

Estimation of Unintended Fertility: Its Causes & Determinants in Odisha, India

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Background
Unintended fertility occurs when women become pregnant sooner than they wanted or when they do not want any more children. This is due to a variety of reasons like lack of access to preferred contraceptive methods, incorrect use of a method or do not have autonomy to decide for themselves.

These unplanned pregnancies affect the health and well being of the mother as well as the children and become a burden on the health system. The negative consequences of these are increased risk of low birth weight and premature babies often leading to infant and maternal mortality. Odisha is one of the constituent states of India with a moderate fertility and very high infant and maternal mortality coupled with high unintended pregnancy of 19% with a wide variation across the state and varied socio-economic groups.

Objectives

- Levels and determinants of unintended pregnancy
- Factors associated with unintended pregnancy
- Contraception, unmet need & Unintended pregnancy
- Unintended pregnancy and its bearing on fertility

Materials & Methods

- Uses Data from NFHS-3 (2005-06) & Census
- 4,540 eligible women were interviewed through a multi stage PPS sampling
- Descriptive Statistics, Chi Square and logistic regression
- **The dependent variable**
- **Independent variable**

Demographic variables

- **Socio-economic** - religion, ethnicity, wealth index, standard of living index
- **Demographic**- Age of the women, type of residence, education and occupation of the women and her husband, child loss, birth order and birth interval, ..
- **Socio-economic** - religion, ethnicity, wealth index, standard of living index

Logistic regression model: $\text{Log} [P(\text{UIP})/1-P(\text{UIP})] = B_0 + B_1X_1 + B_2X_2 + \dots + B_kX_k$

Where B0 is intercept, B1 to B14 are logistic coefficients X1 to X14 are independent variables and UIP is Unintended Pregnancy

