

Voluntary Termination of Pregnancy among Unmarried Women in Tunisia: Access to Abortion, Sexual Violence, and Gaps in Post-Abortion Care from a Six-Year Hospital-Based Study

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ABSTRACT

Background: Although abortion has been legal and free of charge in Tunisia since 1973, unmarried women continue to experience social vulnerability, stigma, and gender-based violence that shape access to reproductive care.

Methods: We conducted a retrospective, descriptive, longitudinal, monocentric study at the Center of Maternity and Neonatology of Tunis between January 2018 and December 2023, including all unmarried pregnant women managed for voluntary termination of pregnancy (VTP), prenatal care, or delivery. Comparative analyses explored factors associated with abortion and post-abortion outcomes.

Results: Among 2,411 included women, 688 (28.53%) underwent VTP. Sexual violence preceded 46.66% of abortions, and adolescents accounted for 11.19% of cases. Most abortions occurred at early gestational age and were predominantly medical, with a low complication rate. Post-abortion contraceptive uptake was extremely low (6.83%), and recurrent pregnancy occurred in 22.38% of women who underwent VTP.

Conclusion: Legal access to abortion in Tunisia ensures procedural safety but does not guarantee reproductive autonomy for unmarried women. Strengthening trauma-informed care, adolescent-friendly services, and systematic post-abortion family planning is essential to translate legal access into effective reproductive rights.

Introduction

Access to safe abortion is a fundamental component of sexual and reproductive health and rights and is essential to women's autonomy, dignity, and health [1]. Globally, unintended pregnancy and abortion disproportionately affect socially vulnerable populations, including adolescents, unmarried women, and survivors of sexual violence [2,9].

In many Arab-Muslim societies, pregnancy outside marriage remains highly stigmatized. Unmarried pregnant women often face social exclusion, family rejection, and psychological distress, which may delay care-seeking and limit access to contraception and post-abortion follow-up. Abortion stigma persists even in legally permissive settings and constitutes a major barrier to comprehensive reproductive care.

Tunisia represents a unique context in the Middle East and North Africa region. Since 1973, abortion has been legal and provided free of charge in public health facilities, without restriction related

to marital status and up to the first trimester. Despite this progressive legal framework, evidence suggests that legal permissibility alone does not ensure equitable access or reproductive autonomy, particularly for unmarried women exposed to social vulnerability and gender-based violence [3-5,7].

Data specifically addressing voluntary termination of pregnancy among unmarried women in Tunisia remain scarce. In particular, the contribution of sexual violence to abortion demand and the quality of post-abortion care have been insufficiently documented. This study aimed to analyze voluntary termination of pregnancy among unmarried women in Tunisia, focusing on circumstances of pregnancy, abortion practices, post-abortion contraception, and reproductive outcomes.

Methods

Study Design and Setting

We conducted a retrospective, descriptive, longitudinal, monocentric study at the Center of Maternity and Neonatology

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of Tunis, a tertiary referral hospital providing obstetric, neonatal, and family planning services.

Study Population

All unmarried pregnant women managed for voluntary termination of pregnancy, prenatal care, or delivery between January 2018 and December 2023 were included. Women lost to follow-up after the first consultation and those consulting for reasons unrelated to pregnancy were excluded.

Data Collection

Data were extracted from medical records using a standardized collection form. Variables included age, socioeconomic characteristics, circumstances of pregnancy (consensual relationship, sexual violence, incest), gestational age at abortion, abortion method, complications, post-abortion contraception, and recurrent pregnancy.

Sample Size

The minimum required sample size was estimated at 384 women assuming a 50% prevalence of VTP, a 95% confidence level, and a 5% margin of error. The final sample largely exceeded this requirement.

Statistical Analysis

Qualitative variables were expressed as frequencies and percentages, and quantitative variables as means \pm standard deviation. Comparative analyses were performed using the chi-square or Fisher's exact test to explore associations according to circumstances of pregnancy, age group, and post-abortion contraceptive uptake. A p -value < 0.05 was considered statistically significant.

Ethical Considerations

Anonymity and confidentiality were strictly respected. Given the retrospective design, informed consent was not required.

Results

A total of 2,614 unmarried pregnant women were identified during the study period. After excluding 203 women lost to follow-up, 2,411 women were included in the analysis, representing 3.45% of all obstetric consultations at CMNT.

Characteristics of Women Undergoing Voluntary Termination of Pregnancy

Among the 2,411 unmarried pregnant women included in the study, 688 (28.53%) underwent voluntary termination of pregnancy. The mean age of women who had an abortion was 25.0 ± 4.2 years (range: 13–42 years), with adolescents (< 18 years) accounting for 11.19% of cases.

