

A Retrospective Cohort Study on Epidemiology of MTP Seekers in a Tertiary Care Hospital in South India

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Abstract

Background: Medical Termination of Pregnancy (MTP) Act legalizes abortion to moderate extent and describes various grounds under which termination of pregnancy can be done. The present study aims to know the proportion of women and to analyse their determinants which lead to seek for MTP services in the family planning unit of a tertiary care hospital

Methodology: A retrospective cohort study done between December 2023 to January 2024 for which data of 2 years i.e., from January 2022 to December 2023 was retrieved from the MTP registers in the family planning unit. Data was entered in Microsoft Excel and analysed using SPSS Version 21.

Results: There were a total of 119 MTPs done in the family planning unit over a period of 2 years, which were all of first trimester abortions. 60.3% fall under socioeconomic causes, 17.2% were due to failure of contraceptive methods. The mean age was 28 years ranging from 17 to 40 years.

Conclusion: Most common indication for MTP was found to be socioeconomic causes. Women who did not practice contraception after having desired family size contributes for this unwanted pregnancy.

Key words: Contraception, indications, medical termination of pregnancy, MTP Act

Introduction

Medical Termination of Pregnancy (MTP) Act 1971, was legalized in India under which a woman can undergo termination of pregnancy up to 20 weeks of gestational age. The Act lays down the conditions under which a pregnancy can be terminated, the person or persons who can perform

such terminations, the place where such terminations can be performed. Though termination of pregnancy has been legalized in India for more than 45 years, the annual number of legal abortions are about 6.1 per 1000 pregnancies, whereas the illegal abortions performed in the country are about 13.5 per 1000 pregnancies⁸.

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According to the new October 2022 ruling of Supreme Court, Rule 3B allows abortion between 20 and 24 weeks of pregnancy if there is a change in marital status during pregnancy including widowhood or divorce. The Supreme Court declared that rule 3B must also extend to unmarried women who experience a change in their relationship (even if not married) status, whether due to separation from, desertion by or death of their partners⁸.

There are five conditions under MTP Act 1971, in which termination of pregnancy can be done. They are:

- Medical - pregnancy endangering the mother's life or causing grave injury to the physical or mental health of the mother
- Eugenic - substantial risk of the child being born with serious handicaps due to physical or mental abnormalities
- Humanitarian - pregnancy is the result of rape
- Socio-economic - actual or reasonably foreseeable environments (whether social or economic) could lead to risk of injury to the health of mother
- Failure of contraceptives

The termination of pregnancy up to 12 weeks of gestational age is done in the family planning unit of a tertiary care hospital. The aims and objectives of this study are to estimate the prevalence of MTP and to analyse the determinants which are leading to seek Medical Termination of Pregnancy in a tertiary care hospital in South India.

Methodology

After obtaining Institutional Ethics Committee clearance (IEC No. 411/2024) the study has been

conducted. This is a retrospective cohort study conducted from December 2023 to January 2024 for which the data has been retrieved from the registers maintained from January 2022 to December 2023 at family planning unit for Medical Termination of Pregnancy in Government general hospital, Kurnool. Women with <12 weeks of gestational age who are admitted in family planning unit and willing for medical termination of pregnancy were included in the study. Women who were admitted in family planning unit but not underwent medical termination and women with >12 weeks of gestational age who have approached family planning for medical termination of pregnancy were not taken into the study.

Data collection include age, residence, gravidity, parity, number of living children, indications for termination of pregnancy and method of contraception followed after termination. The collected data was entered in Microsoft Excel and the data analysis was done using SPSS version 21. Descriptive statistics was used to express data in percentages and proportions and Chi-square test was done wherever applicable. 'p' value less than 0.05 is considered as statistically significant.

Results

There were 119 women who underwent MTP in the family planning unit over a period of 2 years. There is a slight increase in the number of MTPs when observed over a period of 2 years. Table 1 shows the most common indication was the unwanted pregnancy (60.3%) resulted due to un-usage of any of the contraceptive methods which may affect their socio-economic status. Another common indication is to save the physical and mental health of pregnant women (19%), followed by pregnancy due to failure of contraception (17.2%), another indication for MTP is humanitarian/unmarried/pregnancy after rape (3.4%).

Table 1: Indications for MTP and trend over a period of 2 years

Indications as per MTP Act	January 2022 to December 2022 N(%)	January 2023 to December 2023 N(%)	Total N(%)
To save physical and mental health of pregnant women	8(34.78%)	15(65.21%)	23(19%)
Eugenic/Congenital anomalies	-	-	-
Humanitarian/unmarried/pregnancy after rape	2(50%)	2(50%)	4(3.4%)
Socio-economic -unwanted child/not used contraception	27(38.02%)	44(61.97%)	71(60.3%)
Failure of contraceptives	9(42.85%)	12(57.14%)	21(17.2%)

Figure 1 depicts the religion wise distribution of women who opted for MTP in which 62.10% of women were Hindus, 25.9% constitute Christians

and 12.1% account for Muslims among 119 women who underwent MTP in the family planning unit of a tertiary care hospital.

