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# Cross-sectional study of the epidemiological profile and consequences of clandestine abortions among women in the city of Bunia, province of Ituri, northeast of the Democratic Republic of Congo

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## ABSTRACT

### Introduction

Clandestine abortion remains a significant cause of maternal morbidity and mortality due to insufficient contraceptive services and restrictive Congolese legislation.

### Objective

This cross-sectional study aims to identify the socio-demographic factors, methods, and health consequences of clandestine abortions among women in the City of Bunia, Ituri Province.

### Methods

A sample of 118 cases of clandestine abortions was drawn from 1,514 pregnant women admitted to 5 health facilities selected through multi-stage sampling. Data were encoded and analysed in SPSS 20 using Fisher's exact test.

### Results

The study reveals a frequency of clandestine abortions of 7.78%. The women most affected were aged 15–19 years (45.45%), married girls (46.15%), primigravidae (60.0%), single women (64.14%), and displaced persons (50%). Nearly half of the research participants (49.15%) used misoprostol to induce abortion. The factors contributing to abortions included refusal of paternity (46.61%), fear of parents (29.66%), academic pursuits (18.64%), and rejection of pregnancy (5.08%). Retention of tissue was the most common complication, affecting more than one-third of the research participants (38.14%). Finally, 90% of the participants were cured, while 4.24% died.

### Conclusion

In light of these findings, it is imperative to develop new multi-sectoral strategies aimed at promoting women's empowerment, strengthening policies on access to contraceptive services, and engaging legal and religious leaders in discussions on sexual health law reform. Such measures could support efforts to combat clandestine abortions and ultimately contribute to the reduction of maternal mortality.

## INTRODUCTION

Globally, as well as in various regions, the incidence of abortion is significant, especially in countries with restrictive legislation compared to those with more liberal laws. Studying the circumstances under which illegal abortions are performed is challenging due to their clandestine nature, which is difficult to detect except through complications. The same is true for non-medical care procedures (Sedgh et al., 2015).

Approximately 73 million induced abortions occur each year worldwide. Six out of ten unwanted pregnancies (61%) end in induced abortion. Nearly 45% of all abortions are unsafe, 97% of which occur in developing countries. Global estimates indicate that in 2023, a woman dies every nine minutes from a clandestine abortion. A third of all abortions are carried out under very unsafe conditions, meaning they are performed by individuals without adequate training and using dangerous and invasive methods (Bearak et al., 2020).

Despite the legalization of abortion in Belgium, unsafe abortions persist due to certain barriers that hinder access to safe abortion care (Bourzar & Lorant, n.d.).

In France, the law permitting voluntary interruption of pregnancy has evolved over time, beginning with the Veil Law, which forms the basis of current legislation and ensures access to reproductive health services related to abortion without stigma (Mathieu, 2022).

In France and Russia, there are 30 unsafe abortions per 100,000 cases, with a lethality rate ranging from 4.2% to 13.2% (Bankole et al., 2020a). However, in Argentina, women's health has become a political battleground influenced by Catholic doctrine (Graco, 2024).

In Quebec, studies reveal that the information provided to women regarding abortion is often insufficient, particularly concerning the gestational age and abortion methods. These factors limit access to quality care (Guilbert & Bois, 2023).

In Libreville, most women seeking clandestine abortions were single and had attained a secondary education level (79.9%). Unwanted pregnancy was the primary reason for abortion in 52.8% of cases (Mouba et al., 2021).

In Burkina Faso, the law prohibits induced abortion. A study aimed at establishing a dilemma agenda on abortion found that the factors driving clandestine abortions were unwanted pregnancies and the desire to terminate the pregnancy (Ouattara, 2021).

According to Cecilla et al. (2020), adolescents account for a significant proportion of annual deaths due to abortion. Overall, 15% of all unsafe abortions are performed on girls under 20 years old.

In Senegal, unsafe abortions are prevalent; however, post-abortion care appears to be less accessible to certain categories of women, despite their need for it. The cost of care at the national level remains unknown (Lince-Deroche et al., 2020).

In Morocco, abortion is considered a social taboo. A study revealed that the factors leading to clandestine abortions included limited access to abortion services and the failure of contraceptive methods (Elomrani et al., 2023).

