How to Cite:

**Socio-clinical profile of women receiving comprehensive abortion care**

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**Abstract**---Introduction: Comprehensive abortion care (CAC) is an intervention proven to prevent maternal death or injury. Disrupted health systems, limited contraception, and a higher instance of sexual violence cause an increase in the number of unintended pregnancies and demand for safe abortion. One of the leading causes of maternal mortality and morbidity is unsafe abortion. 8% of the maternal mortality is contributed by unsafe abortion.  

Aim & Objective: To identify reasons for seeking CAC services, socio-clinical profile of its users, its effectiveness, acceptance at the level of users and complication.  

Observation: 65% of patient were educated & were lying between 9th standard to 12th class. Only 0.4% was illiterate among the women receiving CAC. Mean age of patient receiving CAC was 29 years. 25.9% underwent medical method of abortion; maximum patients 46.9% patients did not receive any contraception. 73.8% of patients underwent abortion without complication.  

Conclusion: Post-abortion care is an opportunity for healthcare professionals to provide education, discuss fertility needs and the need for contraception with
women seeking abortion so that appropriate decisions can be taken for suitable family planning. A more evidence based and practical approach in discussion of family planning needs with health care provider helps improve the health status of a family, society and ultimately the whole country.

**Keywords**---abortion, maternal mortality, clinical profile.

**Introduction**

When properly done, abortion is one of the safest procedures in medicine[1] but unsafe abortion is a major cause of maternal death, especially in the developing world[2], while making safe abortion legal and accessible reduces maternal deaths[3,4]. It is safer than childbirth, which has a 14 times higher risk of death in the United States[5]. One of the leading causes of maternal mortality and morbidity is unsafe abortion. The MMR (maternal mortality ratio) 130/1 Lakh live birth (2014-16) & unsafe abortion accounts for 8% of MMR performed either by person lacking the necessary skills or in an environment lacking the minimum medical standard or both (RGI-SRS 2014-16) [6]. Safe abortion is a necessary component of reproductive health care. The incidence of abortion 15.6millions took place in India in the year 2015[7]. The abortion rate is 47 /1000 women aged 15-19 year[8]. WHO issued technical guidance in 2003 to strengthen the capacity of health system to provide SAC (Safe Abortion Care) and PAC (Post Abortion Care)[9].

Unsafe abortion, the third leading cause of maternal deaths in the country, contributes eight per cent of all such deaths annually with 13 women dying each day[10].Though Medical Termination of Pregnancy (MTP) has been legalized in India since 1971, the access to services is still a challenge, especially in the rural and remote regions of the country [11]. While there is a desire for small families among married couples, this has not translated into contraception usage. Further, no contraceptive is 100% effective and therefore, safe abortion services would always be a necessary component of reproductive healthcare[12]. Ensuring Comprehensive Abortion Care (CAC) services is now an integral component of the efforts made by the Government of India to bring down maternal mortality and morbidity in the country.

Woman-centered, comprehensive abortion care (CAC) is an approach to abortion services that takes into accounts a woman’s individual physical and emotional health needs and circumstances and ability to access care. It includes induced abortion; treatment of incomplete, missed or unsafe abortion; compassionate counseling; contraceptive services; related sexual and reproductive health services provided on site or via referrals to accessible facilities and community-service provider partnerships [13]. Woman-centered, Comprehensive Abortion Care includes a range of medical and related health services and is comprised of three key elements: 1. Choice 2. Access 3. Quality.

PAC is a global strategy to decrease morbidity and mortality out of abortion[14] This has 5 elements: -1.Treatment of Incomplete and Unsafe Abortion and its
complication. 2. Counselling- to identify and respond to women’s emotional and physical health needs, 3. Contraceptives and Family Planning service, 4. Reproductive and other health service, & 5. Community and service provider partnership. So this is a observational study done in a tertiary care that is VSSIMSAR, BURLA which is the biggest tertiary care in the western Odisha where patient from all the district of Western Odisha, part of Chatisgarh, part of Jharkhand comes to pursue their health needs. The main aim of the study is to identify the reasons for seeking CAC services, socio-clinical profile of its users, Its effectiveness, acceptance at the level of users and complication. And to know the proportion of patient receiving CAC, and to know the level at which CAC Service can be strengthened to reduce the maternal mortality, ultimately serve the Motherhood with love and compassion, and to make the human resource intensify for wealth of the Odisha and India at large. Hence, the study was planned.