Conceptual Framework on Unintended Pregnancy

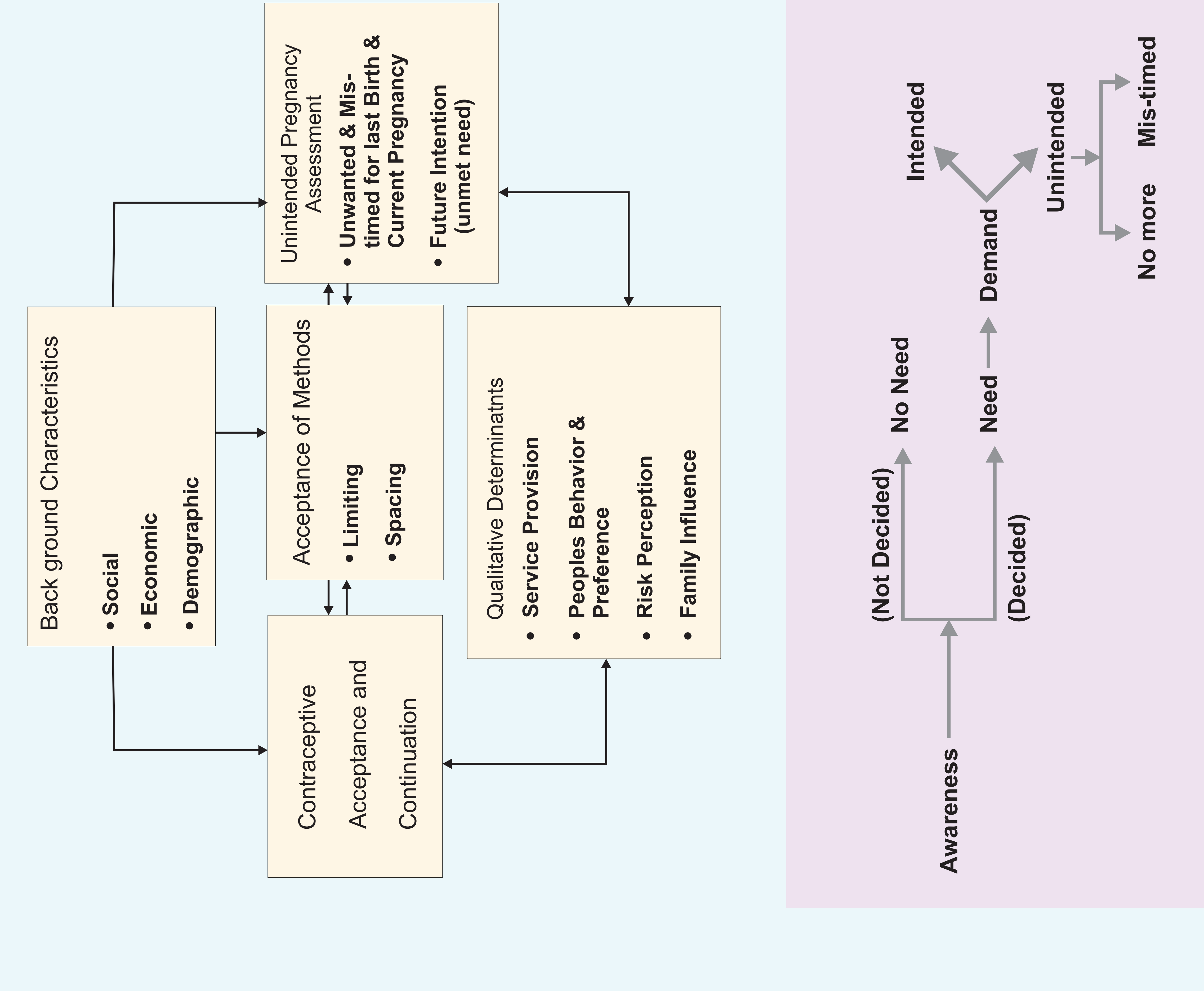


Fig-1:- Trend of age specific fertility rate (Births per 1,000 women)