Cameroonian legislation allows abortion in cases of rape and when the pregnancy endangers the woman's life. In Yaoundé, half of the respondents opposed the decriminalization of abortion, with health security being cited as a key reason among those supporting decriminalization (Mayack, 2022).

Despite the legislation in Congo-Brazzaville, women frequently resort to street drugs to induce abortion in 74.5% of cases (Essie et al., 2020b).

In the Democratic Republic of Congo (DRC), only 31% of health facilities meet the criteria to provide voluntary termination of pregnancy services. Disparities exist in access to this care based on location. Additionally, only a third of health facilities are prepared to offer contraceptive care following an abortion. However, the unavailability of medications further restricts access (Déroche et al., 2019).

A descriptive study conducted in Kananga, at the Provincial Hospital, over a period of four years, revealed that the frequency of clandestine abortions was 3.48%, with the average age of women being 26.96 years. Women who sought clandestine abortions were mostly under 30 years old, with 70% being nulliparous. Furthermore, 55.1%

of them were students, pupils, or unemployed, while 37.70% of abortionists were nurses (Kayembe et al., 2022).

Safe abortions should be encouraged. On a psychological level, the choice of a safe abortion method is essential and should not be imposed on women. Attali (2016) affirms that allowing women to choose the method increases their satisfaction with the procedure.

The Ituri Province, particularly the city of Bunia, which is experiencing a massive influx of displaced persons due to war, is no exception. The unique humanitarian crisis in Bunia has resulted in pregnancies that are both wanted and unwanted, some of which are linked to rape, contributing to the incidence of unsafe abortions. The low involvement of researchers in this area motivated the present study.

This study, therefore, aims to identify the sociodemographic factors, methods, and health consequences of clandestine abortions among women in the City of Bunia.

## METHODS

### *Study Area*

This multicenter study was conducted in the Bunia Health Zone, Ituri Province, in the northeast of the Democratic Republic of Congo. The zone contains 121 health establishments, including 26 second-level health facilities, six public health structures, and three parastatal health structures. All these establishments are situated within three municipalities.

The study was carried out in the following state and parastatal health establishments: Hôpital Général de Référence (HGR) Bunia, Centre Hospitalier (CH) Mudzi Maria, and Centre de Santé de Référence (CSR) Lembabo in the Shari municipality; CSR PNC in Mbunya municipality; and CSR Bunia Cité in Nyakasanza municipality.

The Bunia Health Zone has a distinctive demographic profile due to the presence of four displaced persons' camps, which have continued to expand due to armed conflicts over the past two decades. This population movement creates substantial needs in the city. The supervision of children and young people has become challenging, leading to juvenile delinquency and prostitution, which present sexual and reproductive health issues.

### *Research Design and Period*

This descriptive study covered a research period from January 1, 2022, to June 30, 2024. Data related to the study were collected over one month. The cross-sectional method, as described by Vaughan and Morrow (1991), was employed for its implementation. This method enabled the study to examine the phenomenon of clandestine abortion among homogeneous women during a specific period of humanitarian crisis.

### *Study Population*

The population of the study consisted of all pregnant women hospitalized in the gynecology and obstetrics unit during the study period, amounting to 1,514 women. The sample included 118 women who had experienced clandestine abortion, were admitted for complications, and whose records were complete and well-maintained in line with the research instrument. Women whose files were missing or incomplete were excluded from the study.

### *Sample Size and Sampling Technique*

A multistage sampling method was used. First, all second-level integrated state and parastatal health establishments in the Bunia Health Zone were identified, including HGR Bunia, CSR Bunia-Cité, CH Rwankole, CSR PNC, CSR UMIR/OPAS, CSR Lembabo, and CH Mudzi Maria. At the second level, only establishments that consented to participate were retained. These included HGR Bunia, CSR Bunia-Cité, CH Mudzi Maria, and CSR Lembabo. The CM Divine Grace was included as a substitute for the establishment that declined to participate. Subsequently, all files of women who had experienced clandestine abortion were selected, and only those that were well-maintained were retained for analysis.

### *Data Collection Method*

For data collection, a documentary review method was used. To facilitate data collection, six third-year midwifery students with knowledge of the field and study context were recruited and trained in advance on the data collection tool. These students were divided into three groups. Their training focused on the data collection tool and the ethical principles of research.