**Aim**

To identify reasons for seeking CAC services, socio-clinical profile of its users, Its effectiveness, acceptance at the level of users and complication. **OBJECTIVES :**

Primary objective: -To study the socio clinical profile of comprehensive abortion care seekers. Secondary objective: -To study the reasons for procuring abortions & to determine the proportion of the complete comprehensive abortion care users.

**Material & Methods**

After getting clearance from institutional ethics & research committee this observational study was held in the Indoor & out door Department of O&G, VIMSAR, Burla from November 2019 to October 2021 by taking systematic random sampling from study population of all patients who will undergo abortion in 1st and 2nd trimester.

Sample Size: - The minimum sample size of the study was using following formula for observational study.

\[ N \geq Z^2 \frac{pq}{d^2} \]

\[ Z = 1.96 \text{ at 95% confidence interval} \]

\[ P = \text{prevalence(0.5%)} \]

\[ Q = 1 - p \]

\[ d = \text{precision estimate(0.05%)}, \text{the minimum sample size needed 385. taking the design effect of 1.2 the sample size was calculated as 462.} \]

**Selection Criteria**

Inclusion criteria: - Women of reproductive age group 15-49 years in 1st and 2nd trimester undergone any type of abortion (incomplete abortion, septic abortion, inevitable abortion, missed abortion, MTP). Exclusion Criteria: - suspected ectopic pregnancy, threatened abortion.

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\]

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\(Q=1-p\)
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**Study Variable**

Demographic Variables

- Age: 15-19yrs, 20-29yrs, 30-39yrs, 40-49yrs
- Education: Illiterate, Literate-Basic:Grade, Secondary: 9-12, Bachelor, Masters
- Occupation: Housewife, Agriculture Service, Student, Business
- Marital status: Married, Unmarried

Reproductive Variable

- Gravida: Prim, Multi
- Gestational Age: 1\textsuperscript{st} trimester, 2\textsuperscript{nd} trimester
- Procedure of CAC: MVA, Medical, D&E
- Post CAC contraception: IUCD, hormonal method-(OCP, long term injectable(MPA), Pop, others), Condom, permanent method (NSV, BTL), Natural method
- Comorbidities: (with/without)

**Study procedure**

Patient was admitted at outdoor or indoor of O&G department on the basis of clinical finding, ultrasound finding at any stage of abortion procedure. They were treated after taking informed consent according to trimester & procedure(MMA, MVA, D&E), then counseling was done regarding contraceptive procedure and post abortion care, they were discharged. Record & data was collected at the time of discharge & was followed up. Then data was analyzed.

Data Management: Completeness of data was checked, cleaning of data was done, compilation of data was done. Data Analysis After matching baseline characteristics, all data was analyzed using SPSS software. Appropriate statistical tests were applied and after comparison final interpretation has been done.
Ethical Approval: The study was started after approval from the research ethics committee VIREC, Burla. Prior to the study necessary permission was obtained from all relevant participants. Only voluntary participants were included in the study. Confidentiality and anonymity was maintained throughout the study. There was low risk to the study population. No compensation was given to patients.