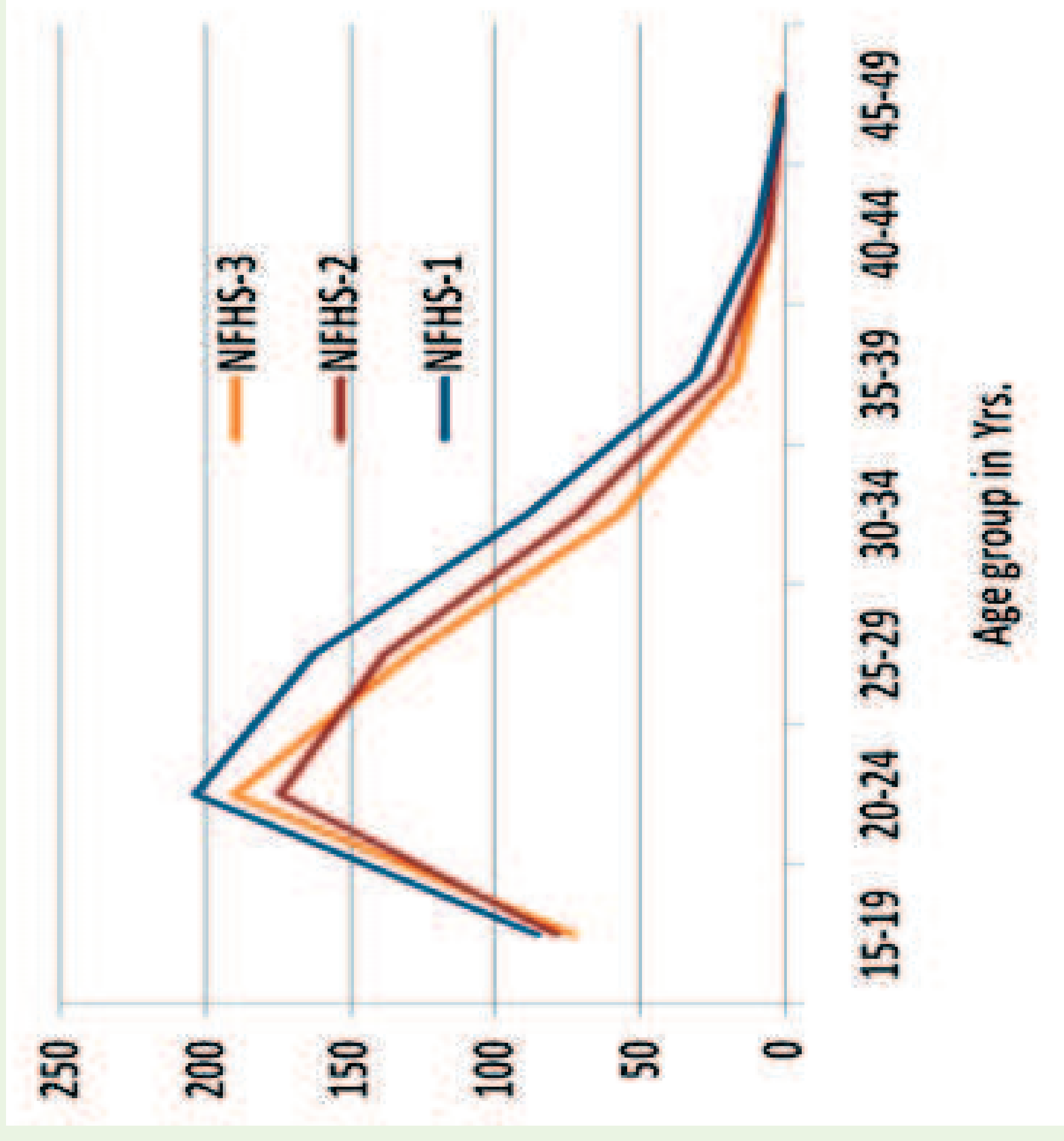


Fig-2:- Total Fertility Rate by type of residence in NFHS-1, 2,3, Odisha