### *Validity and Reliability of the Instrument*

To ensure the validity and reliability of the research instrument, a pre-test of the documentary analysis guide was conducted at a training site other than those targeted in the main study. This process facilitated the adaptation of the research instrument. The sociodemographic variables retained for analysis included age group, occupation, marital status, parity, gestational age, and place of origin. Study variables included pregnancy age, pregnancy profile, causes of abortion, abortion methods, complications, and outcomes.

### *Data Analysis*

The database was created using SPSS version 20, where the data were encoded and processed. Data analysis was conducted using Fisher's exact statistical test.

### *Ethical Approval*

Ethical approval for the study was granted by the Bioethics Committee of the Higher Institute of Medical Techniques of Kinshasa, under Note No. 003/CBE/ISTM/KIN/RDC/PMBBL/2024, dated May 16, 2024.

Following ethical approval, the research team visited the hospitals where consent forms were presented to the hospital authorities. Once permission was obtained, the researchers gained access to patient files. During file processing, the collection sheets were gathered daily and secured by the principal investigator. Data collected were stored in a password-protected computer, with only the principal investigator's computer used for data processing to ensure data security.

## RESULTS

**Table 1**:
Frequency of Clandestine Abortions and Profile of the Affected Women

| Variables | Modality | N | Cases of Induced Abortions | Eff | % | Chi² Cal | Chi² Obs | df | p = 0.05 |
|---|---|---|---|---|---|---|---|---|---|
| **Age (years)** | 15-19 | 110 | 50 | 45.45 | | | | | |
| | 20-24 | 326 | 47 | 14.42 | | | | | |
| | 25-29 | 480 | 15 | 3.13 | | | | | |
| | 30-34 | 373 | 5 | 1.34 | | | | | |
| | 35-39 | 180 | 1 | 0.56 | | | | | |
| | 40-44 | 40 | 0 | 0 | | | | | |
| | 45-49 | 5 | 0 | 0 | | 148.25 | 12.59 | 6 | **S** |
| **Profession** | Housewife | 1056 | 37 | 3.5 | | | | | |
| | Maid | 13 | 6 | 46.15 | | | | | |
| | Pupil/Student | 205 | 63 | 30.73 | | | | | |
| | Official | 240 | 12 | 5 | | 69.04 | 7.81 | 3 | **S** |
| **Obstetric Formula** | 1 | 133 | 81 | 60.9 | | | | | |
| | 2 | 128 | 15 | 11.72 | | | | | |
| | 3 | 411 | 12 | 2.92 | | | | | |
| | 4 | 468 | 9 | 1.92 | | | | | |
| | 5 | 266 | 1 | 0.38 | | | | | |
| | 6 | 89 | 0 | 0 | | | | | |
| | 7 | 13 | 0 | 0 | | | | | |
| | 8 | 6 | 0 | 0 | | 323.31 | 14.06 | 7 | **S** |
| **Origin** | Displaced | 179 | 17 | 9.5 | | | | | |
| | Indigenous | 1335 | 101 | 7.57 | | 59.78 | 3.84 | 1 | **S** |
| **Marital Status** | Single | 145 | 93 | 64.14 | | | | | |
| | Married | 1369 | 25 | 1.83 | | | | | |
| **Total** | | 1514 | 118 | 7.79 | 39.18 | 3.84 | 1 | **S** | |

The frequency of clandestine abortions was 7.78%. This issue predominantly affects women aged 15–19 (45.45%), maids (46.15%), and pupils/students (30.73%). It is also prevalent among women in their first obstetric formula (60.9%), single women (64.14%), and displaced women (50%) ($p < 0.05$).