A substantial proportion of women seeking abortion were socially vulnerable. Low educational attainment and lack of health insurance were frequent among this population.

Magnitude of Voluntary Termination of Pregnancy

Voluntary termination of pregnancy was performed in 688 women, representing 28.53% of the study population. The proportion of VTP showed a slight increase over time, from 24.53% in 2018 to 28.05% in 2023.

Circumstances of Pregnancy

Sexual violence was reported in 46.66% ($n = 321$) of VTP cases, 9.01% including assaults involving minors. Consensual sexual relationships accounted for 51.74% of abortions, while incest was reported in 1.60% of cases.

Table 1: Circumstances of pregnancy leading to voluntary termination (N = 688) Sexual violence includes assaults involving minors

Circumstance of pregnancy	n	%
Consensual sexual relationship	356	51.74
Sexual violence	321	46.66
Incest	11	1.60

Abortion Practices and Safety

The mean gestational age at abortion was 8 weeks and 3 days of amenorrhea. More than half of abortions (55.52%) were performed before 9 weeks of gestation. Medical abortion was the predominant method (69.76%), while surgical abortion accounted for 30.24%.

Complications were rare and mostly minor. Medical abortion was complicated by hemorrhage requiring aspiration in 6.87% of cases. Surgical abortion complications included controlled hemorrhage and three cases of uterine perforation, all with favorable outcomes.

Post-Abortion Care and Reproductive Outcomes

Post-abortion contraceptive uptake was extremely limited (6.83%), with rare use of long-acting reversible contraception. Most women did not attend post-abortion follow-up visits.

Recurrent pregnancy was observed in 22.38% of women who underwent voluntary termination of pregnancy.

Factors Associated with Post-Abortion Contraception

Post-abortion contraceptive uptake was significantly lower among women whose pregnancies resulted from sexual violence compared to those with consensual pregnancies ($p < 0.05$). Adolescents were also less likely to receive post-abortion contraception than adult women ($p < 0.05$).

Table 2: Sociodemographic and clinical characteristics of women undergoing voluntary termination of pregnancy Values are expressed as frequencies and percentages

Characteristic	n	%
Age (years)		
< 18	77	11.19
≥ 18	611	88.81
Circumstances of pregnancy		
Consensual relationship	356	51.74
Sexual violence	321	46.66
Incest	11	1.60
Gestational age at abortion		
< 9 weeks	382	55.52
≥ 9 weeks	306	44.48

Abortion method		
Medical	480	69.76
Surgical	208	30.24
Post-abortion contraception		
Yes	47	6.83
No	641	93.17
Recurrent pregnancy during study period		
Yes	154	22.38
No	534	77.62

Discussion

This study provides rare hospital-based evidence on voluntary termination of pregnancy among unmarried women in Tunisia. Nearly half of abortions followed sexual violence, highlighting the central role of gender-based violence in shaping reproductive trajectories. Sexual violence is a well-established determinant of unintended pregnancy and abortion worldwide [3,4].

The predominance of early medical abortion and the low complication rate are consistent with WHO recommendations and confirm that abortion services in Tunisia are procedurally safe when accessed within the healthcare system [1]. However, procedural safety does not equate to reproductive autonomy.

The extremely low uptake of post-abortion contraception represents a critical failure of service delivery. WHO strongly recommends systematic provision of post-abortion family planning to prevent repeat unintended pregnancies [1]. The high rate of recurrent pregnancy observed in our study likely reflects this gap in care. Similar gaps have been reported among unmarried women and adolescents in other low- and middle-income settings.

Adolescents constituted a particularly vulnerable subgroup, facing increased exposure to violence, stigma, and inadequate follow-up. Adolescent-friendly, confidential, and non-judgmental reproductive health services are urgently needed [6,9,10].

Limitations

The monocentric and retrospective design may limit generalizability and result in underreporting of sexual violence due to stigma and incomplete documentation. Nevertheless, the large sample size and extended study period strengthen the validity of our findings.

Conclusion

Legal access to abortion in Tunisia ensures safety but does not guarantee reproductive autonomy for unmarried women. Addressing sexual violence and strengthening post-abortion contraception and trauma-informed care are essential to fulfill reproductive rights.

Declarations

Ethics Approval and Consent to Participate

Patient anonymity and confidentiality were strictly respected. No informed consent was required.

Consent for Publication

Not applicable.

Availability of Data and Materials

Data are available from the corresponding author upon reasonable request.

Competing Interests

The authors declare no competing interests.

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