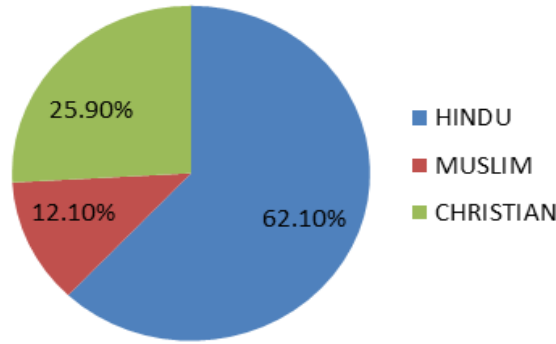


Figure 1: Religion wise distribution of women underwent MTP

Table 2: Age wise distribution of women seeking for MTP services

Age	To save physical and mental health of woman (n = 22)	Humanitarian causes (n = 4)	Socioeconomic causes (n = 72)	Failure of contraception (n = 21)	Total (n = 119)	'p' value
Age (Mean Age - 28 years)						
≤ 20 years	-	2 (50%)	-	-	2 (1.68%)	0.2
21 - 25 years	6 (27.27%)	2 (50%)	29 (40.27%)	10 (47.61%)	47(39.49%)	
26 - 30 years	12 (54.54%)	-	22 (30.55%)	5 (23.8%)	39(32.77%)	
31 - 35 years	2 (9.09%)	-	15 (20.83%)	6 (28.57%)	23(19.32%)	
36 - 40 years	2 (9.09%)	-	6 (8.33%)	-	8(6.72%)	

Table 2 shows the age wise distribution of women seeking for MTP services in which the mean age was 28 years ranging from 17 to 40 years. Most common age group for MTP to save the physical and mental health of pregnant woman is 26 to 30 years.

Women seeking for MTP for socio-economic causes and failure of contraception constitute for 40.27% and 47.61% respectively among the age groups of 21 to 25 years.

Table 3: Religion wise distribution of women seeking for MTP services

Religion	To save physical and mental health of woman (n = 18)	Humanitarian causes (n = 5)	Socioeconomic causes (n = 76)	Failure of contraception (n = 20)	Total (n = 119)	'p' value
Hindu	8 (44.44%)	5 (100%)	45 (59.21%)	14 (70%)	72 (60.5%)	0.05
Muslim	2 (11.11%)	-	6 (7.89%)	6 (30%)	14 (11.76%)	
Christian	8 (44.44%)	-	25 (32.89%)	-	33 (27.73%)	

Table 3 explains the religion wise distribution of women seeking for MTP services in which 59.21% of women under socio-economic causes and 70%

of women under failure of contraception belong to Hindu community.

Table 4: Gravidity wise distribution of women seeking for MTP services

Gravida	To save physical and mental health of woman (n = 23)	Humanitarian causes (n = 5)	Socioeconomic causes (n = 71)	Failure of contraception (n = 20)	Total (n = 119)	'p' value
1	-	5 (100%)	5 (7.04%)	-	10 (8.4%)	0.01*
3	5 (21.73%)	-	39 (54.92%)	8 (40%)	52 (43.69%)	
4	8 (34.78%)	-	17 (23.94%)	8 (40%)	33 (27.73%)	
5	8 (34.78%)	-	8 (11.26%)	2 (10%)	18 (15.12%)	
6	-	-	2 (2.81%)	2 (10%)	4 (3.36%)	
7	2 (8.6%)	-	-	-	2 (1.68%)	

Table 4 shows gravidity wise distribution of women seeking for MTP services in which 54.92% of women under socioeconomic causes were with a gravid of 3. Women with gravida of 3 and 4 under

failure of contraception causes are of 40% and 40% respectively. Chi-square test was done for gravidity and indications for MTP, which gave a p-value of 0.01 which is considered statistically significant.

Table 5: Distribution of women seeking for MTP services based on number of living children

Number of living children	To save physical and mental health of woman (n = 22)	Humanitarian causes (n = 4)	Socioeconomic causes (n = 73)	Failure of contraception (n = 20)	Total (n = 119)	'p' value
0	-	4 (100%)	4 (5.47%)	-	8 (6.72%)	0.02*
1	2 (9.09%)	-	39 (53.42%)	8 (40%)	2 (1.68%)	
2	14 (63.63%)	-	57 (78.08%)	14 (70%)	85 (71.42%)	
3	4 (18.18%)	-	8 (10.95%)	6 (30%)	18 (15.12%)	
4	2 (9.09%)	-	2 (2.73%)	-	4 (3.36%)	
5	-	-	2 (2.73%)	-	2 (1.68%)	

Table 5 shows distribution of women seeking MTP services based on number of living children in which 63.63% of women under the indication of saving physical and mental health of women, 78.08% of women under socio-economic causes and 70% of

women under failure of contraception causes have 2 live children. When chi-square test was applied for number of living children and indications for MTP, we got a p-value of 0.02 which is statistically significant.