**Table 2**:
Factors Favouring Clandestine Abortions

| Variables | N | Refusal of Paternity | | Reason for Study | | Fear of Parents | | Non-acceptance of Pregnancy by the Mother | | Chi² Cal | Chi² Obs | df | p= 0.05 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | f | % | f | % | f | % | f | % | | | | |
| **Age (years)** | | | | | | | | | | | | | |
| 15-19 | 50 | 12 | 24,00 | 10 | 20,00 | 26 | 52,00 | 2 | 4,00 | | | | |
| 20 - 24 | 47 | 29 | 61,70 | 11 | 23,40 | 6 | 12,77 | 1 | 2,13 | | | | |
| 25 - 29 | 15 | 11 | 73,33 | 1 | 6,67 | 2 | 13,33 | 1 | 6,67 | | | | |
| 30 - 34 | 5 | 2 | 40,00 | 0 | 0,00 | 1 | 20,00 | 2 | 40,00 | | | | |
| 35 - 39 | 1 | 1 | 100,00 | 0 | 0,00 | 0 | 0,00 | 0 | 0,00 | | | | |
| | | | | | | | | | | 36,03 | 21,02 | 12 | S |
| **Profession** | | | | | | | | | | | | | |
| Housewife | 37 | 26 | 70,27 | 1 | 2,70 | 8 | 21,62 | 2 | 5,41 | | | | |
| Maid | 6 | 3 | 50,00 | 1 | 16,67 | 2 | 33,33 | 0 | 0,00 | | | | |
| Pupil/Student | 63 | 20 | 31,75 | 19 | 30,16 | 24 | 38,10 | 0 | 0,00 | | | | |
| Official | 12 | 6 | 50,00 | 1 | 8,33 | 1 | 8,33 | 4 | 33,33 | | | | |
| | | | | | | | | | | 35,76 | 16,91 | 9 | S |
| **Obstetric formula** | | | | | | | | | | | | | |
| **Gesta** | | | | | | | | | | | | | |
| 1 | 81 | 28 | 34,57 | 20 | 24,69 | 31 | 38,27 | 2 | 2,47 | | | | |
| 2 | 15 | 9 | 60,00 | 2 | 13,33 | 2 | 13,33 | 2 | 13,33 | | | | |
| 3 | 12 | 9 | 75,00 | 0 | 0,00 | 2 | 16,67 | 1 | 8,33 | | | | |
| 4 | 9 | 8 | 88,89 | 0 | 0,00 | 0 | 0,00 | 1 | 11,11 | | | | |
| 5 | 1 | 1 | 100,00 | 0 | 0,00 | 0 | 0,00 | 0 | 0,00 | | | | |
| | | | | | | | | | | 27,38 | 21,02 | 12 | S |
| **Origine** | | | | | | | | | | | | | |
| Displaced | 17 | 11 | 64,71 | 1 | 5,88 | 5 | 29,41 | 0 | 0,00 | | | | |
| Indigenious people | 101 | 44 | 43,56 | 21 | 20,79 | 30 | 29,70 | 6 | 5,94 | | | | |
| | | | | | | | | | | 3,28 | 7,81 | 3 | S |
| **Marital status** | | | | | | | | | | | | | |
| Single | 93 | 36 | 38,71 | 20 | 21,51 | 33 | 35,48 | 4 | 4,30 | | | | |
| Married | 25 | 19 | 76,00 | 2 | 8,00 | 2 | 8,00 | 2 | 8,00 | | | | |
| **Total** | **118** | **55** | **46,61** | **22** | **18,64** | **35** | **29,66** | **6** | **5,08** | **16,61** | **7,81** | **3** | **S** |

Refusal of paternity was identified as the most common factor (46.61%), followed by fear of parents (29.66%). These results align with the significant association between marital status and motivations for clandestine abortions ($p < .05$).