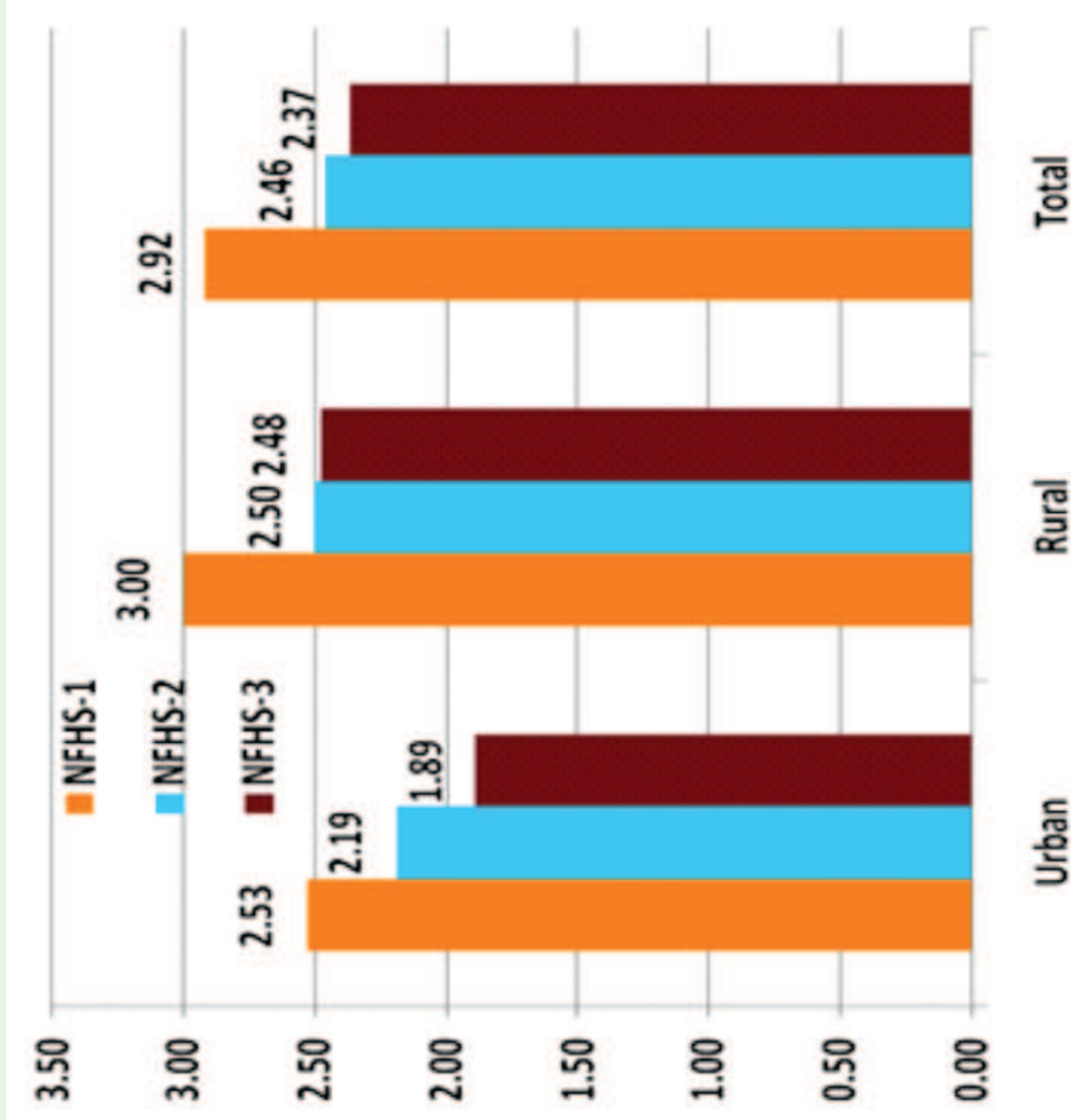


Fig-7 :- Use of different contraceptive methods by Currently Married Women.