**Observation**

Table 1: Distribution of Patients Receiving CAC

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Number of patients</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;15 years</td>
<td>7</td>
<td>1.5%</td>
</tr>
<tr>
<td>15-19 years</td>
<td>12</td>
<td>2.5%</td>
</tr>
<tr>
<td>20-29 years</td>
<td>210</td>
<td>45%</td>
</tr>
<tr>
<td>30-39 years</td>
<td>217</td>
<td>46.9%</td>
</tr>
<tr>
<td>40-49 years</td>
<td>16</td>
<td>3.4%</td>
</tr>
<tr>
<td><strong>Literacy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illiterate</td>
<td>2</td>
<td>0.4%</td>
</tr>
<tr>
<td>O-8</td>
<td>9</td>
<td>1.9%</td>
</tr>
<tr>
<td>9 to 12</td>
<td>303</td>
<td>65%</td>
</tr>
<tr>
<td>Bachelor</td>
<td>127</td>
<td>27%</td>
</tr>
<tr>
<td>Master</td>
<td>21</td>
<td>4.5%</td>
</tr>
<tr>
<td><strong>Occupation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housewife</td>
<td>238</td>
<td>51%</td>
</tr>
<tr>
<td>Agriculture</td>
<td>112</td>
<td>24%</td>
</tr>
<tr>
<td>Service</td>
<td>56</td>
<td>12%</td>
</tr>
<tr>
<td>Student</td>
<td>30</td>
<td>6.4%</td>
</tr>
<tr>
<td>Business</td>
<td>26</td>
<td>5.6%</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>452</td>
<td>97.8%</td>
</tr>
<tr>
<td>Unmarried</td>
<td>10</td>
<td>2.1%</td>
</tr>
<tr>
<td><strong>Parity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primigravida</td>
<td>82</td>
<td>17.7%</td>
</tr>
<tr>
<td>Multigravida</td>
<td>380</td>
<td>82.2%</td>
</tr>
<tr>
<td><strong>Different Procedure</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical</td>
<td>141</td>
<td>30.5%</td>
</tr>
<tr>
<td>Surgical</td>
<td>312</td>
<td>67.5%</td>
</tr>
<tr>
<td>Combine</td>
<td>9</td>
<td>1.9%</td>
</tr>
<tr>
<td><strong>Post abortion contraception</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COC Pill</td>
<td>169</td>
<td>36.5%</td>
</tr>
<tr>
<td>CU T</td>
<td>46</td>
<td>9.9%</td>
</tr>
<tr>
<td>DMPA</td>
<td>30</td>
<td>6.4%</td>
</tr>
<tr>
<td>Nil</td>
<td>217</td>
<td>46.9%</td>
</tr>
<tr>
<td><strong>Complications</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haemorrhage</td>
<td>9</td>
<td>1.90%</td>
</tr>
<tr>
<td>Incomplete evacuation</td>
<td>2</td>
<td>0.40%</td>
</tr>
<tr>
<td>Pain</td>
<td>4</td>
<td>0.80%</td>
</tr>
<tr>
<td>Not follow up</td>
<td>104</td>
<td>22.50%</td>
</tr>
<tr>
<td>Nil</td>
<td>341</td>
<td>73.80%</td>
</tr>
<tr>
<td>Death</td>
<td>2</td>
<td>0.40%</td>
</tr>
<tr>
<td><strong>Reasons For Blighted ovum</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>0.60%</td>
</tr>
</tbody>
</table>
Out of 462 patients majority 46.9% (217) belongs to age group 30 to 39 years followed by age group 20 to 29 years that is 45% and minimum patients that is 1.5% belongs to age less than 14 years. Mean age of the patients receiving CAC is 28.85 years. The distribution of patients according to literacy receiving CAC was considered, maximum 65% were educated and were between 9th class to 12th class. 27% of the patients had completed their bachelor degree in any of the education (science, commerce or arts) or technical field. Only 0.4% patients had never gone to school or illiterate. As far as their occupation who seeked CAC was considered, 51% of the women were housewife followed by 24% belongs to agriculture by occupation. 5.6% patients were business women by occupation. 97.8% Patients were married and only 2.1% patients were unmarried who seeked CAC. 82.2% patients were multigravida & 17.7% were primigravida. 67.5% patients underwent surgical procedure. Only 1.9% underwent combine procedure like misoprostol & mechanical.

Out of 462 patients 39.3% underwent dilatation & evacuation. 25.9% underwent medical method of abortion, maximum patients 46.9% patients did not receive any contraception. 73.8% of patients underwent abortion without complication. 39.8% patients sought CAC because of completed family. 0.3% patients received CAC for missed abortion. 76.6% patients who seeked CAC were without morbidity & 19% were with anaemia.