**Table 3**:
Methods Used to Induce Abortion

| Variables | N | Misoprostol | | Native Plants | | Unknown | | Dilation of Cervix | | Curettage | | Chi² Cal | Chi² Obs | df | p = 0.05 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | f | % | f | % | f | % | f | % | f | % | | | | |
| **Age (years)** | | | | | | | | | | | | | | | |
| 15-19 | 50 | 21 | 42,00 | 21 | 42,00 | 0 | 0,00 | 7 | 14,00 | 1 | 2,00 | | | | |
| 20 - 24 | 47 | 27 | 57,45 | 15 | 31,91 | 0 | 0,00 | 1 | 2,13 | 4 | 8,51 | | | | |
| 25 - 29 | 15 | 9 | 60,00 | 3 | 20,00 | 1 | 6,67 | 0 | 0,00 | 2 | 13,33 | | | | |
| 30 - 34 | 5 | 1 | 20,00 | 2 | 40,00 | 0 | 0,00 | 2 | 40,00 | 0 | 0,00 | | | | |
| 35 - 39 | 1 | 0 | 0,00 | 1 | 100,00 | 0 | 0,00 | 0 | 0,00 | 0 | 0,00 | | | | |
| | | | | | | | | | | | | 28,61 | 26,29 | 16 | S |
| **Profession** | | | | | | | | | | | | | | | |
| Housewife | 37 | 17 | 45,95 | 14 | 37,84 | 0 | 0,00 | 3 | 8,11 | 3 | 8,11 | | | | |
| Maid | 6 | 2 | 33,33 | 3 | 50,00 | 0 | 0,00 | 1 | 16,67 | 0 | 0,00 | | | | |
| Pupil/Student | 63 | 34 | 53,97 | 23 | 36,51 | 0 | 0,00 | 4 | 6,35 | 2 | 3,17 | | | | |
| Official | 12 | 5 | 41,67 | 2 | 16,67 | 1 | 8,33 | 2 | 16,67 | 2 | 16,67 | | | | |
| | | | | | | | | | | | | 14,67 | 21,02 | 12 | NS |
| **Obstetric formula** | | | | | | | | | | | | | | | |
| **Gesta** | | | | | | | | | | | | | | | |
| 1 | 81 | 40 | 49,38 | 31 | 38,27 | 0 | 0.00 | 7 | 8,64 | 3 | 3,70 | | | | |
| 2 | 15 | 8 | 53,33 | 3 | 20,00 | 1 | 6,67 | 2 | 13,33 | 1 | 6,67 | | | | |
| 3 | 12 | 6 | 50,00 | 2 | 16,67 | 0 | 0,00 | 1 | 8,33 | 3 | 25,00 | | | | |
| 4 | 9 | 4 | 44,44 | 5 | 55,56 | 0 | 0,00 | 0 | 0,00 | 0 | 0,00 | | | | |
| 5 | 1 | 0 | 0,00 | 1 | 100,00 | 0 | 0,00 | 0 | 0,00 | 0 | 0,00 | | | | |
| | | | | | | | | | | | | 22,72 | 26,29 | 16 | NS |
| **Origin** | | | | | | | | | | | | | | | |
| Displaced | 17 | 7 | 41,18 | 9 | 52,94 | 0 | 0,00 | 1 | 5,88 | 0 | 0,00 | | | | |
| Indigenious people | 101 | 51 | 50,50 | 33 | 32,67 | 1 | 0,99 | 9 | 8,91 | 7 | 6,93 | | | | |
| | | | | | | | | | | | | 3,03 | 9,48 | 4 | NS |
| **Marital status** | | | | | | | | | | | | | | | |
| Single | 93 | 45 | 48,39 | 34 | 36,56 | 1 | 1,08 | 10 | 10,75 | 3 | 3,23 | | | | |
| Married | 25 | 13 | 52,00 | 8 | 32,00 | 0 | 0,00 | 0 | 0,00 | 4 | 16,00 | | | | |
| **Total** | **118** | **58** | **49,15** | **42** | **35,59** | **1** | **0,85** | **10** | **8,47** | **7** | **5,93** | **7,73** | **9,48** | **4** | **NS** |

The most common method reported was the use of misoprostol (49.15%), followed by native plants (35.59%). Notably, cervical dilation (8.47%) and curettage (5.93%) were less frequently employed. These trends were prominent among single women (52%), indigenous people (50.50%), and women aged 25–29 years (60%), with statistical significance for age only ($p > .05$).



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**Table 4:**
Complications of clandestine abortions

