excluded the pregnant population. Secondly, women usually present late to the hospital.

Traditional methods were the least preferred method of contraception in my study. This is in accordance with the study conducted Ram et al.<sup>5</sup> These methods are less effective, not only have high failure rates but also higher susceptibility to STD. Traditional methods, although used the least, still occupy 6% of the study population, which when translated in figures may be significant. This, in turn, draws attention to the high level of unmet need for spacing contraceptive methods.

In my study, the traditional methods were most prevalent in the lowest income strata of study population. This is in contrast with the study by Ram F et al, who reported that traditional methods were used more by the affluent, educated class.<sup>5</sup> In my study, the traditional methods were used almost equally among Hindus and Muslims, the two main religions in India. This is not in agreement with the study by Ram et al where Hindus used traditional methods in higher proportions than other religions.<sup>5</sup> In this study, Hindus preferred terminal methods of contraception more than the Muslims. The reason for low prevalence of sterilization and high utilization of temporary methods by Muslim women can be explained by the religious doctrine of Islam which does not favour permanent methods of family planning.<sup>6</sup> The longstanding heterogeneity of population of India associated with religion and the caste system is still relevant in contraceptive choices.<sup>7</sup>

These differences may be explained due to small sample size, the study population being derived from hospital setting and regional differences.

Modern temporary methods were used by 23.5% of couples. These methods were preferred by nulliparas and educated couples residing in urban areas. This is in accordance with the study conducted Everling et al who also found a similar overall rate of use (25.7 %).<sup>8</sup>

The ongoing fear of side effects and health issues associated with the use of various temporary methods may be one of the factors contributing to low usage. Other factors include opposition of husband, lack of access due to lack of empowerment of women in rural areas etc. Awareness of temporary modern methods of contraception does not translate into use.<sup>9</sup> Despite availability of wide range of temporary measures of contraception, the trends are skewed towards sexual modesty, termination of unwanted pregnancy and female sterilization.<sup>9</sup>

Terminal methods were the most popular methods of contraception (72.5%) of couples. This was in accordance with the study conducted by Ewerling et al, who reported that female sterilization accounted for more than two-thirds of all sterilizations.<sup>8</sup> The usage of terminal methods was almost equal in both urban and rural areas and increased with increase in house- hold income and education level. However, most participants belonged to low- income group. This finding is consistent with the observation by Fernando et al who reported that women who are the least independent (having low education,

income etc.) have the highest reliance on permanent methods.<sup>8,10</sup> Also, there was a tendency to produce one or two children in quick succession and then opt for terminal method of contraception.<sup>10</sup> The Government incentives given out for sterilization procedures has skewed the mindset towards birth limitation rather than conscious birth spacing. If birth spacing is encouraged on public platforms, the unmet need for spacing that is usually fulfilled by traditional methods (faulty and unsafe), Emergency contraception (significant failure rate) and ultimately MTPs, may be reduced.

There were no cases of male sterilization in the three- year study period. This in accordance with the National Family Health Survey (2015-2016) which showed dipping of male sterilization rates from 1-0.3%.<sup>4,11</sup> Nearly 75.4% of married men in India currently don't use any method of contraception. Historically, however, male sterilization was more popular than it is now. Two factors are responsible for the change - excesses during emergency in 1975. Popularization of the laparoscopic method of tubectomy for women.

These two developments shifted the onus of family planning totally on women and very little was done to amend the skew. Only two primary methods of male contraception exist- condoms and vasectomy. There is a dearth of research in this field. A shift from permanent to temporary contraceptive(reversible) methods is necessary as it acts as a key driver of a diverse set of positive outcomes of women's health and social well-being.<sup>12</sup> The study population is confined to a hospital setting and hence the observations need to be validated by larger studies with door-to-door survey.

## CONCLUSION

This is the first study done in an industrial belt which represents a large section of skilled workers in central India. Female sterilization accounts for two thirds of all contraceptive use. My study highlights the mind-set skewed towards terminal method of contraception which was largely unaffected by residence, education or income. There is an explicit promotion of sterilization with monetary compensation hence female sterilization continues to be the dominant method accounting for two thirds of contraceptive use. Male sterilization was not opted for, at all. It seems that male sterilization is soon going to be a thing of past. Despite being the least traumatic of all terminal methods, no couples opted for it, in my study.

There is a necessity of research in this area so that there are more options for males apart from condoms and vasectomy. Focused information targeted at dispelling myths and doubts may enable shift from terminal to temporary modern methods of contraception.

Traditional methods, although used the least, still occupy 6 % of the study population, which when translated in

figures may be significant. This, in turn, draws attention to the high level of unmet need for spacing contraceptive methods. Although the reversible modern contraception methods are covered under public health schemes for decades, their usage is limited.

The focus of the Family welfare program should shift from birth limitation to birth planning. A multi- level approach, involving Government, policy makers and society will be the key in supporting the shift towards gender neutral contraceptive service provision, that meets everyone's needs.

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