**Discussion**

Pregnancy plays a unique role in the transformation of women towards completeness. Pregnancy should be considered a unique normal physiological episode in a woman’s life. Around 73 million induced abortions take place worldwide each year. Six out of 10 (61%) of all unintended pregnancies, and 3 out of 10 (29%) of all pregnancies, end in induced abortions [15]. Global estimates from 2010–2014 demonstrate that 45% of all induced abortions are unsafe. Developing countries bear the burden of 97% of all unsafe abortions [15].
than half of all unsafe abortions occur in Asia, most of them in south and central Asia. Unsafe/illegal abortions account for 8% of all maternal deaths in India.

The barriers which impede women from reaching the required safe abortion services include illiteracy especially female illiteracy, lack of awareness, lack of access to health facilities, distance, lack of confidentiality, anonymity, privacy and respect towards women. Comprehensive abortion care is included in the list of essential health care services published by WHO in 2020. Comprehensive abortion care includes the provision of information, abortion management and post-abortion care. It encompasses care related to miscarriage (spontaneous abortion and missed abortion), induced abortion (the deliberate interruption of an ongoing pregnancy by medical or surgical means), incomplete abortion as well as fetal death (intrauterine fetal demise).

There seems to be a big gap on tackling the problem by focusing on women ‘s decision making processes at community level. This study tried to find out and therefore opens a new area of focus on the fight to eliminate abortion and results could help programs to design new interventions. This study endeavored to bring these aspects of abortion to the fore so that appropriate interventions can be developed to respond to unsafe abortion at community level. So taking all the possible variable and comparing the results with other studies this study gave the following results.

Reproductive health status of women who used CAC service showed multi gravida 82.2% while 17.7% were primigravida which is very nearer to the study held in 2019 at a retrospective review of CAC service register at Tribhuvan University Teaching Hospital (TUTH) university, where 84% patients were multigravida and 16% were primigravida[16].

In this study showed 65% of patients were studied in between 9 to 12 class that is secondary class which is quite high as compared to a study held in 2019 at Tribhuvan University Teaching Hospital where only 34% patients had completed their secondary education and also in a study which is a descriptive study conducted among 400 married women of reproductive age group in selected villages of Gazole and Bamongla Block of Malda District in selected rural community, West Bengal India where 35% patients had completed their secondary education. This shows in western Odisha the literacy of the patients seeking CAC was almost double that of the previous studies. It can act as a bigger strength in combating unsafe abortion[17].

Maximum patients that is 51% were house wife by occupation. So we need to educate housewives for more use for contraception. This result is lower than the study held in Tribhuvan University Teaching Hospital where 75.5% patients were housewives by occupation and a study held in west Bengal where only 70% of CAC service users were housewives.[16,17]

The Study found that 65.7% patient had under gone different surgical procedure. 39.3% patients had undergone dilatation & evacuation,27.4% percent of women had MVA as method of abortion and 30.5% had medical abortion who seeks CAC services. The result varies widely according to locality and preferences as
compared to the study held at TRUTH UNIVERSITY where 85.6% had Manual Vacuum Aspiration (MVA) and 14.4% had Medical Abortion (MA). Only 37.6% women used any method of post abortion contraception. This showed the high prevalence of unwanted pregnancy among the married women which needs to be addressed with appropriate family planning (FP) counseling. Women were presenting late to the institution may be because of lack of awareness.

A retrospective study in CAC and PAC center of a maternity hospital in Nepal showed that the major reason for seeking abortion was too many children (59%) followed by illegitimate pregnancy (16%) [18]. However, this study found the reason for seeking CAC was completed family (39.8%) followed by induced abortion leading to incomplete abortion following taking easily available MTP kit as an over the counter drug without any proper medical advices (21.6%). But the induced abortion percentage is quite nearer and less than the incidence worldwide that is 29%[15]

Regarding the contraceptive devices used by women, previous study showed that contraceptive acceptance rate was 38% [19], however it was increased up to 53% in this study. This finding is an indicator that much greater efforts are still needed to increase the delivery of contraception to women immediately following the abortion procedure. Although CAC was safe in majority of women, some women were found to have complications. Thus an unwanted pregnancy must be avoided rather than being exposed to the risks of abortion. There should be increased preference and scope for LARC that is long acting reversible contraceptive devices.