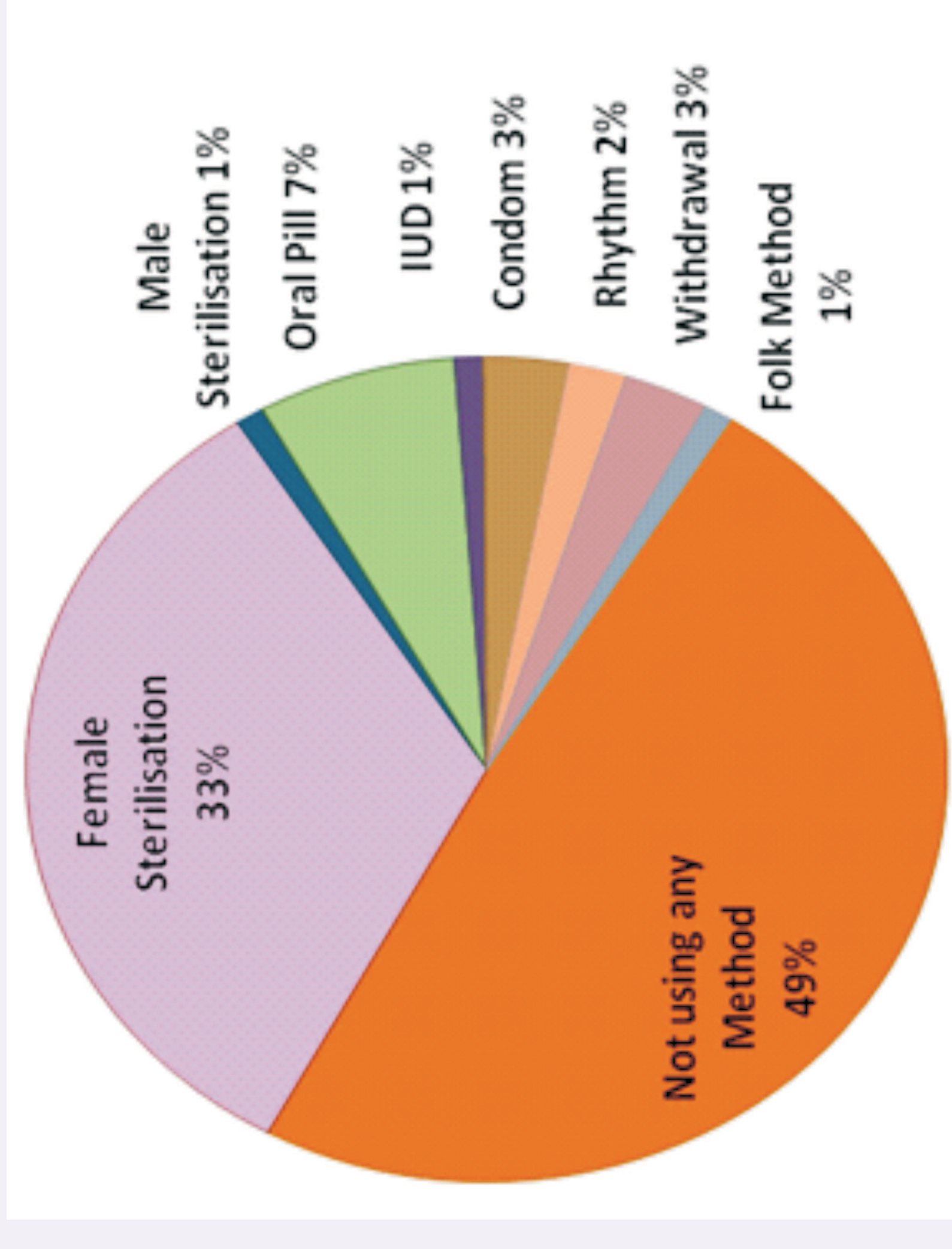