| Variables | N | Uterine Perforation | | Infection | | Retained Products of Conception | | Metrorragia | | Chi² Cal | Chi² Obs | df | p=0.05 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | f | % | f | % | f | % | f | % | | | | |
| **Age** (years) | | | | | | | | | | | | | |
| 15-19 | 50 | 4 | 8,00 | 17 | 34,00 | 17 | 34,00 | 12 | 24,00 | | | | |
| 20 - 24 | 47 | 6 | 12,77 | 11 | 23,40 | 17 | 36,17 | 13 | 27,66 | | | | |
| 25 - 29 | 15 | 1 | 6,67 | 3 | 20,00 | 9 | 60,00 | 2 | 13,33 | | | | |
| 30 - 34 | 5 | 0 | 0,00 | 2 | 40,00 | 2 | 40,00 | 1 | 20,00 | | | | |
| 35 - 39 | 1 | 0 | 0,00 | 1 | 100,00 | 0 | 0,00 | 0 | 0,00 | | | | |
| | | | | | | | | | | 8,43 | 21,02 | 12 | NS |
| **Profession** | | | | | | | | | | | | | |
| Housewife | 37 | 4 | 10,81 | 9 | 24,32 | 20 | 54,05 | 4 | 10,81 | | | | |
| Maid | 6 | 0 | 0,00 | 0 | 0,00 | 2 | 33,33 | 4 | 66,67 | | | | |
| Pupil/Student | 63 | 7 | 11,11 | 18 | 28,57 | 20 | 31,75 | 18 | 28,57 | | | | |
| Official | 12 | 0 | 0,00 | 7 | 58,33 | 3 | 25,00 | 2 | 16,67 | | | | |
| | | | | | | | | | | 16,27 | 16,91 | 9 | NS |
| **Obstetric formula** | | | | | | | | | | | | | |
| Gesta | | | | | | | | | | | | | |
| 1 | 81 | 8 | 9,88 | 27 | 33,33 | 24 | 29,63 | 22 | 27,16 | | | | |
| 2 | 15 | 0 | 0,00 | 4 | 26,67 | 9 | 60,00 | 2 | 13,33 | | | | |
| 3 | 12 | 2 | 16,67 | 1 | 8,33 | 6 | 50,00 | 3 | 25,00 | | | | |
| 4 | 9 | 1 | 11,11 | 2 | 22,22 | 5 | 55,56 | 1 | 11,11 | | | | |
| 5 | 1 | 0 | 0,00 | 0 | 0,00 | 1 | 100,00 | 0 | 0,00 | | | | |
| | | | | | | | | | | 13,04 | 21,02 | 12 | NS |
| **Origin** | | | | | | | | | | | | | |
| Displaced | 17 | 1 | 5,88 | 4 | 23,53 | 8 | 47,06 | 4 | 23,53 | | | | |
| Indigenious people | 101 | 10 | 9,90 | 30 | 29,70 | 37 | 36,63 | 24 | 23,76 | | | | |
| | | | | | | | | | | 0,72 | 7,81 | 3 | NS |
| **Marital status** | | | | | | | | | | | | | |
| Sigle | 93 | 9 | 9,68 | 29 | 31,18 | 31 | 33,33 | 24 | 25,81 | | | | |
| Married | 25 | 2 | 8,00 | 5 | 20,00 | 14 | 56,00 | 4 | 16,00 | | | | |
| **Total** | **118** | **11** | **9,32** | **34** | **28,81** | **45** | **38,14** | **28** | **23,73** | **3,99** | **7,81** | **3** | **NS** |

Complications such as uterine perforation (6.78%) and infections (25.42%) were prevalent. Retained products of conception (27.12%) and metrorrhagia (20.68%) were also observed. The findings showed significant correlations for age and obstetric history ($p < .05$).