Table 6: Contraception method opted following MTP

Method of Contraception	To save physical and mental health of woman (n = 23)	Humanitarian causes (n = 4)	Socioeconomic causes (n = 63)	Failure of contraception (n = 29)	Total (n = 49)	'p' value
IUCD	-	-	4 (6.34%)	-	4 (3.36%)	0.04*
Permanent sterilization	23(100%)	-	41 (65.07%)	9 (31.03%)	73 (61.34%)	
None	-	4 (100%)	18 (28.57%)	20 (68.96%)	42 (35.29%)	

Table 6 depicts the contraception methods opted with MTP in which 65.07% and 31.03% of women who underwent MTP under socioeconomic causes and failure of contraception opted for permanent sterilization respectively. Whereas 28.57% and 68.96% of women who underwent MTP under socioeconomic causes and failure of contraception did not opt for any method of contraception following Medical Termination of Pregnancy.

Discussion

All the health care facilities strictly follow the indications given by the Medical termination of pregnancy Act 1971 in which there are also guidelines to obtain consent and maintain confidentiality. There are also instructions given regarding safe, affordable and accessible abortion services to terminate pregnancy (MTP Act, 2024). Of the estimated 15.6 million abortions performed in India in 2015, just 22% took place in a hospital or other healthcare institutions¹¹. Hence this study reflects one face of termination of pregnancies in health facility. The trend in incidence of termination of pregnancy over the 2 year period did not change in the current study.

The commonest reason for opting MTP in our study was socio-economic causes (60.3%) which is a matter of concern in which women who already had 2 live and healthy children didn't practice any contraceptive methods. The rate of unintended pregnancy was estimated to be 70.1 per 1000 pregnancies which is high¹¹. Socioeconomic reason was the commonest indication (40%) in women seeking MTP in the study published by Shankarraiah et al from Karnataka which correlates with our study¹⁰. Worldwide, in about 14 countries having 20% of world's population have undertaken MTP for social reasons of limiting family and without restrictions in 56 countries with 40% of world's population⁴. It is the most common reason for undertaking MTP^{2,3}.

Pregnancy termination decisions made under the category of saving the physical and mental health of the pregnant woman are interdisciplinary and frequently involve the advice of doctors evaluating the relationship between a woman's health and her pregnancy's potential to cause harm to either¹. This indication constitute for 19% in our study where as it is 17% in study conducted by Veena et al, which is

correlating with our study¹⁴. This decision has to be a shared one keeping the individual characteristics of the patient⁶.

In our study 17.2% of terminations are due to failure of contraception while in the study undertaken by Veena et al. from South India, the commonest reason for seeking MTP was reported to be contraceptive failure (50%)¹⁴. Yet another study from Maharashtra reported contraceptive failure in 99.1% as reason for undergoing MTP⁹.

The age groups are important to plan interventions and counselling to prevent unintended pregnancies and congenital malformations. We could not find relevant studies which analysed indications for termination of pregnancy with age groups. The mean age group in the current study is 28 years. A study from Tamil Nadu, South India reported 72% to be below 30 years of age and 92% were first trimester abortions and main reason was for social reason for completion of the family⁷. Whereas in our study 54.54% involve the indication to save physical and mental health of the mother among 26 – 30 years age group and 40.27% comes under indication of social causes among 21 – 25 years age group.

There were no pregnant women reported with congenital anomalies of the fetus in the current study whereas in the study conducted by Pratima Agarwal and Papa Dasari considering data of 3 year period, the commonest reason for opting MTP was for congenitally malformed fetus (38.28%)¹. It was estimated that globally 27,000 newborn deaths occurred within 28 days after birth due to congenital malformations and in India approximately 6% of births were reported to have congenital malformations. Though most lethal anomalies could be diagnosed by 20 weeks of pregnancy so as to undertake termination of pregnancy as per MTP act, a recent study in India reported their incidence after 24 weeks of pregnancy to be 51.75/10,000 pregnancies (0.5%)¹³. Of late high incidence of congenital malformations are reported in India with a pregnancy termination rate of 4.39 per 1000 births⁹.

In our study 61.34% adopted permanent sterilisation methods, 35.29% did not opt for any methods of contraception and 3.36% opted for IUCD method of contraception following MTP. Oral

contraception was the choice of contraception in most women in North India where as tubectomy or CU-T in South India^{9,10,14}.

Conclusion

MTP in the family planning unit constitute termination of first trimester pregnancies. The most common reason for opting MTP was to terminate unplanned pregnancy even after completion of desired family size. 17.2% only constitute the failure of contraception undergoing termination of pregnancy. 61.34% only adopted permanent method of contraception following MTP. Appropriate knowledge regarding contraceptive methods is essential which plays a key role in reducing the burden of termination of pregnancies. Only medical methods of termination of pregnancies is followed in the family planning unit of our institute which are safe without any complications.

Limitations: As it is a Retrospective study and the data was retrieved only from registers, we could not assess the knowledge and attitude of the women regarding contraceptive methods and also the accessibility of family planning services.

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Conflicts of Interest: None

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