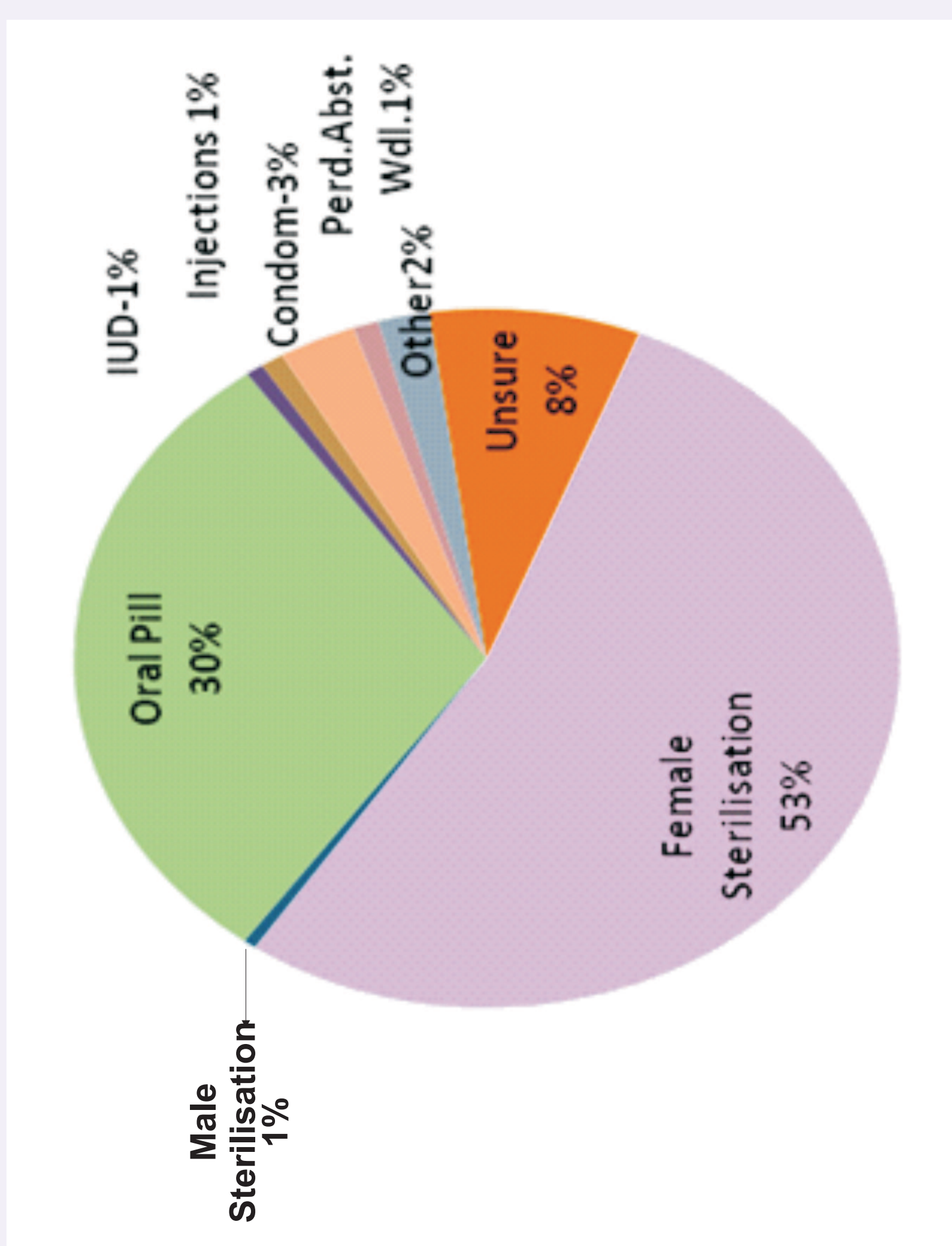