**Table 5:**
Care Prognosis

| Variables | Modalities | N | Healing | | Death | | Evasion | | Chi² Cal | Chi² Obs | dF | p=0.05 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | f | % | f | % | f | % | | | | |
| **Age** (years) | 15-19 | 50 | 46 | 92 | 2 | 4 | 2 | 4 | | | | |
| | 20 - 24 | 47 | 42 | 89,36 | 2 | 4,26 | 3 | 6,38 | | | | |
| | 25 - 29 | 15 | 13 | 86,67 | 1 | 6,67 | 1 | 6,67 | | | | |
| | 30 - 34 | 5 | 5 | 100 | 0 | 0 | 0 | 0 | | | | |
| | 35 - 39 | 1 | 1 | 100 | 0 | 0 | 0 | 0 | | | | |
| | | | | | | | | | 4,82 | 15,5 | 8 | NS |
| **Profession** | Housewife | 37 | 35 | 94,59 | 2 | 5,41 | 0 | 0 | | | | |
| | Maid | 6 | 4 | 66,67 | 0 | 0 | 2 | 33,33 | | | | |
| | Pupil/Student | 63 | 58 | 92,06 | 2 | 3,17 | 3 | 4,76 | | | | |
| | Official | 12 | 10 | 83,33 | 1 | 8,33 | 1 | 8,33 | | | | |
| | | | | | | | | | 10,1 | 12,59 | 6 | NS |
| **Obstetric formula** | Gesta | | | | | | | | | | | |
| | 1 | 81 | 74 | 91,36 | 3 | 3,7 | 4 | 4,94 | | | | |
| | 2 | 15 | 13 | 86,67 | 1 | 6,67 | 1 | 6,67 | | | | |
| | 3 | 12 | 10 | 83,33 | 1 | 8,33 | 1 | 8,33 | | | | |
| | 4 | 9 | 9 | 100 | 0 | 0 | 0 | 0 | | | | |
| | 5 | 1 | 1 | 100 | 0 | 0 | 0 | 0 | | | | |
| | | | | | | | | | 5,97 | 15,5 | 8 | NS |
| **Origin** | Displaced | 17 | 13 | 76,47 | 2 | 11,8 | 2 | 11,76 | | | | |
| | Indigenious people | 101 | 94 | 93,07 | 3 | 2,97 | 4 | 3,96 | | | | |
| | | | | | | | | | 5,08 | 5,99 | 2 | NS |
| **Marital status** | Single | 93 | 86 | 92,47 | 3 | 3,23 | 4 | 4,3 | | | | |
| | Married | 25 | 21 | 84 | 2 | 8 | 2 | 8 | | | | |
| **Total** | | **118** | **107** | **90,68** | **5** | **4,24** | **6** | **5,08** | **2,33** | **5,99** | **2** | **NS** |

For more than 90% of respondents, the treatment prognosis is recovery ($p>0.05$) for all trends combined compared to 5.08% of deaths.

## DISCUSSION

### *Frequency of Clandestine Abortions*

The results of our research indicate a frequency of clandestine abortions of 7.78%, with the most affected demographic being the age group of 15-19 years (45.45%). The highest proportions were observed among maids (46.15%), women with a parity of one (60.0%), single women (64.14%), and displaced persons (50%) ($p < 0.05$) (see **Table 1**).

These findings are consistent with those of Kayembe et al. (2022), who, in a study conducted at the provincial hospital in Kananga, observed that clandestine abortions were more frequent among women under 30 years of age, 70% of whom were nulliparous, and 55.1% were pupils, students, and unemployed individuals. The frequency of clandestine abortions in their study was 3.48%, with the average age of women being 26.96 years (Kayembe et al., 2022). Similarly, Mouba (2021) found that clandestine abortions were more prevalent among women with secondary education and those who were single and poor, with a rate of 79.9%.



https://dx.doi.org/10.4314/orapj.v5i7.63

Essie et al. (2020) noted that the average age of women undergoing clandestine abortions was 25 years, with 38.8% of them living alone. In Morocco, Aicha (2020) observed that the annual rate of clandestine abortions from 2009 to 2010 was 7.21% among single women, 8.35‰ in rural areas, and 6.34% in urban areas.

In our study, the frequency of clandestine abortions was higher among displaced people and young girls. We believe that the difficult economic situation of parents is a significant influencing factor, leading to unwanted pregnancies. Moreover, social instability and a lack of accountability from partners are key contributors to this phenomenon.

*Factors Favouring Clandestine Abortions*

The results indicate that the primary factor favouring clandestine abortions was the refusal of paternity (46.61%), followed by fear of parents (29.66%) and the desire to pursue studies ($p < 0.05$) (see **Table 2**).

Similar factors were highlighted in a study in Burkina Faso, which identified unwanted pregnancies and the desire to terminate the pregnancy as the primary reasons for clandestine abortions (Ouattara, 2021). In Morocco, a study by Elomrani et al. (2023) found that factors contributing to clandestine abortions included limited access to abortion services and the failure of contraceptive methods. Mayack (2022) reported that, in Yaoundé, health security reasons were the dominant factor favouring clandestine abortions.

Our findings suggest that the individuals responsible for these pregnancies are often married men or irresponsible partners. Additionally, young women, particularly those affected by the humanitarian crisis in the region and without financial stability, are vulnerable to these factors. Societal customs, which strongly discourage pregnancies outside of marriage, further compel young women to resort to clandestine abortions. Limited access to contraceptive services also plays a significant role in the perpetuation of this issue.