A study done at southern general hospital, Glasgow, UK, found that 12% of abortion recipients were adolescents among them 18–19 years of age accounted for 8% and 15–17 years of age was 3% and those younger than 15 years of age was 0.2% in 2014 [20]. However, only 4.1% of women were adolescents in this study. From this data it can be inferred that in our community adolescent patients were more aware and the major age group who should be counselled is 30 to 39 years (46.9%). The mean age is 29 year. This mean age is nearer to study held in TRUTH university which is 28.4 years and study held in west Bengal.

Regarding the complications of CAC, this study showed that the overall prevalence was 3.6%. The commonest complication was haemorrhage and four women complained abdominal pain which were comparatively lower than the reports of other studies. In other settings of low resource countries, the complication rate of incomplete abortion was 1.3% which was higher than expected range of 0.5–1.2% [16]. Thus, it is suggested to develop provision of adequate training to providers for ensuring the complete removal of retained product of conception (RPOC) after the CAC procedure. Likewise, to aid in expulsion of small fragments of RPOC not removed during the procedure, administration of oxytocin, should be made as a rule [40]. Similarly, use of transvaginal ultrasound after the CAC procedure may help in determining whether products of conception remain in uterus or not [21,22]. 19%f patients were already anemic which was of different severity. The anemia would have been due to acute hemorrhage or chronic anemia due to malnutrition. So this showed the need of blood transfusion or other intervention to correct anemia first followed
by any termination procedure and also women were delaying to avail abortion care.

This study also revealed some unique and special finding which is hardly mentioned in any studies and need to be studied further. Out of total 462 patients 3 of the patients were having anomaly of the uterus like bicornuate uterus where MVA was successfully carried out without any complication.

**Limitations**

This study is not without limitations. There was a 22.5% loss to follow up rate at the two-week follow up visit. Furthermore, not all women who volunteered to complete the survey could be interviewed to know the correctness of the data they had filled up during questionnaire. Additionally, we have to be concerned for social desirability of the answers that women provided for the survey. Because the survey was administered in a written form with a provider, women might have felt compelled to give the answer they thought they should be giving, because of feelings of guilt or shame. Additionally, this is a sensitive topic, and a matter of death or disability. Regarding complication further investigation could had been done and followed up which was not possible because of COVID and many more factors.

**Strength of the study**

A large number of patients participated in the study. Simultaneously study and result could be made regarding many variable or determinants including both social and clinical factors that directly or indirectly affect CAC procedure effectivity and finally in aiding reduction of maternal mortality and morbidity.

**Conclusion**

Women’s age, literacy, contraceptive use, previous pregnancy status were the determinants of unintended pregnancy. Abortion for unplanned pregnancy can be prevented if people are well informed about methods of contraception. Post-abortion care is an opportunity for healthcare professionals to provide education, discuss fertility needs and the need for contraception with women seeking abortion so that appropriate decisions can be taken for suitable family planning. A more evidence based and practical approach in discussion of family planning needs with health care provider helps improve the health status of a family, society and ultimately the whole country. There should be more encouragement and scope for MVA as complication is less, safe, simple, inexpensive than other all method in first trimester spontaneous abortion/incomplete abortion/missed abortion and LARC as the best contraceptive method. Restriction of the over-the-counter dispensation of abortion pills needs to be strictly implemented and knowledge of women regarding the unfavourable outcome of MTP pill intake without proper consultation needs to be improved. Awareness programme on Comprehensive Abortion Care through mass media and interpersonal communication should be initiated at programmatic level.
Authors Contribution: All authors were involved in research design, data analysis, and manuscript preparation and editing.

Disclosure: The authors report no conflicts of interest in this work.

References


17. Sample registration system office of registrar general.INDIA.2014-16(Goggle Scholar)