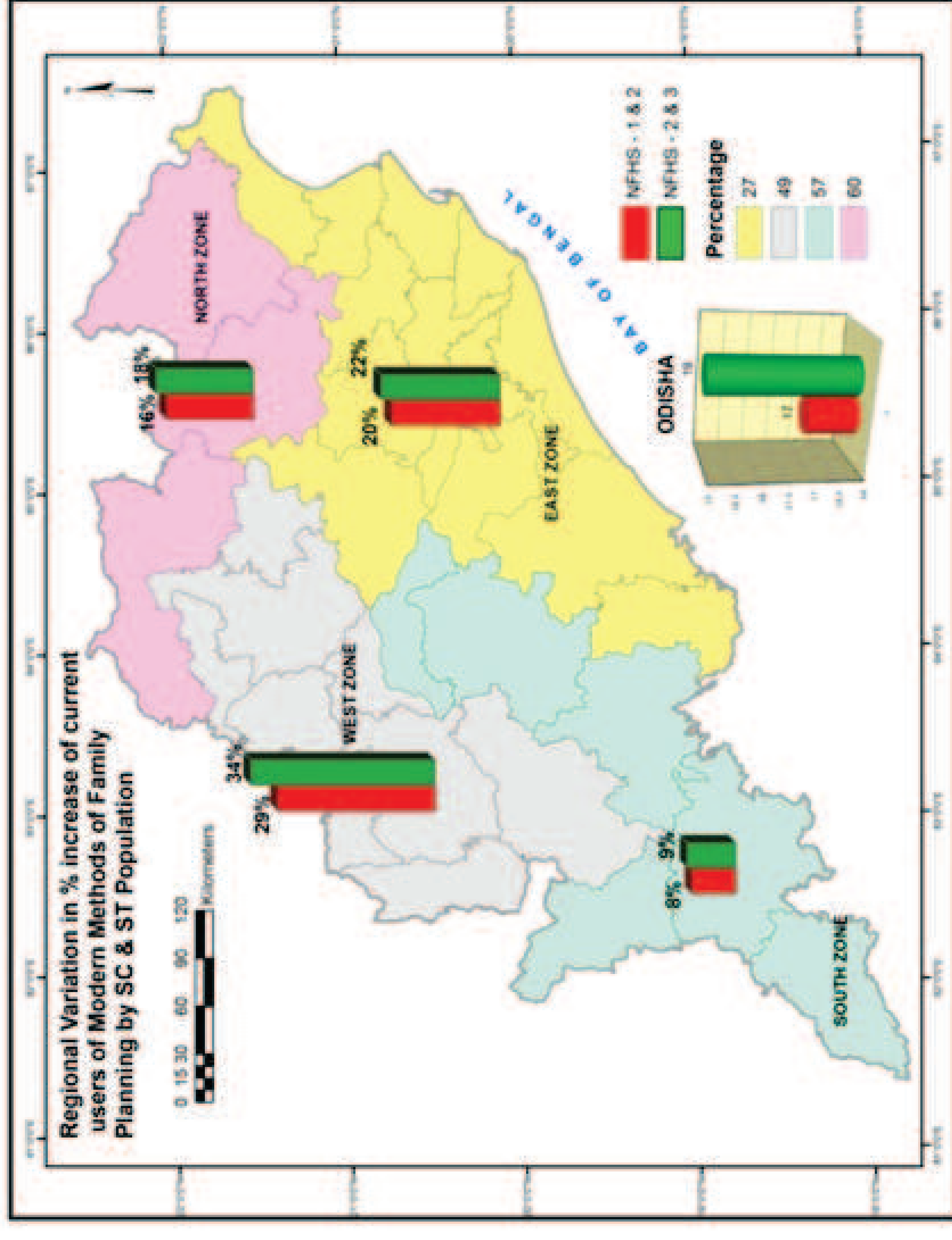
Fig-8 :- Preferred future use of diff. contraceptives By currently married women, NFHS-3