*Methods Used to Induce Abortions*

The results show that almost half of the respondents (49.15%) induced abortions using misoprostol, while 35.59% relied on native plants, 8.47% used cervical dilation, 5.93% underwent curettage, and 0.85% used unknown methods ($p > 0.05$), except for the variable "age." The trend of misoprostol use was most prominent among married women (52%), indigenous women (50.50%), women with a parity of two (53.33%), students (53.97%), and those in the 25-29 year age group (60%) (see **Table 3**).

Contrary to these findings, in Kananga, the most common method of clandestine abortion was cervical dilation and curettage (69.07%) (Kayembe et al., 2022). In Congo Brazzaville, Essie et al. (2020b) observed that 74.5% of women used street drugs to induce abortion.

The high rate of misoprostol use in our study could be attributed to the fact that the drug is relatively well-known among women and is accessible in local pharmacies, despite restrictions on its sale. The absence of medical abortion services may also be a driving factor for women to resort to self-management of the abortion process.

*Complications of Clandestine Abortions*

The main complication reported in our study was the retention of the products of conception (38.14%), followed by infections (28.81%), metrorrhagia (23.73%), and uterine perforation (9.32%) ($p > 0.05$). These complications were most common among married women (56%), displaced persons (47.6%), women with a parity of five (100%), housewives (54.05%), and women in the 25-29 year age group (60%) (see **Table 4**).

In contrast, Jet al. (2021) identified infections as the most frequent complication of clandestine abortions. Mouba et al. (2021) noted that hemorrhage was the leading complication, accounting for 55.6% of cases. Another study revealed that, although infections are the most common complication, Neisseria meningitidis can also complicate septic abortions (J et al., 2021).

In Brazzaville, a study conducted at Talangaï Hospital from July to December 2018 revealed that abortion complications accounted for 53.8% of cases among unemployed women (Essie et al., 2020b).

Our findings differ from those of other studies, as the predominant method of abortion in our sample was the use of misoprostol, which is part of a medical abortion plan. We attribute the complications observed to the

improper administration of abortifacient drugs, particularly in self-managed abortions.

### *Support and Prognosis*

Our findings reveal a recovery rate of 90% and a case fatality rate of 4.24% (see **Table 5**).

The study conducted by Bankole et al. (2020a) in France and Russia reported a lethality rate for clandestine abortions ranging from 4.2% to 13.2%. Mouba et al. (2021) reported a recovery rate of 92.5% and a death rate of 7.5%. Our study found a relatively higher recovery rate, which we attribute to the timely arrival of patients at healthcare facilities after experiencing complications. However, the deaths observed in our study may have been linked to the severity of complications and delays in seeking medical consultation.

### *Limitations*

This study focused on describing the epidemiological aspects of women undergoing clandestine abortions. However, due to its retrospective and documentary nature, it could not capture all relevant factors. We recommend that future researchers conduct qualitative studies to explore women's experiences with clandestine abortions, as this would provide a more exhaustive understanding of the phenomenon.

## CONCLUSION

This multicentre descriptive study aimed to identify the sociodemographic factors, methods, and health consequences of clandestine abortions among women in the city of Bunia, Ituri Province, over the period from January 1, 2022, to June 30, 2024.

The following key results were obtained:

- The frequency of clandestine abortions was 7.78%.
- The epidemiological profile revealed that the most affected women were in the 15-19 age group (45.45%), married girls (46.15%), those with a gestation of 1 (60.0%), nulliparous women (60%), single women (64.14%), and displaced women (50%).
- The factors favouring clandestine abortions included refusal of paternity (46.61%), fear of parents (29.66%), the pursuit of education (18.64%), and rejection of pregnancy (5.08%).
- The most common complication was retention of conception tissue (38.14%).
- The treatment prognosis was characterised by a recovery rate of 90% and a lethality rate of 4.24%.

In view of these results, it is necessary to develop new multi-sectoral strategies aimed at promoting women's empowerment, strengthening policies on access to contraceptive services, and sensitising legal and religious leaders on the need for legal reform in sexual and reproductive health. Such measures could contribute to combating clandestine abortions and reducing maternal mortality.

**Ethics Approval:** Ethical approval for the study was granted by the Bioethics Committee of the Higher Institute of Medical Techniques of Kinshasa, under Note No. 003/CBE/ISTM/KIN/RDC/PMBBL/2024, dated May 16, 2024.

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