- 51% of currently married women are using any contraceptive methods.
- Women from Scheduled Tribes, no education, Lowest Wealth Index are less likely to use family planning methods than other women
- 61% of currently married women in age gr. 30-34yrs prefer female sterilization
- 70% husband working in sales prefer male sterilisation.
- 64% of Muslim women prefer IUD.
- 2.3% women of higher education level & urbanites prefer IUD

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Fig-9:-Regional Variation in percentage increase of current users of Modern Methods of Family Planning by Schedule Caste and Schedule Tribe population in Odisha

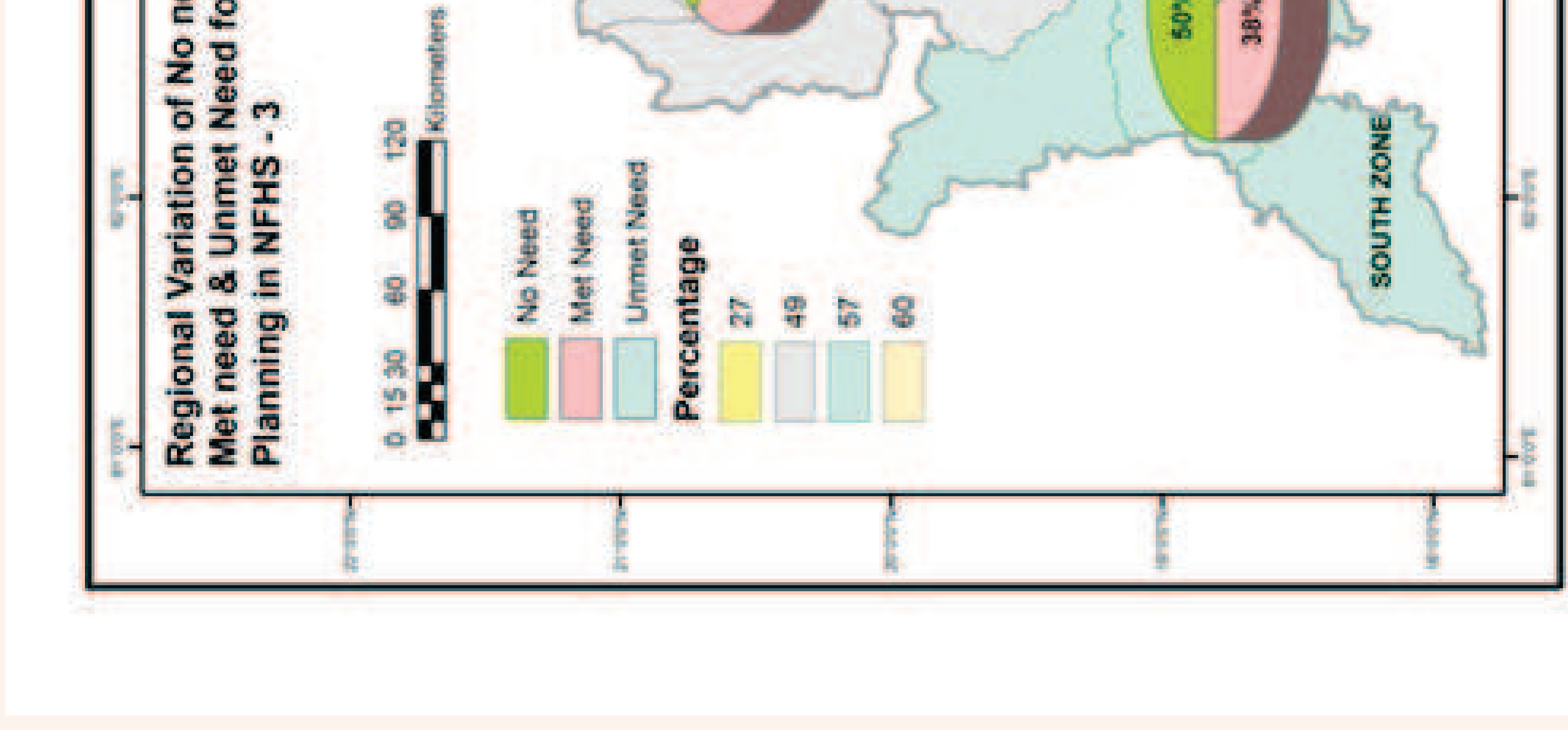


- The % increase of current users of modern methods of family planning in NFHS-1-2 is 17 and NFHS 2-3 is 19%. Increase is lowest in southern zone and highest in western zone.

Contraceptive use and Unintended Pregnancy

- Nearly 25% of women reporting unintended pregnancy were not using any type of contraception
- There are women who do not want any more children are still using temporary methods.
- Contraceptive nonusers who do not intend to use increases with increasing birth order, age and sex of the living children and decrease with education of the mother and husband, child loss.
- **Factors associated with Unintended Pregnancy**
- Working women are showing lower unintended pregnancy than non working women.
- Older women reported higher unintended pregnancy than their younger counter parts
- Unintended pregnancy is lower for Hindus and higher for other religions
- Richer and poorer women have a higher unintended pregnancy
- Unintended pregnancy is higher among SC & ST over general population

Fig-10:- Regional Variation of no need, met need and unmet need for family Planning in NFHS-3



- Unmet need is 15% which is lower than the unintended pregnancy of 19%
- Unmet need is 17% i.e. Highest in eastern zone and 12 % i.e. Lowest in southern zone

Results from Chi-Square Test and Multi-nomial Logistic Regression analysis

- The Chi Square Test predicts that after the birth of the last child the variables like age, occupation and education of the women, husband's education, birth order and birth interval have significant impact on the unintended pregnancy of the women. From the multi-nomial logistic regression analysis, it is revealed that women having secondary level education, higher educated husbands, other caste groups (1.9 times greater), poorer women, husband from sale and business, 3+ child birth order and birth interval of 37 months or more are having higher unintended pregnancy. The **R²** for these fourteen independent variables is 30.0 for the intention of the last child birth.
- Similarly in the chi-square test, when the women currently pregnant, the child loss, birth order, sex of living children, husbands occupation have significant impact on the unintended pregnancy. Whereas from the multi-nomial logistic regression it is revealed that women from the rural areas, higher education level, medium standard of living index, husband in the sales and business and 3+ birth order are showing higher unintended pregnancy. The Exp (B) or adjusted Odds-Ratio for higher birth order is 15.6 times more chance of having unintended pregnancy than other lower birth order.
- Again among all the significant variables birth order is the main determinant of unintended pregnancy of the women. The **R²** or total variability accounts for 55.4 % for the selected fourteen independent variables for unintended pregnancy when women are currently pregnant.

Summary & Conclusion

- 19 % women are reporting unintended pregnancy of which 50% are unwanted.
- Prevalence of high unintended pregnancy among teen age groups is a matter of concern.
- Higher % of unintended pregnancies is associated with women who are depending on either traditional methods or oral pills
- The variables like higher birth order, education, higher age group, high birth order, and lower standard of living of the women are highly associated with unintended pregnancy and these variables should be looked upon from the beginning for reducing unintended pregnancy
- Ensuring women's access to quality family planning information and services giving special attention to poor and less-educated women can reduce unintended pregnancy
- Area, contraceptive method and client specific approach should be taken-up in order to reduce unintended pregnancy for strengthening MCH care in the state.

Limitation

The scope of using current data is limited because the only data available is from NFHS - 3 of 2005-06.

Selected References

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